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Coping with the stigma of AIDS: An investigation of the effects of shame, stress, control, and coping on depression in HIV-positive and -negative gay men

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has been accepted towards fulfillment
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COPING WITH THE STIGMA OF AIDS: AN INVESTIGATION OF THE EFFECTS OF SHAME, STRESS, CONTROL AND COPING ON DEPRESSION IN HIV-POSITIVE AND -NEGATIVE GAY MEN

By

Frank Joseph DeMarco

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ABSTRACT

COPING WITH THE STIGMA OF AIDS:
AN INVESTIGATION OF THE EFFECTS OF SHAME, STRESS, CONTROL AND COPING ON DEPRESSION IN HIV-POSITIVE AND -NEGATIVE GAY MEN

By

Frank Joseph DeMarco

The current study examines how HIV serostatus, internalized shame, physical symptoms, stress, appraisals of control, and type of coping used (detachment versus involvement) affect depression in a sample of HIV-positive (N = 50; 31 with AIDS diagnosis) and HIV-negative (N = 57) gay men, as well as in a comparison sample of heterosexual male college students (N = 112). Multivariate path analyses indicated that, among gay men, being HIV-positive was associated with increased shame (b = .09), which in turn was associated with increased use of detachment (avoidance) coping (b = .51) and decreased use of involvement (active) coping (b = -.30). Increased stress was associated with greater use of both involvement (b = .53) and detachment (b = .49) coping. Involvement coping was associated with decreased depression (b = -.49) while detachment coping was associated with increased depression (b = 1.04). Coping explained 76% of the variance in depression, and the model fit the data well (chi square 11 df = 15.85, p = .147). Implications for clinical practice and suggestions for future research are discussed.

This work is dedicated to my wife, Christine Edgar,
and in loving memory of Michael LeRoux.

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ACKNOWLEDGMENTS

This dissertation represents the culmination of many years of study and toil, and is an undertaking that would not have been possible without the kindness, help, and support of a great many people.

First and foremost I would like to thank the men who agreed to participate in my research study. I am especially grateful to the persons living with HIV/AIDS who were generous enough to share their experiences with me.

This study would have been far more difficult (if not impossible) to conduct without the help of the Lansing Area AIDS Network (LAAN). In particular I would like to thank former LAAN director Bill Bathie for believing in my project and allowing me to solicit research participants from among LAAN's clientele, and Carrie Tarry for her immeasurable help with the data collection and for taking my project on as her own. I will always be grateful for your help and support.

My dissertation committee was carefully chosen not only for their scholarly abilities, but for their human qualities as well. Each of these men has been an enormous help to me throughout my graduate career at Michigan State. I would like to thank Bob Caldwell, my chair, for his mentoring, patience, and kindness throughout this arduous process; Gersh Kaufman, for inspiring this research and for his kindness and encouragement throughout; Bert Karon, for keeping me inspired through his passion

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about psychology in general and psychoanalysis in particular; and Ralph Levine, for agreeing at the last minute to join my committee, and for teaching me the "right" way to do statistical analysis.

The Psychology Department is fortunate to have excellent administrative and support staff who are critically important to helping students negotiate the sometimes treacherous waters of the graduate school process. Many people have helped me throughout my years at Michigan State, but I would especially like to mention Suzy Pavick ("Goddess of Knowledge and Keeper of the Chocolate"), Cheryl Forcia, and Roger Halley. Thank you for your help and for making this a more humane process for graduate students.

There have been many other people whose friendship, mentoring, or support has meant a great deal to me throughout this process. I would just like to mention a few of them: Brent Bilodeau, Jennifer Chabot, Georgia Davidson, Mary Edens, Jim Fuendeling, Lisa Gauthier, Lauren Harris, Debbie Kolk, Jon Lacey, Lisa Laughman, David Lounsbury, David Ostrow, Denise Rajala, Peter Reilly, and Michael Teixeira.

I must thank my family for always believing in me and for their love, patience and support throughout a VERY long process. I love you all very much.

Last, but by no means least, I must acknowledge my spouse, Christine Edgar, for her incredible patience and unconditional love and support throughout my entire graduate school career. You're a dissertation widow no more, sweetie!

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TABLE OF CONTENTS

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INTRODUCTION

In 1981, the first deaths related to acquired immune deficiency syndrome (AIDS) were reported by the Centers for Disease Control and Prevention (CDC). Today, the World Health Organization (WHO) estimates the worldwide prevalence of human immunodeficiency virus (HIV) infection to be around 30.6 million people, a truly sobering figure (WHO, 1997). This is clearly a worldwide epidemic of staggering proportions.

In the US alone, 612,078 AIDS cases have been reported to date; 379,258 (62%) of these cases have ended in death (CDC, 1997). Of these US AIDS cases, 7,902 were reported in children under thirteen, 91% of whom incurred the disease perinatally. African Americans, Latinos, and intravenous (IV) drug users and their partners demonstrate the fastest-growing rates of new HIV infection in the US, according to the CDC. While men who have sex with men continue to account for the largest proportion of AIDS cases, the incidence of new cases has slowed among this population (CDC, 1997).

Thus, like the situation worldwide, the scope of the AIDS epidemic in the US is enormous. To help put the loss of life in perspective, consider that in the fifteen years since the epidemic began nearly 380,000 Americans have died—about *six times* more than the number of Americans who died during the Vietnam War.

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"A MENTAL HEALTH CATASTROPHE"

"Though widely perceived as an important medical issue, the AIDS epidemic is also a mental health catastrophe perhaps unmatched in 20th century American history." Thus writes Walt Odets in his introduction to *The second decade of AIDS: A mental health practice handbook* (1995, p. 1). Indeed, the AIDS pandemic not only confronts medical science with one of its greatest conundrums, but also presents mental health professionals with a new set of challenges. The American Psychological Association saw fit to devote two special issues of *American Psychologist* to AIDS in 1984 and 1988. The battle cry went out for psychologists to be involved in both AIDS prevention and assisting with the emotional adjustment of those individuals diagnosed with HIV-related illness. In the first special issue, Batchelor (1984) highlights the stigmatizing nature of the disease. "The mention of AIDS causes people to draw back in fear; it has the emotional impact of a modern-day black plague. AIDS has become a psychological emergency" (p. 1279). He notes that AIDS presents psychological stressors that may not be adequately addressed under current mental health treatment conditions. "In our interviews with people with AIDS, they have repeatedly stressed that, although their medical needs were being adequately addressed, their psychological needs were not being given sufficient priority" (1984, p. 1288).

By the time of the second special issue of *American Psychologist* in 1988, more was known about the spread of AIDS and about its psychological impact. Three general themes had emerged regarding the role of psychologists in the AIDS epidemic: Effecting behavioral change to prevent transmission, changing social attitudes and beliefs regarding AIDS and persons with AIDS (PWAs), and helping PWAs deal with the psychological

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impact of their condition. The concern of the present study lies mainly with the last of these three themes.

Morin, in the 1988 special issue of *American Psychologist*, delineates the epidemic of reaction and stigma that accompanies the medical epidemic of AIDS. "In order to understand what we are facing, it may be useful to think of three separate epidemics....First, an epidemic of HIV infection....The second epidemic involved the diseases characterized by the case surveillance definition of AIDS....The third epidemic, which has received far less attention, involves the social, cultural, economic, and political reactions to the HIV and AIDS epidemics. This third epidemic of reaction....is as much a part of the pathology of AIDS as the virus itself" (p. 838).

Morin elaborates on the stigma of AIDS: "Stigma associated with AIDS has lead to people being shunned socially and suffering significant psychological damage even though they maintain employment and housing....AIDS has disproportionately affected groups, such as gay men and IV drug users, who are already subjected to substantial stigma" (1988, p. 840). In this same issue, Jones writes: "The AIDS epidemic is a profound attack on the physical, mental, and emotional welfare of millions of human beings. Psychology is a discipline whose expertise is critical to blunting the devastating effects of this disease....Another critical area in which we have much to offer is in understanding the attitudinal and behavioral dimensions of prejudice and discrimination" (1988, p. 899). The present research is concerned with the stigmatization that results from these social attitudes, and its effect on the mental health of PWAs.

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Chapter 1

LITERATURE REVIEW, STUDY RATIONALE, AND HYPOTHESES

THE PSYCHOLOGICAL IMPACT OF AIDS

There has been considerable research on the psychological impact of coping with HIV/AIDS. The types of mental health problems investigated have included depression and/or anxiety (e.g., Atkinson et al., 1988; Cazzullo et al., 1990; Folkman, Chesney, Pollack, & Coates, 1993; Ostrow, Joseph, et al., 1989; Ostrow, Monjan, et al., 1989); substance abuse (e.g., James, Rubin, & Willis, 1991; Perry et al., 1990; Rosenberger et al., 1993); "reactive" or adjustment disorder (e.g., Bungener, Kosmadakis, Jouvent, & Widlocher, 1993; Lipsitz et al., 1994); and suicidal behavior (e.g., Gala, Pergami, Catalan, & Riccio, 1992; McKegney & O'Dowd, 1992; Rajs & Fugelstad, 1992).[1]

It is commonsensical to assume that HIV/AIDS has devastating psychological effects on those infected. "Fear of contagion leads to social ostracism....The damaging psychological effects to people with AIDS when they are faced with such abject fear in others need not be quantified to be comprehended" (Batchelor, 1984, p. 1283). However, to advance scientific knowledge of the mental health implications of HIV/AIDS, these

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[1] Organic brain syndromes, psychotic disorders, and personality disorders have also been investigated but do not fall within the purview of the current study. This study is concerned with "functional" (i.e., presumably non-organic) psychological problems (Sacks et al., 1995), so AIDS-related dementia and other organic mental disorders will not be considered. Psychotic disorders and personality disorders will not be considered here because of their relative rarity as well as a scarcity of available research.

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effects *do* need to be quantified so that we may better understand the nature and scope of the damaging effects of social ostracism and stigmatization. Fortunately, there have been a number of research studies that have attempted to quantify the impact of HIV/AIDS on mental health.

DOES HIV SEROSTATUS AFFECT MENTAL HEALTH? FINDINGS IN THE AIDS AND MENTAL HEALTH LITERATURE

A number of studies reported differences in mental health outcomes between groups differentiated by *serostatus* (i.e., whether subjects are HIV-negative or HIV-positive). The characteristics of the empirical studies discussed in this section are summarized in Appendix F.

Several investigators reviewed hospital charts of AIDS inpatients to determine if they had a higher rate of psychiatric consultations and psychological disturbance than other (non-AIDS) inpatients. It was found that AIDS inpatients had a higher rate of psychiatric consultations than did any other group of hospitalized patients (Johannet & Muskin, 1990), that they had a significantly higher rate of *repeat* consultations and required more attention from psychiatric staff than did non-AIDS inpatients (O'Dowd & McKegney, 1990), and that a small but significant population of new psychiatric inpatients (i.e., individuals who presumably would not otherwise have been hospitalized) appears to have been brought on by the AIDS epidemic (Sacks et al., 1995). The evidence provided by these chart reviews must be interpreted cautiously, as it is not clear whether the higher rates of psychiatric consultations are due to AIDS per se or to psychiatric problems related to risk-group status (an issue to be discussed in more detail

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below). Further, the evidence is retrospective and focuses only on inpatients. Nevertheless, these findings are suggestive of a growing demand for psychiatric services by PWAs, and also imply that AIDS inpatients may be psychologically needier than non-AIDS inpatients.

Other studies have examined inpatient, outpatient, and community samples of persons considered at high risk for HIV/AIDS, including hemophiliacs, intravenous drug users (IVDUs), and gay/bisexual men.

Only one study focusing on hemophiliacs was found. Dew, Ragni, and Nimorwicz (1990) examined mental health outcomes among male hemophiliacs, and found that HIV-positive subjects were more likely to have clinically elevated anxiety and anger-hostility than HIV-negative controls. HIV-positive subjects also had higher mean depression scores than HIV-negative controls, but the differences were not clinically meaningful.

Several investigations looked at outcomes for samples composed primarily of IVDUs, with mixed results. In their Norwegian sample of drug addicts in residential treatment, Hestad, Aukrust, Ellersten, and Klove (1994) found that HIV-positive subjects evinced greater psychological disturbance than did HIV-negative subjects, and that these differences were even more pronounced at follow-up nine months later. Similarly, Pakesch et al. (1992) reported that HIV-positive drug users tended to have more elevated depression scores than HIV-negative drug users. Finally, Lipsitz et al. (1994) found no overall differences according to HIV serostatus in a sample of IVDU outpatients, but did report a gender—serostatus interaction for men with regard to depression, with HIV-positive men being more depressed than HIV-negative men. Significantly, the sample as a whole (regardless of HIV serostatus) showed serious impairment in DSM Axis V global

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functioning (mean = 49), approaching levels found in psychiatric inpatients. Also of interest is the finding that, although there were no clear-cut differences between HIV-positive and HIV-negative subjects, HIV-positive subjects in a more advanced stage of HIV illness were more depressed (even when controlling for vegetative symptoms) and experienced greater stress than subjects who were less ill.

The largest number of studies supporting a positive relationship between HIV infection and psychological distress have examined samples consisting primarily of gay and bisexual men. These investigations reported that HIV-positive subjects exhibited elevated levels of sexual dysfunction (Catalan et al., 1992), any Axis I disorder (especially adjustment disorder) (Chuang, Jason, Pajurkova, & Gill, 1992), depression (Bungener et al., 1993; Ostrow, Joseph, et al., 1989), somatic complaints (Krikorian, Kay, & Liang, 1995; Rosenberger et al., 1993), anxiety, obsessive-compulsive behavior, and general psychological distress (Ostrow, Joseph, et al., 1989) when compared to HIV-negative subjects.

Interestingly, the most consistent finding among these studies is that psychological distress among gay and bisexual men appears to be elevated relative to the population in general, *regardless* of HIV serostatus—a finding similar to that of Lipsitz et al. (1994) regarding IVDUs. While differences in psychological distress between HIV-positive and HIV-negative subjects do exist, they tend to be slight; but the overall level of disturbance in these samples relative to population norms is high (Bungener et al., 1993; Chuang et al., 1992; Krikorian et al., 1995; Rosenberger et al., 1993). Further, Rosenberger and her colleagues found that, among depressed HIV-positive gay men, onset of the depression typically preceded that of HIV symptoms (or confirmation of

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HIV-positive serostatus) by a considerable margin. Taken together, these results suggest a premorbid vulnerability to psychological distress among gay men in general, in addition to elevations in distress related to HIV-positive serostatus.

There is therefore some empirical support for the hypothesis that psychological distress will be greater for HIV-positive individuals than for HIV-negative individuals. The hospital chart reviews suggest that there is a small but not insignificant new population of HIV-related psychiatric inpatients, and that AIDS inpatients in general hospitals may constitute a psychologically needier group compared to other inpatients. Hestad et al.'s Norwegian sample of drug addicts, as well as Bungener et al.'s French sample of gay men, indicate some fairly clear-cut differences in distress between HIV-positive and HIV-negative subjects.

However, findings of clear-cut differences related to serostatus are more the exception than the rule. Most investigations reported equivocal results; for example, two studies (Krikorian et al., 1995; Rosenberger et al., 1993) reported elevated somatization scores among HIV-positive subjects, especially those at a more advanced stage of the illness (as would be expected), but failed to show any differences on other measures of psychological distress such as anxiety or depression. Likewise, Lipsitz et al. (1994) found no clear-cut differences related to serostatus in their sample of IVDU outpatients. Quite commonly, then, results are mixed, with some meaningful differences between groups emerging while others prove small and clinically insignificant (e.g., Catalan et al., 1992; Dew et al., 1990). Perhaps most interesting, however, is the consistent finding that group differences in psychological distress related to serostatus are often overshadowed by the

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elevated levels of distress found in so-called "high risk" samples (such as gay men and IVDUs) *regardless* of serostatus[2].

The intuitive, commonsense expectation that a diagnosis of HIV/AIDS would be associated with clear-cut evidence of increased psychological morbidity is therefore not borne out by the literature. In fact, there is a large group of investigations that failed to find *any* clear-cut, clinically significant differences between HIV-positive and HIV-negative subjects (Atkinson et al., 1988; Folkman et al., 1993; Gala et al., 1993; Hays, Turner, & Coates, 1992; O'Dowd, Natali, Orr, & McKegney, 1991; Ostrow, Monjan, Joseph, & VanRaden, 1989; Perry, Jacobsberg, Card, & Ashman, 1993; Williams, Rabkin, Remien, Gorman, & Ehrhardt, 1991). However, these investigations do provide further evidence of the importance of risk group membership and level of HIV-related symptomatology. Several (Gala et al., 1993; O'Dowd et al., 1991; Perry et al., 1993) documented the high rate of psychiatric morbidity among IVDUs regardless of serostatus. Similarly, gay and bisexual samples were found to have significantly elevated levels of psychological distress relative to population norms (Atkinson et al., 1988; Folkman et al., 1993; Williams et al., 1991). Further, as was the case for Rosenberger and her colleagues (1993), Atkinson et al. (1988) found that the psychological problems reported by HIV-positive gay men in their sample tended to predate HIV diagnosis. Finally, HIV-related symptoms, rather than HIV serostatus per se, emerged as a significant predictor of mental

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[2] It is interesting to note that three of the studies showing the clearest differences in distress between serostatus groups were examining European samples (Pakesch et al., 1992—Austria; Bungener et al., 1993—France; and Hestad et al., 1994—Norway). It is uncertain to what degree the experience of PWAs in these three cultures mirrors that of PWAs in the US. Regardless, two of the three (Pakesch et al., 1992, and Bungener et al., 1993) are similar to most of the American studies in showing as many (if not more)

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Taken together, these findings suggest that members of certain groups at increased risk for HIV infection (e.g., gay men and IVDUs) experience elevated levels of psychological distress, but that there are no clear differences in distress related to HIV serostatus *per se*. Most of the studies that failed to find any significant differences related to serostatus utilized large samples[3], indicating that a lack of statistical power does not explain their negative results.

In summary, three interesting findings emerged from the literature. First, members of high-risk groups such as gay men and IVDUs (regardless of HIV serostatus) evinced high levels of psychological disturbance relative to population norms, while comparatively few (and weak) differences related to serostatus were found. Second, among HIV-positive gay men, it was shown that the onset of psychological problems often predated the HIV diagnosis (Atkinson et al., 1988; Rosenberger et al., 1993), suggesting a premorbid vulnerability to psychological distress. And third, while HIV-positive serostatus per se was often not associated with greater psychological distress, HIV-related symptomatology *was* associated with greater distress (Folkman et al., 1993; Hays et al., 1992; Ostrow, Monjan, et al., 1989).

HIV/AIDS and mental health therefore bear a complex relationship to one another. As Rosenberger and her colleagues note, there are inconsistent results across

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important similarities in psychological morbidity within the high risk samples (regardless of serostatus) as they did differences related to serostatus.

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studies regarding the effects of HIV/AIDS on mental health. "Whether psychiatric symptomatology is higher in HIV-infected populations is unclear." (Rosenberger et al., 1993, p. 150).

FACTORS MEDIATING THE RELATIONSHIP BETWEEN HIV/AIDS AND MENTAL HEALTH: I. RISK GROUP MEMBERSHIP & HIV SYMPTOMS

The answer to the question, "Does having HIV/AIDS result in greater psychological distress than not having HIV/AIDS?" does not appear to be a straightforward "yes" or "no." Rather, there appear to be other factors that are critical to an understanding of this relationship.

Risk Group Membership

First, the AIDS—mental health relationship clearly seems to depend on risk group membership (Folkman et al., 1993; Rosenberger et al., 1993). The literature demonstrates that variability in psychological distress related to serostatus is greatly reduced, and in some cases disappears entirely, when comparisons are made within particular risk groups. Risk group status seems to be the most salient predictor of mental health among PWAs. It may be that being a member of certain groups involves living with many daily stressors that exist irrespective of HIV serostatus (though they may be exacerbated by HIV infection). For instance, it is well-documented that IV drug use (and substance abuse in general) is associated with considerable comorbidity with other psychiatric disorders (Kessler, 1991). Likewise, the shame, stigmatization, and discrimination faced by gay, lesbian, and bisexual individuals is pervasive in our society and is associated with

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[3] The median sample size was 304 in the eight studies that failed to find any significant differences between

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psychological distress within these groups (Kaufman & Raphael, 1996; Morin, 1988; Neisen, 1990). A thorough discussion of the mental health implications of risk group membership is beyond the scope of the present investigation; but in any event, membership in these groups has been associated with increased levels of psychological distress relative to the general population.

If it is the case that the risk or transmission group a person belongs to is a better predictor of psychological distress than HIV serostatus, does this imply that serostatus is unimportant? Not necessarily. It does suggest the need to assess the impact of an HIV-positive diagnosis within the context of the person's daily life and sociocultural milieu. It also suggests that when measuring mental health outcomes within a population with a high base rate of psychological problems, it may be more difficult to discern the incremental effects of additional stressors. Finally, it implies that it may be important to discern the *meaning* of being diagnosed with HIV, how that meaning changes over the course of the disease, and how the changing nature of HIV-related stressors affects mental health at different stages of the illness. One potent set of HIV-related stressors that vary across different stages of the illness are physical symptoms. The literature suggests that it is not the HIV diagnosis per se, but rather the onset of symptoms, that is more important in predicting psychological distress in PWAs (Bungener et al., 1993; Folkman et al., 1993; Hays et al., 1992; Lipsitz et al., 1994; Ostrow, Monjan, et al., 1989).

HIV-Related Symptoms

It must be emphasized that degree of HIV/AIDS-related symptomatology is a very different variable than HIV serostatus. Many HIV-positive individuals are asymptomatic,

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and may remain so for months or even years (Volberding & Cohen, 1990). Psychological adjustment to the HIV *diagnosis* therefore does not necessarily involve coping with actual *symptoms* of HIV-related illness. It has been suggested that psychological distress specific to receiving a diagnosis of HIV seropositivity while still asymptomatic consists mainly of transient adjustment reactions (Bungener et al., 1993; Krikorian et al., 1995; Tross & Hirsch, 1988). The onset of actual symptoms, however, and the progression of the disease from HIV-positive but asymptomatic to AIDS-related complex (ARC) to AIDS, introduces stressors that may place greater demands on psychological resources.

Both Hays et al. (1992) and Folkman et al. (1993) addressed the importance of the appearance of HIV symptoms. Hays and his colleagues speculated that the threat of AIDS may seem remote when the subject is still asymptomatic—in essence, one is protected from the implications of the diagnosis by defensive denial. When symptoms finally emerge, deleterious effect on mental health may result from a number of factors, including feeling out of control, negative changes in self-image, worry over illness, and confronting the possibility of death.

Folkman et al. (1993) concluded that HIV symptoms affect mental health indirectly through their effects on stress and coping processes. These processes are mediated by individuals' appraisals of control over their situation and by the availability and perceived adequacy of social support.

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FACTORS MEDIATING THE RELATIONSHIP BETWEEN HIV/AIDS AND MENTAL HEALTH: II. STRESS, CONTROL, AND COPING

In addition to risk-group membership and HIV-related symptoms, other factors have been implicated in the literature as affecting psychological morbidity among PWAs. These include *stressors* PWAs may be experiencing, their appraisals of the level of *control* they have over these stressors, and specific *coping strategies* they may employ, including the utilization of social support.

Stress And Cognitive Appraisal

Lazarus and Folkman (1984) provide an integrative framework within which to assess the effects of stress, appraisals of control, and coping (the latter including seeking and utilizing social support) on psychological well-being. In their cognitive theory of stress and coping, *stressors* are defined as situations or events that are appraised by the person as significant to his well-being *and* as taxing or exceeding his resources. It is significant that, in this definition, one's *appraisal* of the situation determines whether the situation is or is not a stressor. This approach recognizes that individual differences exists in the degree to which events and situations are evaluated as stressful. This definition of stress takes into account characteristics of both the person and the situation, emphasizing the relationship between the two. Cognitive appraisal is crucial to the stress experience according to this framework.[4]

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[4] Lazarus and Folkman emphasize conscious, reality-oriented cognitive appraisals rather than unconscious processes. "It is our premise that although personality factors such as needs, commitments, and preferred styles of attention influence perception, appraisals are generally correlated with reality" (1984, p. 53). Yet Lazarus and Folkman also acknowledge the possible influence of unconscious processes. Appraisal is not necessarily an entirely conscious, rational, or intentional process, according to the authors. This idea will

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Many psychosocial stressors are cited in the literature as "AIDS-related." These include the gradual, insidious, and unpredictable course of the disease; HIV-related health problems; the fact of being stricken during the prime of life; multiple losses due to AIDS; caregiver burden; financial difficulties; the fear of infecting others, with consequent inhibition of sexual relationships in order to avoid transmission; social isolation and alienation from family; societal disapproval and stigmatization, with consequent feelings of shame and guilt; and stressors surrounding HIV testing and treatment decisions (Cazzullo et al., 1990; Folkman et al., 1993; Rabkin & Rabkin, 1995).

Some of the above-mentioned stressors may be endemic to risk group status—for example, gay men and IVDUs may experience societal disapproval and discrimination whether they are HIV-infected or not, and members of these communities have often suffered multiple losses or experienced caregiver burden as a result of the disease. Other stressors seem reasonably specific to living with HIV/AIDS, particularly those involving symptoms, treatment, and fear of infecting others. The nature and severity of these stressors will vary by illness stage (Hays et al., 1992), again highlighting the importance of assessing level of symptomatology as a key HIV-related stressor.

What are the mechanisms by which stressors effect the mental well-being of PWAs? According to Lazarus and Folkman (1984), stressful situations exert their effects on mental health via two mediating processes: situational appraisals of control, and coping.

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emerge as important in the application of Lazarus and Folkman's theoretical framework in the present investigation.

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Appraisals Of Control

According to Lazarus and Folkman (1984), *situational appraisal of control* refers to one's evaluation of the degree to which a stressful situation can be controlled or modified. Control is often cited in the literature as an important mediator of the effect of HIV-related stressors on psychological distress; specifically, feeling out of control of stressful situations is associated with increased psychological distress (Catalan et al., 1992; Cazzullo et al., 1990; Folkman et al., 1993; Hays et al., 1992; Krikorian et al., 1995). In addition, some investigators have found that negative appraisals of control are associated with maladaptive coping strategies, which are in turn associated with increased depression (Catalan et al., 1992; Folkman et al., 1993; Krikorian et al., 1995).

Coping

Lazarus and Folkman define *coping* as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (1984, p. 141). A distinction is therefore made by the authors between *appraisals* of control (i.e., beliefs about the controllability of a given situation) and actual *efforts* to control the situation (i.e., coping). This definition also emphasizes a *process-oriented* conceptualization of coping, as opposed to a more static *trait-oriented* model. The definition also makes a distinction between routine, automatic adaptive behaviors and coping; the latter implies *mobilization* and *effort*, and is reserved for times of unusual psychological stress. Lazarus and Folkman also caution against confusing coping with *outcome*—coping is an *effort* to manage a situation, irrespective of that effort's effectiveness. A distinction is therefore made

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between *managing* a situation, and *mastery* over the situation. Coping does not imply mastery, but rather refers to an attempt to manage a given stressful situation.

Lazarus and Folkman assert that this process-oriented model of coping is superior to the older trait-oriented models that grew out of psychoanalytic ego psychology because the latter often failed to predict actual coping behavior. They do not deny the existence of stable traits (such as characteristic defenses) that affect coping processes, but they do argue that past research focusing primarily on stable traits did not prove fruitful. Thus, although the authors state that "we should recognize that there is *both* stability and change in coping" (1984, p. 130, emphasis added), they advance a process-oriented approach that emphasizes the changing nature of coping over time and across situations. According to the authors, therefore, it does not make sense to speak of a person having an overall "coping style."

Coping is broken down by Lazarus and Folkman into those strategies used to manage or modify the stressful situation itself *(problem-focused coping*), and those intended to modulate the emotional response to the situation (*emotion-focused coping*). Both types of coping may be invoked during a stressful encounter and may interact to facilitate or impede one another. It has been shown that in situations where people feel they can control the outcome of events, problem-focused coping strategies are more likely to be employed, whereas in situations where people feel matters are out of their control, emotion-focused coping strategies (e.g., escape-avoidance, distancing, keeping feelings to oneself, seeking emotional support, putting a positive spin on the situation) are more common (Folkman et al., 1993). Emotion-focused coping that involves *avoidance* is associated with greater psychological distress (Namir, Wolcott, Fawzy, & Alumbaugh,

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1987), whereas emotion-focused coping that involves *selective attention* (e.g., putting a positive spin on the situation or using the situation to promote personal growth) is associated with less psychological distress (Billings & Moos, 1981; Folkman & Lazarus, 1985). Problem-focused coping is associated with less psychological distress in situations where there is some possibility of controlling or affecting the outcome of the situation (Aldwin, 1981; Forsythe & Compas, 1987).

Several investigators (Catalan et al., 1992; Folkman et al., 1993; Krikorian et al., 1995) have linked PWAs' appraisals of control to their coping and problem-solving strategies, with positive appraisals of control over situations being associated with active, problem-focused coping (e.g., planful problem solving, active conflict resolution), which were in turn associated with better mental health outcomes. Others (Namir et al., 1987; Wolf et al., 1991) did not explicitly measure appraisals of control, but did find favorable psychological outcomes to be related to an active-behavioral coping style. Similarly, Miller and Riccio (1990), in their review of the literature, found that higher depression scores among PWAs were associated with avoidance reactions to HIV illness. Further, they found that an active-*cognitive* coping style was problematic because it lead to obsessive and ruminative thoughts and attitudes, while an active-*behavioral* strategy, on the other hand, was productive. The latter included expressing feelings, information-seeking, relying on others and seeking social support, taking care of oneself, involvement with AIDS programs, political involvement, membership in AIDS support groups, and active pursuit of self-growth. Likewise, Tross and Hirsch (1988) recommended that the best therapy for PWAs is to teach them coping skills in a supportive environment,

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especially through participation in peer support groups. Indeed, seeking social support may be among the most important types of active-behavioral coping.

Perceived Social Support

The network of social relationships within which an individual functions constitutes a dynamic, ever-changing context for stress and coping. Social relationships can serve as important resources for the person, but may also present demands and be a source of stress as well. This is why it should not be assumed that a person's social network is synonymous with social support, according to Lazarus and Folkman (1984). They argue that it is the level and quality of social support *perceived* by the person that is important. Social support is an important resource that must be cultivated and used appropriately; utilization of social support is therefore viewed by Lazarus and Folkman as a form of coping.

Social support has been widely cited as beneficial to the psychological adjustment of PWAs (Chung & Magraw, 1992; Conwell, 1994; Dew et al., 1990; Folkman et al., 1993; Hays et al., 1992; Lackner et al., 1993; Michels & Marzuk, 1993; Miller & Riccio, 1990; Tross & Hirsch, 1988; Wolf et al., 1992). "Seeking social support" is included as one of the scales in the Ways of Coping questionnaire (Folkman & Lazarus, 1988). A second-order factor analysis of the instrument showed that the "seeking social support" scale loaded on an *involvement coping* factor (along with items measuring planful problem-solving and positive reappraisal). Involvement coping was in turn positively associated with less depressed mood in gay men (Folkman et al., 1993).

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Cognitive Theory Of Emotions

According to Lazarus and Folkman (1984), all of the foregoing is linked to mental health by a cognitive theory of emotions which posits that the values, beliefs, commitments, and goals that influence a person's cognitive appraisal of a situation determine whether that situation is experienced as stressful and controllable; this appraisal leads to the mobilization of certain coping strategies (including the utilization of social support) which in turn help to shape the emotions that the person experiences. These effects operate reciprocally as well—emotional responses can shape subsequent cognitive appraisals.

An Application: Folkman and Colleagues' Study of Stress, Control, and Coping among Gay Men in San Francisco

This study (Folkman et al., 1993) of the effects of stress, control, and coping on mental health merits a more detailed examination because it draws directly upon Lazarus and Folkman's (1984) theory of stress and coping and serves as a model for the current study.

Participants were 425 gay and bisexual men recruited in the San Francisco area. Subjects were asked to rate on a 4-point scale the degree of stress they had experienced during the past month in each of nine domains (primary relationships, relationships with friends, relationships with family, work, finances, illnesses of close others, deaths of close others, own health, and political issues). They then were asked which of these nine domains had been the *most* stressful for them, and to indicate on a 4-point scale the degree of control they feel they have over that domain. Coping relative to this most stressful domain was assessed using a short (19-item) version of The Ways of Coping Questionnaire (WOC; Folkman & Lazarus, 1988). The WOC has participants indicate on

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a 4-point scale the extent to which they used each item (i.e., coping strategy) in attempting to deal with the most stressful domain of their lives. The short WOC yields seven scale scores: self-controlling, cognitive escape-avoidance, behavioral escape-avoidance, distancing, planful problem-solving, seeking social support, and positive reappraisal. Depressive mood was measured using a 6-item depression subscale from the Brief Symptom Inventory (Derogatis & Melisaratos, 1983). Depressive mood was measured twice, once in 1988 and again in 1989. All other variables were measured once, in 1989.

HIV serostatus and symptomatology were assessed by subject self-report. Participants were asked whether they had been tested for HIV, the date of their most recent test, their current serostatus, and whether they had been diagnosed with AIDS. They were then asked to indicate which of 15 physical symptoms, if any, they had experienced during the past year (please see Appendix D for symptom checklist). Based on these responses, "HIV status" was categorized as status unknown, HIV-negative, HIV-positive asymptomatic (zero to one symptom), HIV-positive symptomatic (two or more symptoms), or AIDS (diagnosed).

The authors performed a second order factor analysis (oblique rotation) of the seven WOC scale scores to reduce the number of coping variables. Three factors emerged: *detachment* coping (consisting of self-controlling, cognitive escape-avoidance, and distancing), *involvement* coping (consisting of planful problem-solving, seeking social support, and positive reappraisal), and *behavioral escape-avoidance* (e.g., using sex, drugs, or alcohol to escape problems), which loaded by itself. Item analysis of the behavioral escape-avoidance factor indicated that those strategies were used relatively

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infrequently; in addition, the scale had poor reliability (alpha = .29). For these reasons it was excluded from subsequent analyses.

It was found that the sample of gay men as a whole was significantly depressed relative to population norms both at time one (T1) and time two (T2), scoring 2.8 standard deviations above the mean for non-patient males. This result is in line with previous findings (e.g., Bungener et al., 1993; Chuang et al., 1992; Krikorian et al., 1995; Rosenberger et al., 1993) that gay men as a group are more depressed than the general population. A logarithmic transformation was used to normalize these positively skewed depression scores.

Cross-sectionally, HIV status was related to depression both at T1 (F [4, 411] = 3.28, p = .01) and T2 (F [4, 416] = 4.44, p = .001), with AIDS-diagnosed subjects reporting significantly more depressive mood than HIV-negative, HIV-positive asymptomatic, or status unknown. There were no significant differences between AIDS-diagnosed and HIV-positive symptomatic subjects, or between HIV-positive symptomatic subjects and those in the other three categories.

Longitudinal results were somewhat different; it was found that HIV status had no significant effect on depression at T2, after controlling for depression at T1 (F [4, 415] = 1.61, p = .17).

HIV *symptoms*, however, *were* related to depressive mood at T2, even when controlling for depressive mood at T1. Subjects were grouped according to whether they reported zero or one symptom versus two or more symptoms, and an analysis of covariance was performed using T1 depressive symptoms as the covariate (F [1, 422] =

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5.66, $p = .02$). Based on this finding, the authors covaried HIV symptoms in the subsequent path analysis.

Correlations among the variables used in the path analysis are presented in Table 1. The bivariate analyses revealed, not surprisingly, that the best predictor of depressive mood at T2 was depressive mood at T1 ($r = .70, p < .001$). For this reason, depressive mood at T1 was also covaried in the subsequent path analysis.

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Table L-1

Bivariate correlations among variables in the path analysis (from Folkman et al., 1993)

	1	2	3	4	5	6	7
1 Depressive mood T1	1.00	.18**	.41**	-.15**	.31**	-.21**	.70**
2 HIV symptoms		1.00	.23**	-.01	.09*	-.02	.21**
3 Stress			1.00	-.20**	.29**	-.09*	.54**
4 Control				1.00	-.03	.21**	-.18**
5 Detachment					1.00	-.23**	.38**
6 Involvement						1.00	-.31**
7 Depressive mood T2							1.00

*$p < .05$; **$p < .001$.

Folkman and her colleagues hypothesized that subjects who appraised the most stressful domain of their lives as controllable would rely more on involvement coping, while those who felt out of control of this domain would rely on detachment or avoidance coping. It was further expected that involvement coping would be negatively associated with depressive mood, while detachment coping would be positively associated with depressive mood. Thus, stress would exert its effect on depressive mood via the mediating effects of control and coping. The results of the path analysis are shown in Figure 1.

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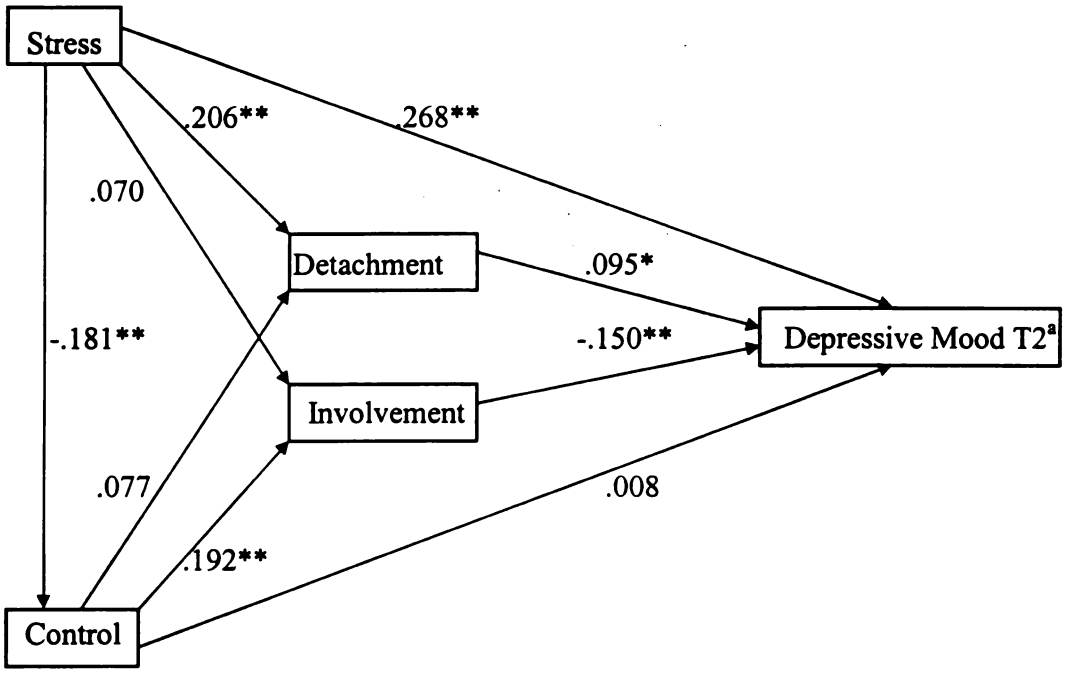
Figure L-1

Path analysis from Folkman et al. (1993).



*$p < .05$; **$p < .01$

[a] Depressive mood at T1 and HIV symptoms are covaried in all analyses.

As predicted, the path analysis indicated that increased stress was negatively related to feeling in control; feeling in control was in turn positively related to involvement coping; and involvement coping was negatively related to depressed mood. Also as expected, detachment coping was positively related to depressed mood. However, contrary to expectations, this effect was not mediated by appraisal of control; instead, stress exerted its effect on detachment coping *directly*. Also contrary to expectations was a significant direct effect of stress on depressive mood. As Figure 1 indicates, this direct path from stress to depressed mood is the strongest effect in the model (beta = .27, $p <$ .01).

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Overall, the model accounted for 60% of the variance in T2 depressed mood (adjusted $R^2 = .60$). The covariates, depressed mood at T1 and HIV symptoms, accounted for 50% of the total variance; stress, control, and coping accounted for the other 10%, a statistically significant increase ($F = 21.89, p < .001$).

These results provide partial support for Folkman et al.'s model. The data suggest that stress affects depression in part through the negative effects of passive, avoidance-focused coping strategies that are positively associated with depressed mood. However, if individuals appraise the stressful situation as controllable, they are more likely to bring involved, problem-focused coping strategies to bear, which are negatively associated with depressed mood.

The data fall short of Folkman et al.'s expectations in two important ways, however. First, there is the unexpected asymmetry in the relationship among stress, appraisals of control, and coping. That is, appraisals of control mediated the effects of stress on involvement coping, but not on detachment coping. Instead, stress exerted its effect on detachment coping directly. Folkman et al. suggest that this problem may stem from assessing control and coping in one domain only, thus lowering the reliability of these measures. The reliability of the coping measure is further compromised by the fact that it is a short version of the original WOC, and omits two of the scales found in the full-length version of the instrument. The current investigation will attempt to address some of these methodological concerns.

Second, the significant direct pathway between stress and depressed mood suggests that there may be other important variables mediating between stress and

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depression that are not accounted for by Folkman et al.'s model. One candidate for such a factor—shame—will be introduced and discussed in more detail below.

Another potential problems with Folkman and colleagues' study is the confounding of HIV serostatus with HIV symptoms. The variable "HIV status" as defined by Folkman et al. combines HIV serostatus, number of HIV symptoms, and whether one has received an AIDS diagnosis. This confounds "HIV status" with the "HIV symptoms" variable used in the path analysis. In effect, these two variables are simply different ways of collapsing the continuous variable "number of symptoms" into a categorical variable (with the addition of HIV serostatus in the case of the "HIV status" variable). By collapsing HIV symptoms into a categorical variable and adding in HIV serostatus, information is lost (by decreasing the measurement level of the HIV symptoms variable) and one becomes unable to differentiate the psychological effects of *knowledge* of HIV-positive serostatus (irrespective of symptoms) from those of the *experience* of HIV-related symptoms. It is an assumption of the current study that these constitute two distinct adaptive contexts within which the individual may experience different kinds of psychological distress presenting different demands on coping and adjustment resources. For this reason these two variables will be kept conceptually distinct in this study. HIV serostatus will be measured as a binary categorical variable: HIV-positive or HIV-negative. Number of HIV symptoms, on the other hand, will be treated as a continuous variable.

The present study will also depart from Folkman et al. (1993) in that HIV serostatus and HIV symptoms will be included in the full path model. It is believed that

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These concerns notwithstanding, Folkman et al. (1993) provide a valuable example of research on psychological functioning in PWAs from the stress and coping perspective of Lazarus and Folkman (1984). Especially important are the longitudinal nature of the study (which unfortunately cannot be duplicated in the present investigation), and the use of the powerful statistical technique of path analysis, which permits the examination of structural relationships among variables. The current investigation will use Folkman et al.'s (1993) work as a model (attempting to address some of the methodological concerns noted above), and will seek to extend that model as described below.

EXTENDING THE STRESS AND COPING MODEL

Lazarus and Folkman (1984) provide an elegant theoretical model with which to investigate stress and coping processes and their emotional outcomes, and Folkman et al. (1993) apply this theoretical framework to empirical research involving PWAs. The stress and coping model is an advancement over other approaches in that it is process-oriented (rather than static) and allows for reciprocal causality. It is also an improvement over past efforts in that it does not look solely at static person factors (i.e., traits), but is concerned instead with the dynamic interplay of both person *and* environmental factors that come to bear in particular stressful situations. The model therefore does justice to the complexity of human responses to stressful situations.

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In their model of stress and coping, Lazarus and Folkman acknowledge the existence of unconscious and non-rational influences on the appraisal and coping process. Appraisal is not necessarily a conscious, rational, or intentional process, according to the authors. "[A]n individual may be unaware of any or all of the basic elements of an appraisal" (1984, p. 52). Lazarus and Folkman appear to welcome the integration of their theoretical model with psychodynamically-oriented perspectives.

> "Our position allows the concept of appraisal to be integrated with depth or psychoanalytic-type theories....Appraisal theory thus need not be restricted to personal agendas that are accessible and easily operationalized; less accessible agendas and processes, about which psychoanalytic theorists have been most vocal, are also fair game. Appraisal theory is in a sense neutral with respect to the specific personal agendas that are conceived to shape it" (1984, p. 52).

Their claim of neutrality notwithstanding, Lazarus and Folkman's model—including the cognitive theory of emotion linking appraisals and coping to emotional responses to stressors—emphasizes *conscious* cognition and *overt* behavior. In practice, the research based on this model has not adequately addressed the role that *unconscious* or *intrapsychic* factors may play in shaping appraisals of stress and control, coping behaviors, and mental health.

One such intrapsychic factor is *internalized affect* (Kaufman, 1989). Lazarus and Folkman are concerned with overt emotional responses to stressors, and their process-oriented approach acknowledges that these emotional responses will in turn influence subsequent cognitive appraisals. However, internalized, unconscious, or unexpressed affects may also play a major role in psychological symptom formation and distress

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(Kaufman, 1989; Lewis, 1971; Lewis, 1987). This observation is not inconsistent with Lazarus and Folkman's model, but these internalized affects have not been adequately assessed alongside overt cognitive appraisals and coping behaviors.

Regarding PWAs, it is hypothesized that the most salient internalized affect is *shame* associated with the stigmatizing nature of the disease (Herek & Glunt, 1988; Kaufman, 1989; Levenson, 1988; Morin, Charles, & Malyon, 1984; Nichols, 1983). For PWAs who are also members of particular risk or transmission groups, the shame of the HIV/AIDS diagnosis is compounded by already-existing stigma concerning sexual orientation or IV drug use (Morin, 1988; Nichols, 1983). The current project therefore proposes to examine shame in the context of stress, appraisal, and coping in PWAs. It is hoped that the inclusion of shame will result in a more fully specified model of the relationship among HIV/AIDS, stress, coping, and depression.

THE ROLE OF SHAME

This study draws primarily from an *affect theory* perspective on shame. This perspective was developed by Silvan Tomkins, and further elaborated by Gershen Kaufman with respect to shame. Affect theory has been selected as the theoretical viewpoint which can best guide the present investigation for several reasons. Affect theory, unlike more traditional psychoanalytic approaches (e.g., Lewis, 1971; 1987)[5], differentiates the affect system from the drive system, thereby providing a more precise language with which to describe and predict emotional experience (Kaufman, 1989).

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[5] It is acknowledged that many other theoretical treatments of shame exist as well, notably those of Lynd (1958), Nathanson (1994), Tangney (1995), and Wurmser (1981). However, a full discussion of the many varied perspectives on shame is beyond the scope of the current study.

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Secondly, Tomkins and Kaufman argue persuasively for the primacy of the affect system over the drive system. Affect theory subsumes and integrates classical psychoanalytic theory and object relations theory within a general theory of the emotions, one in which innate drives and relationships with both "real" and internalized objects derive their power over behavior and personality through their fusion with affect. Thirdly, from a practical standpoint, affect theory, unlike other approaches, has led directly to the development of standardized instruments for measuring internalized shame. Rather than attempting to infer shame from clinical material as Lewis (1971) has, instruments such as the Internalized Shame Scale (ISS; Cook, 1994) allow for more objective investigations of the impact of internalized shame on psychological health.

What follows is a brief discussion of shame and its impact on psychological distress from the perspective of affect theory. For a more expanded discussion of affect theory in general, the place of shame within that framework in particular, and a comparison of the affect theory and psychoanalytic approaches to understanding shame, see Appendix C.

Affect Theory

Tomkins (1995) considers affect, both positive and negative, to be the primary innate motivating mechanism of human behavior. This view differs from the traditional psychoanalytic perspective, in which the drives are primary. Tomkins considers drives and affects to constitute separate systems, both of which are important motivators of behavior (Kaufman & Raphael, 1996). The affect system, however, is considered primary over the drive system because the drives require amplification by affects in order to function. For example, the sex drive must be fused with excitement affect in order to

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function properly; any impediment to excitement, such as shame, disgust, or fear, will quickly disrupt the sex drive and in many instances make it impossible for individuals to function sexually until the impediment is removed. Likewise, the hunger and thirst drives can be quickly overridden by disgust, which functions to prevent the ingestion of toxic or noxious substances (Kaufman & Raphael, 1996).

Combinations of affects (positive or negative), along with the stimuli or situations that trigger them, are stored in memory as *scenes* according to Tomkins (1995). The more intense the affect attached to the original object or event, the more memorable and powerful the scene. Scenes involving similar affects can become interconnected and *magnified*, thereby increasing their psychological "footprint" and exerting considerable influence over one's psychic life. Scenes in turn generate *scripts*, which Tomkins defines as rules for action and cognition that allow one to predict, interpret, control, and respond to specific scenes (Kaufman & Raphael, 1996). The affect theory concept of script appears similar to the notion of coping strategies found in the work of Lazarus and Folkman.

Scenes eventually disappear from full consciousness until they are later reactivated by a similar scene, or by language that evokes the old scene. When scenes are reactivated, a substantial portion of the original scene may remain inaccessible to conscious experience. As long as important aspects of the scene remain inaccessible, the scene resists control or modification, and one is prone to reexperience the scene again and again (Kaufman, 1989).

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The Affect Of Shame

Tomkins defines shame as "an innate *affect auxiliary* response and a specific inhibitor of continuing interest and enjoyment....The innate activator of shame is the incomplete reduction of interest or joy...." (Tomkins, 1995, p. 84, emphasis in original). Thus, according to Tomkins, shame is evoked whenever one experiences a *partial* reduction in the positive affects of interest—excitement or enjoyment—joy. In other words, shame is triggered when there is a breach or interruption in the self's experience of positive affect vis-à-vis self or other, *but only when the breach or interruption is incomplete*, leaving vestiges of the positive affect intact. This creates a sense of longing for reinstatement or reparation of the relationship or situation that existed prior to the breach (Kaufman, 1989). If the positive affect is *completely* reduced—if there is *no* longing for a continuation or reinstatement of the previous positive affective state—then shame will not be experienced. There needs to be an ongoing investment in the relationship in order for shame to be evoked.

This idea is readily applicable to interpersonal relationships and affective bonds. Kaufman (1989;1992) refers to the affective bond between two people as the "interpersonal bridge." Whenever this bridge is severed or damaged, whether due to a fight, betrayal, or other failure, strong negative emotions ensue, including shame. The deeply disturbing feeling of shame strongly motivates one to restore or repair the breach to the interpersonal bridge. Thus shame functions to motivate the reparation and maintenance of interpersonal bonds. Shame does not, however, require the presence of another person in order to be felt. The self can and does shame the self (Kaufman, 1989).

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Shame Vs. Guilt

Unlike other authors (e.g., Lewis, 1971), Tomkins does not differentiate shame and guilt as different affects per se. Rather, they represent different "affect complexes" consisting of shame as the core affect, but with differing "causes and consequences." The same may be said of shyness, inferiority, embarrassment, etc. All are considered by Tomkins (1995) to be variants of the shame experience.

Phenomenology Of Shame

"Shame....is an affect auxiliary to the affect of interest—excitement. Any perceived barrier to positive affect with the other will evoke lowering the eyelids and loss of tonus in the face and neck muscles, producing a head hung in shame" (Tomkins, 1995, p. 85). This image of shame as "loss of face" is a familiar one. Shame is a deeply disturbing experience in which one feels profoundly defective, diminished, inferior. These feelings are accompanied by hanging the head and lowering the eyes, along with increased autonomic activity and heightened self-awareness. Kaufman describes shame as feeling "*seen* in a painfully diminished sense" (1989, p. 17). It is the experience of being exposed as inferior, unworthy, lacking. Shame is experienced as an interruption of the smooth functioning of the self, and as a breach in the interpersonal bond between self and other. Shame is so disturbing precisely because it is so central to the self and to the formation of identity and self-concept, as well as to interpersonal relationships (Kaufman, 1989).

Shame is also disturbing because of the ambivalence it engenders toward the perceived source of that shame. There exists a longing for a reestablishment of the interpersonal bridge between self and other, a yearning to heal of the rift within the self

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(Kaufman, 1989). In an evolutionary sense, therefore, shame may be seen as adaptive because it motivates individuals to maintain and repair interpersonal relationships, which contribute to survival. Simultaneously, however, there may be rage and hatred experienced toward the shaming other as well as the shameful self.

Shame And Mental Health

Shame, though always disturbing, is not necessarily harmful in and of itself, and in fact plays the important role of motivating one to reestablish a positive emotional connection with the source of one's shame. However, like all affects, shame can be "magnified in frequency, duration, and intensity" according to Tomkins (1995) and thereby become psychologically harmful or "malignant." The shame experience may also be made malignant by combining it with other affects such as distress; when prolonged, that combination of affects results in depression. This process of *psychological magnification* or interconnection of shame scenes, in combination with the *internalization* of shame through shame binds, results in a self that is profoundly and malignantly bound by shame (Kaufman, 1989).

Kaufman (1989) posits that shame in combination with other negative affects will lead to a variety of shame-based syndromes. For the purposes of the present study, the relationship of shame to depressive syndromes is most relevant. Both Kaufman and Tomkins view depression as a prolonged state of shame combined with distress. Unlike traditional views that consider depression to be a direct result of inwardly-directed anger, Kaufman suggests that while this dynamic does exist, it is secondary to the more important shame-distress dynamic. *Self-blame* and *self-contempt* identity scripts are also common according to Kaufman. In the self-blame script, the self is repeatedly accused by

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the self for real or imagined transgressions, with the blaming accompanied by angry denouncement and humiliation. The self-contempt identity script, on the other hand, involves the self *rejecting* the self entirely. Self-blame and self-contempt scripts reactivate and intensify powerful shame-distress scenes and thereby exacerbate depression.

"AN EPIDEMIC OF STIGMA"

AIDS, more than any epidemic in modern times, is truly "an epidemic of stigma" (Herek & Glunt, 1988). To be stigmatized is, in effect, to be shamed by society. The stigma of AIDS stems in part from the fact that it is a deadly, infectious disease, as well as from the association of AIDS with traditionally stigmatized subgroups in society such as gay/bisexual men, IV drug users, people of color, and the poor.

AIDS is also shameful and stigmatized because of its identification as a sexually transmitted disease, despite that fact that sexual contact is only one of several transmission routes. As Tomkins reminds us: "Sexuality has from the beginning of time engaged shame" (1995, p. 406). In our Western society, sexuality is a moral issue, and is thus prone to evoke guilt (immorality shame); further, this guilt has been merged with terror over the consequences of disobedience to a wrathful God. This is especially true with respect to gay/bisexual/lesbian sexuality. This "immorality and punishment" motif is clear in social attitudes that consider AIDS to be a punishment from God visited upon homosexuals and other "wicked persons." Neisen (1990) cites such attitudes as an example of the intensification of *shame due to heterosexism* that is inflicted upon all PWAs regardless of sexual orientation.

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Finally, the powerlessness and dependency that accompany AIDS engender additional shame. Tomkins writes that "shame may be felt at the vicissitudes of fate, particularly in the face of death, when the self reluctantly acknowledges the fragility of cherished relationships" (1995, p. 404). Kaufman (1989), and Kaufman and Raphael (1996), expand upon this point. Powerlessness, when encountered in adulthood, reactivates primitive scenes of the primary helplessness experienced by infants. This state of helplessness and impotence is incompatible with adult existence, which is built upon the sense of competence and mastery gained through maturation. The adult, once again faced with the helplessness and powerlessness of childhood, feels shamed.

Kaufman (1989) discusses the *affect dynamics* of powerlessness in PWAs in more detail. An HIV/AIDS diagnosis, or just the fear or threat of contracting HIV, evokes a sense of acute powerlessness and uncertainty. PWAs must contend not only with their powerlessness, but also with the fear, anger, shame, distress, dissmell,[6] and disgust that powerlessness activates. According to Kaufman (1989), and Kaufman and Raphael (1996), the most toxic combination is fear and shame, which become magnified into humiliation and terror for PWAs. These magnified negative affects may further suppress the person's already compromised immune system, and may also reactivate old shame scenes surrounding the sense of self-identity (e.g., one's identity as a gay man) that had ostensibly been resolved long ago. The stigmatizing societal reaction to AIDS further magnifies the terror and humiliation experienced by PWAs.

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[6] *Dissmell* is defined in affect theory as an affect auxiliary that serves to protect the oxygen drive; it is the olfactory equivalent of disgust. See Appendix C for a more complete discussion.

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Powerlessness may impinge upon any one of a number of *security areas* according to Kaufman (1989). Security areas include one's intimate relationships and family, home, health, career and work, identity, etc. For the PWA, powerlessness is experienced most immediately in the domains of health and future prospects, with serious additional threats to relationships, home, employment, and other sources of support. When security areas are threatened, rapid magnification of negative affect results. For PWAs, these affects include primarily shame, terror, rage, and distress. Much of this rapidly magnifying negative affect may be systematically suppressed, to prevent its being experienced as overwhelming. Such suppression, however, leads to *backed-up affect*, which in turn may produce physical stress reactions such as elevated blood pressure and other endocrine changes. This chain of events, beginning with powerlessness or other threats to the person's security areas and culminating in physical stress and psychosomatic illness, is termed the *powerlessness-affect-stress cycle* by Kaufman (1989). This cycle may further degrade the already fragile health of PWAs.

AIM OF THE PRESENT STUDY

The powerlessness and uncertainty that accompany an AIDS diagnosis, combined with the stigmatizing reactions of society, family, and friends, make AIDS the most powerfully shame-infused disease since leprosy. Given this, it is surprising that *no* systematic empirical study of the role of shame in mental health outcomes for PWAs has yet been published. Not a single research article was found that systematically measured shame in PWAs using standardized instruments with demonstrable validity and reliability. This is not to say that none of the articles *discusses* the shame experienced by

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PWAs. On the contrary, such discussions are common, with shame issues reviewed in the context of psychotherapeutic work with PWAs (Barret, 1989; Bradley, 1991; Lippmann, James, & Frierson, 1993; Martin & Henry-Feeney, 1989; Schaffner, 1994; Shernoff, 1990), support groups for PWAs (Chung & Magraw, 1992; Millan & Ivory, 1994), and observation and psychiatric consultations with PWAs in hospice and hospital settings (Carr, 1989; Dilley, Ochitill, Perl, & Volberding, 1985). There are also a number of general think-pieces and review articles that raise the issue of shame and stigmatization in PWAs (Herek & Glunt, 1988; Levenson, 1988; Morin et al., 1984; Nichols, 1983). All of these articles make important contributions to the literature, particularly with respect to increasing our understanding of the phenomenology of living with HIV/AIDS. None of them, however, explicitly measures shame, nor documents the relationship of shame to psychological distress among PWAs.

The present study therefore extends Lazarus and Folkman's stress and coping model—which emphasizes the importance of cognitive appraisals of stress, cognitive appraisals of control, and subsequent coping behaviors—by adding to it the measurement of internalized shame. The effects of stress, coping, and shame on depressive symptomatology were investigated within a sample of gay men with and without HIV/AIDS, as well as within a comparison sample of heterosexual male college students. It was hoped that this more elaborated model would increase our understanding of the factors associated with psychological distress among gay men with (and without) HIV/AIDS, as well as increase our understanding of the relationships between health status, stress, coping, shame, and depression among men in general.

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The effects of HIV serostatus were assessed within the gay sample only, due to the unfortunate fact that the serostatus of the college student sample is largely unknown since most of these men have not been tested for HIV. Heterosexual male college students are much less likely to get tested for HIV compared to gay men, and time and resources did not permit recruitment of a sample of heterosexual men aware of their HIV status. However, all of the men in both samples were asked about the presence of physical symptoms related to HIV/AIDS.

VARIABLES

1. Sexual orientation
2. HIV serostatus (gay sub-sample only)
3. Degree of internalized shame
4. Number of physical symptoms
5. Degree of perceived stress
6. Degree of perceived control over stressful situations
7. Degree to which involvement (active) coping is used
8. Degree to which detachment (avoidance) coping is used
9. Degree of depressive symptomatology

HYPOTHESES

Bivariate Hypotheses:

1. **The gay sample will evince greater internalized shame than the heterosexual sample**, due to the stigma associated with homosexuality (Kaufman & Raphael, 1996; Nichols, 1983).
2. **The gay sample is expected to manifest more depressive symptomatology than the heterosexual sample**, based on previous findings (Bungener et al., 1993; Chuang et al., 1992; Folkman et al., 1993; Krikorian et al., 1995; Rosenberger et al., 1993).

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3. **Within the gay sample, HIV-positive serostatus will be associated with greater internalized shame** because of the stigma associated with HIV/AIDS (Herek & Glunt, 1988; Kaufman, 1989).
4. **More physical symptoms will be associated with greater internalized shame**, in part due to the stigmatizing and disfiguring nature of many AIDS-related symptoms, as well as the increasing sense of powerlessness one experiences with declining health (Kaufman, 1989).
5. **More physical symptoms will be associated with greater overall stress level**, since symptoms are perhaps the most significant AIDS-related stressor (Folkman et al., 1993; Hays et al., 1992; Ostrow, Monjan, et al., 1989).
6. **Greater perceived control will be associated with increased use of involvement coping** (Folkman et al., 1993; Lazarus & Folkman, 1984).
7. **Lower perceived control will be associated with increased use of detachment coping** (Lazarus & Folkman, 1984).
8. **Lower perceived control will be associated with greater internalized shame**, due to an increased feeling of powerlessness (Kaufman, 1989).
9. **Greater use of involvement coping will be negatively associated with depression** (Folkman et al., 1993; Lazarus & Folkman, 1984).
10. **Greater use of detachment coping will be positively associated with depression** (Folkman et al., 1993; Lazarus & Folkman, 1984).
11. **Greater internalized shame will be positively associated with depression** (Kaufman, 1989).

Multivariate Hypotheses (Path Models):

A pair of path models, based in part on Folkman et al. (1993), will be tested (see Figures 1 and 2, below). Figure 1 represents the central multivariate research hypothesis. In this model, the structure of the relationships among stress, control, coping, and depressed mood is based on the path model tested by Folkman and her colleagues (1993; see Figure L-1, page 25, above). The model depicted in Figure 1 differs from that tested by Folkman et al. in that physical symptoms and HIV serostatus are explicitly included as variables in the model, rather than controlled for. It also differs from Folkman's model in the inclusion of shame. These three variables—HIV status, physical symptoms, and internalized shame—are hypothesized to be important precursors to the cognitive/behavioral stress and coping processes modeled by Folkman and her colleagues. Finally, the models to be tested differ from Folkman's in that the direct links between stress and depression, as well as between control and depression, have been removed. In Folkman et al. (1983), the direct link between stress and depression was empirically observed but was not predicted by the theory. Folkman speculated that the existence of this direct link indicated that the other variables in her model did not adequately account for the relationship between stress and depression. It is hoped that, with the addition of an affect component to the model (i.e., shame), the direct link between stress and depression will become less important, if not trivial. Similarly, the direct link between control and depression is not predicted by the theory and was shown by Folkman and colleagues to be non-significant, so is excluded here as well. Excluding these direct links provides a stricter test of the theory that the effects of stress and appraisals of control on depression are not direct, but are mediated by coping behaviors.

The model shown in Figure 1 predicts that positive HIV serostatus will be associated with increased shame, increased stress, and increased physical symptoms. Increased symptoms will in turn be associated with increased stress, increased shame, and decreased feelings of being in control. Increased shame will be associated with increased stress, decreased control, greater use of detachment coping, and lesser use of involvement coping. Increased stress will be associated with decreased control, greater use of detachment coping, and lesser use of involvement coping. Decreased control will be associated with greater use of detachment coping and lesser use of involvement coping. Finally, greater use of detachment coping strategies will be positively associated with increased depressed mood, while greater use of involvement coping strategies will be negatively associated with depressed mood. This model will be tested for gay subjects only, since it includes HIV serostatus as a variable.

Figure 2 depicts a model very similar to Figure 1, except that HIV serostatus is not included. This model will be tested for the heterosexual sample only.

Figure 1

Path model for gay sub-sample (HIV status known).

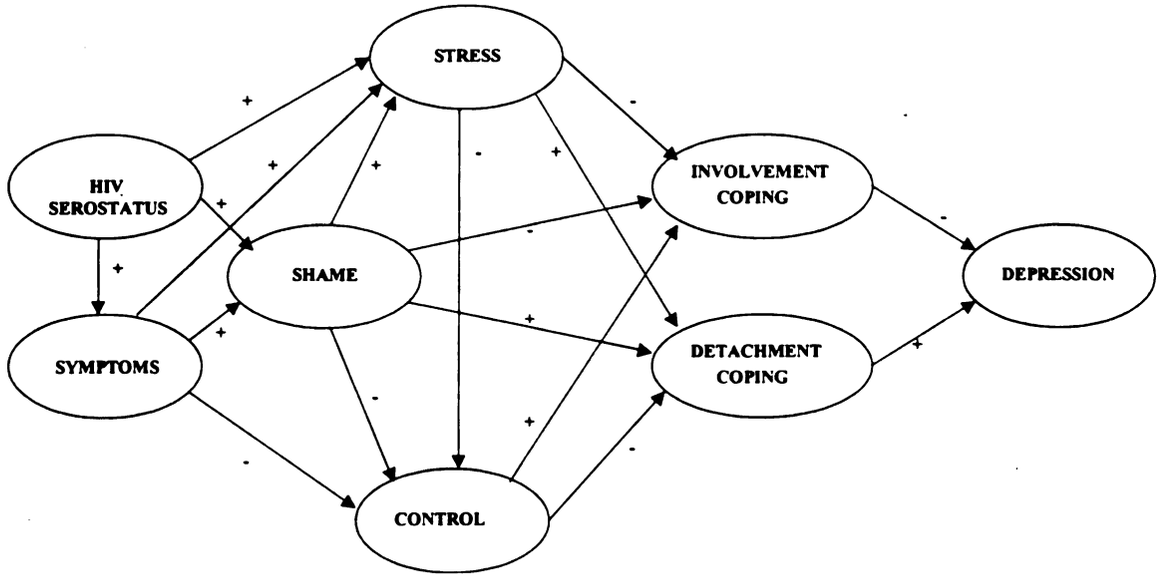
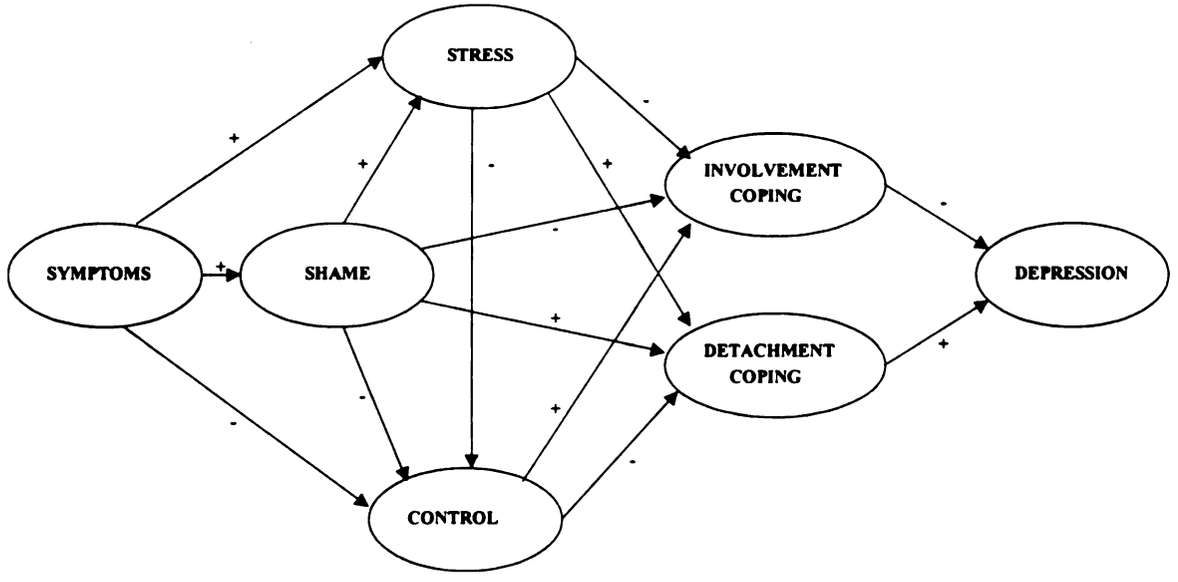


Figure 2

Path model for heterosexual sub-sample (HIV status unknown).



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Chapter 2

METHOD

RECRUITMENT OF PARTICIPANTS

Statistical Power Analysis

It has been suggested (Richard DeShon, personal communication) that the sample size required for sufficient power in structural modeling can be estimated by considering the sample size needed for sufficient power to detect the individual correlations between each variable in the model. Using guidelines provided by Cohen (1992), the sample size needed to achieve power of .80 to detect a small (e.g., $r = .10$) effect with alpha = .05 is 783. The N needed to detect a medium-sized effect (e.g., $r = .30$) under these same conditions is only 85. While it was not feasible (given limitations of time and resources) to recruit a sample size of nearly 800, it was possible to recruit a sample large enough to permit detection of medium-sized effects.

It was proposed that a minimum of 100 gay men be recruited for the study, approximately 50% HIV-positive and 50% HIV-negative. This was achieved; the gay sample consists of 107 men with known HIV serostatus, 50 of whom (47%) are HIV-positive.

Likewise, it was proposed that a minimum of 100 male college students be recruited as a comparison sample. This, too, was achieved; the heterosexual college student sample size is 112.

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Gay Male Community Sample

HIV-negative gay men were recruited in a variety of ways. Michigan State University (MSU) campus organizations serving gay students, faculty, and staff were approached and requests made for their assistance in recruiting subjects. The Alliance of Lesbian-Bi-Gay and Transgendered Students (ALBGTS) placed a link to a written notice about the study on their World Wide Web page. The Gay-Lesbian Faculty-Staff Association (GLFSA) maintains an electronic mail (email) list that serves the MSU lesbian-bi-gay (LBG) community. A notice about the study was posted to this list by LBG Coordinator Brent Bilodeau, an MSU staff member working within the Multicultural Development Unit of the Office of the Vice President for Student Affairs and Services. The study announcement was thereby circulated via email to all individuals subscribing to the list, with good response.

Written notices were also placed in print publications with a high LBG readership. These included the *Capital Times* and *Lansing Association for Human Rights Newsletter*, both covering the Lansing area, and the *Outpost*, covering Ann Arbor, Detroit, and the rest of southeastern Michigan. In addition, flyers were posted (with permission) in several Lansing-area businesses that cater to a LBG clientele. Finally, participants were recruited through word-of-mouth notification about the study in the Lansing LBG community.

Each survey packet contained a cover letter, the questionnaire (including informed consent notification), and a pre-addressed business reply envelope to be used for returning the completed survey. In all, 81 survey packets were mailed to persons requesting them, and 69 were returned, for a response rate of 85%.

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The above recruitment procedures required potential participants to reveal their names and mailing addresses (and often their email addresses as well) in order to have survey packets and compensation (discussed below) mailed to them. All such personal information was securely stored and kept strictly confidential. The survey questionnaires themselves were identified by unique ID number only, and also securely stored. Once a completed survey was returned and the participant's compensation mailed to him, his name and address information was destroyed, unless he requested that a summary of the survey results be sent to him at a future date, after which time the identifying information will be destroyed.

HIV-Positive Gay Male Sample

Gay men with HIV/AIDS were recruited primarily through the Lansing Area AIDS Network (LAAN), a local agency that coordinates services for PWAs throughout the Lansing area, although several HIV-positive men were recruited from the wider community using the techniques outlined above. The identities of LAAN clients participating in the study were unknown to the researcher. LAAN staff mailed out letters to all of their gay male clientele informing them about the study, notifying them that a survey would be sent to them, and explaining that their participation was completely voluntary and that they would remain anonymous. Survey packets were then mailed out one week later. Each survey packet was assigned a unique ID number, matched to each client by LAAN staff. As each completed packet was returned by mail to the researcher (using the enclosed pre-addressed business reply envelope), LAAN staff members were given the survey ID number, which allowed them to identify the participant and mail him his compensation. One wave of reminder letters was sent out to individuals who had not

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yet returned their surveys after three weeks. In all, 70 survey packets were mailed out to LAAN clients, and 44 were returned, for a response rate of 63%.

Compensation for Gay Male Participants

To provide an incentive for study participation, as well as to compensate them for their time and effort, all gay male participants who returned a completed survey packet received a $10 gift certificate[7] from Meijer, a local discount chain selling a wide variety of goods including groceries, clothing, toiletries, and medicine. The gift certificates were purchased directly from Meijer and mailed to each participant by the researcher (or by a LAAN staff member if respondent was a LAAN client) upon receipt of his completed survey.

The final N for the gay male sample was 116, which includes 50 HIV-positive men (44 LAAN clients and 6 men recruited from the wider community), 57 HIV-negative men, and 9 men who had not been tested for HIV and who therefore did not know their serostatus. Of the 66 gay men not recruited through LAAN, 63 were recruited from the community and 3 were identified from within the college student sample, discussed below.

Appendix A contains an example of written notices used in participant recruitment.

Heterosexual Male College Student Sample

Male college students were recruited from the MSU Department of Psychology subject pool. Students received academic credit (psychology experiment credits, part of

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[7] This compensation was made possible in part through a Blue Cross/Blue Shield of Michigan Foundation Student Award Program grant in the amount of $3,000.

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the course requirements for certain psychology courses) for their participation. All 115 students who attended the group data collection sessions completed the survey, for a response rate of 100%. Three of the students indicated in the survey that they are homosexual, and therefore were added to the gay male sample. The final N for the heterosexual sample was 112.

PROCEDURE

Because of the sensitive nature of this research topic, participants were required to be at least 18 years of age to be eligible for the study. Participants were told that they were participating in a study of health, stress, and emotional well-being. Informed consent was obtained from all participants using a form included in each survey questionnaire (see Appendix B).

For the gay sample, self-administered questionnaire packets were distributed to study participants by mail (or, less commonly, in person) by the principal investigator. In the case of LAAN clients, the surveys were distributed anonymously by LAAN staff (see above).

MSU psychology students completed their questionnaires in large groups. Classroom space was reserved for these data collection sessions, and students signed up to attend at their convenience. These sessions typically ran 30-40 minutes, and each student received his experiment credit immediately upon completion of the survey.

All respondents received a debriefing letter after returning their surveys. This letter was mailed to gay respondents along with their gift certificates. For the student

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sample, the debriefing letter was given to each participant at the end of the data collection session when he turned in his survey and received his credit.

No identifying information was included in the research packets; individual packets were identified by a unique case number only. Completed research protocols were stored in a locked filing cabinet located in the home of the principal investigator. Data entered into electronic form for the purpose of analysis were stored in password-protected files on a personal computer located in the home of the principal investigator.

MEASURES

An example of the final survey, containing all of the research instruments described below, can be found in Appendix B.

Demographic Information

Participants were asked for demographic information such as date of birth, sexual orientation, race/ethnicity, level of education, and household income. Participants were also asked about frequency of computer usage, access to the Internet and World Wide Web, and whether they would have been more or less likely to fill out the questionnaire if it had been available online. These computer-oriented questions were included to facilitate comparison of these data with future data collected over the Internet, and are not used as variables in the current study.

HIV Serostatus

HIV serostatus was determined by subject self-report. Participants were asked whether they have had the HIV antibody test, the date that the test was most recently administered, and their current serostatus. HIV-positive participants were also asked whether they have been diagnosed with AIDS. As expected, a majority (94%) of the

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heterosexual college student sample had never been tested for HIV, and therefore the effects and correlates of HIV serostatus could not be assessed for this group.

HIV Symptoms

Following Folkman et al. (1993), participants were presented with a list of 16 physical symptoms and asked to indicate whether they had experienced each during the past year. Space was also provided for participants to mention any symptoms they had experienced that were not included in the list; up to 5 additional symptom mentions were coded, for a possible range of 0-21 symptoms.

Stress

Similarly to Folkman et al. (1993), stress was assessed using an 11-item scale that asks participants to rate on a 4-point Likert scale how stressful (0 = not at all to 3 = extremely) the following 10 life-domains had felt during the past month: primary relationships, relationships with friends, relationships with family, work, school, finances, illnesses of close others, death of close others, own health, and political issues. Participants could also nominate and rate an "other" category. Ratings were summed to create a total stress score (range = 0-33). Test-retest reliability information is not available for this measure or for the measure of control (see below), as these measures were created for one specific study (Folkman et al., 1993) and have not been widely used.

Appraisals of Control

For each of the domains rated for stress, participants rated the extent to which they felt they had control over that domain. Ratings were given on a 4-point scale (0 = almost never to 3 = almost always). Unlike Folkman and her colleagues (1993), who assessed control using a single item concerning the most stressful life domain only, control over all

10 (11 if "other" is endorsed) domains was measured, and these ratings summed to create an overall control score ranging from 0-33. This method was intended to provide a more reliable and comprehensive measure of control, the lack of which Folkman and her colleagues noted as a shortcoming of their 1993 study. Participants were still asked to indicate their most stressful life area in order to assess coping within that domain.

Stress and Control Quotients

Participants varied in the number of life areas that were applicable to them and that could therefore be rated for stress and control. For example, not every participant was currently attending school, or had recently experienced the death of someone close to him. These life areas were therefore marked "N/A" and did not contribute to the overall stress or control summary score. Thus, the total raw scores for stress and control varied partly as a function of the number of applicable life areas rated. This made it difficult to compare the raw scores of participants who endorsed different numbers of life areas.

For example, a person for whom all 11 life areas were applicable, and who experienced "a little" stress (rating = 1) in 10 of those areas and "quite a bit" of stress (rating = 2) in the 11^{th} area would have a total raw score of 12. Another person for whom only 4 life areas were applicable, but who rated all four as "extremely" stressful (rating = 3), would also produce a raw score of 12. Are these two individuals really experiencing an equivalent amount of stress? It is very difficult to say.

To deal with this problem, stress and control quotients were computed. The numerator of the quotient is the raw score (i.e., the sum of the ratings for stress or control). The denominator is the total amount of stress or control possible, given the number of life areas being rated (i.e., the number of life areas multiplied by 3, the highest

possible rating). The result is expressed as a proportion of the total stress or control possible, given the number of life areas rated (range 0.00 – 1.00). This allowed comparison of the stress and control scores of participants whose ratings were based on differing numbers of life areas.

Coping Strategies

Coping was measured using the Ways of Coping (WOC) questionnaire (Folkman & Lazarus, 1988), a self-report scale that presents participants with a range of cognitive and behavioral strategies that may be used in attempting to cope with stressful situations. The WOC scale used in this study is a modified version developed by Folkman and her colleagues (Folkman, Chesney, Cooke, Boccellari, & Collette, 1994) for use with gay men. It is slightly longer than the standard WOC (73 vs. 66 questions). This is due in part to the inclusion of four separate items that assess coping by using food, alcohol, recreational drugs, and prescription drugs (the standard WOC uses just one item for all of these). In addition, the modified scale includes items about having sex with one's primary partner, having anonymous sex, having non-anonymous sex, and using meditation or imagery. These additional items presumably make the scale more inclusive of the types of coping utilized by gay men, but the items are also non-specific enough to be used with a general population sample. Therefore, participants in both the gay and heterosexual samples were given the modified WOC questionnaire for the sake of comparability of responses.

Participants were asked to rate each item according to the frequency with which they used that strategy to attempt to cope with their most stressful life area. Ratings were made on a 4-point scale (0 = does not apply/not used to 3 = used a great deal). Folkman

and colleagues' (1994) scoring rules for the instrument yield eight scale scores, obtained by summing the ratings for the items that load on each scale: accepting responsibility (or self-blaming), behavioral escape-avoidance, cognitive escape-avoidance, distancing, confrontive coping, planful problem solving, positive reappraisal, and seeking social support. These scales can subsequently be summed into two second-order scales: detachment coping and involvement coping. See Table 1 for the item composition of the WOC subscales. See "Results" section (below) for data on internal/external consistency and reliability of the WOC scales as well as the other scales used in this study.

Table 1
Items comprising the Ways of Coping subscales.

Involvement Coping
Confrontive Coping
1. Tried to get the person responsible to change his or her mind.
2. I expressed anger to the person(s) who caused the problem.
3. I apologized or did something to make up.
4. I let my feelings out somehow.
5. I stood my ground and fought for what I wanted.
Planful Problem-Solving
1. Just concentrated on what I had to do next—the next step.
2. I tried to analyze the problem in order to understand it better.
3. Bargained or compromised to get something positive from the situation.
4. I made a plan of action and followed it.
5. I changed something so things would turn out all right.
6. I knew what had to be done, so I doubled my efforts to make things work.
7. I came up with a couple of different solutions to the problem.
Positive Reappraisal
1. Looked for the silver lining, so to speak; tried to look on the bright side of things.
2. I told myself things that helped me to feel better.
3. I was inspired to do something creative.
4. Changed or grew as a person in a good way.
5. I came out of the experience better than when I went in.
6. I found new faith.
7. I rediscovered what is important in life.
8. I changed something about myself.
9. I prayed.
10. I meditated or used imagery.
Seeking Social Support
1. Talked to someone to find out more about the situation.
2. Accepted sympathy and understanding from someone.
3. I talked to someone who could do something concrete about the problem.
4. I asked a relative or friend I respected for advice.
5. I talked to someone about how I was feeling.

(Table continues)

Table 1 (concluded)
Items comprising the Ways of Coping subscales.

Detachment Coping

Behavioral Escape-Avoidance

1. I tried to make myself feel better by drinking.
2. I tried to make myself feel better by using recreational drugs, e.g....
3. I tried to make myself feel better by using prescribed mood-altering drugs, e.g..
4. I took a big chance or did something very risky.
5. I had anonymous sex to feel better.

Cognitive Escape-Avoidance

1. Hoped a miracle would happen.
2. I wished that I could change what had happened or how I felt.
3. I daydreamed or imagined a better time or place than the one I was in.
4. I wished that the situation would go away or somehow be over with.
5. I had fantasies or wishes about how things might turn out.
6. I prepared myself for the worst.
7. I went over in my mind what I would say or do.

Distancing

1. Went on as if nothing had happened.
2. I tried to keep my feelings to myself.
3. Tried to forget the whole thing.
4. I waited to see what would happen before doing anything.
5. I didn't let it get to me; I refused to think too much about it.
6. I made light of the situation; I refused to get too serious about it.
7. I accepted it, since nothing could be done.
8. I tried to keep my feelings from interfering with other things too much.

Self-Blaming[a]

1. Criticized or lectured myself.
2. I realized I brought the problem on myself.
3. I made a promise to myself that things would be different next time.

[a]This scale called "Accepting Responsibility" by Folkman.

According to Folkman and Lazarus (1985), and Folkman (personal communication), it is inappropriate to speak of test-retest reliability for the WOC because of the process-oriented nature of the construct it purports to measure. The instrument is not meant to measure stable coping traits or styles, and it is expected that a person's coping scores on the WOC will change from situation to situation and across time as the degree of threat of particular stressors waxes and wanes. There are some, however, who take issue with this assertion (Parker, Endler, & Bagby, 1993).

Internalized Shame

Shame was measured using the Internalized Shame Scale (ISS; Cook, 1994), a 30-item self-report questionnaire that focuses on the phenomenological experience of internalized shame. Participants were asked to rate how often they feel or experience what is described in each item. Ratings were made on a 5-point Likert scale (0 = Never to 4 = Almost Always). The instrument consists of 24 negatively-worded shame items and 6 positively-worded "self-esteem" items included primarily to reduce negative response set. Factor analyses have consistently yielded one unitary shame construct derived from summing the response categories of the 24 shame items (Cook, 1994). Investigators may also use the 6 self-esteem items as a separate self-esteem scale if they wish. Cook (1994) reported good internal consistency for the shame scale with respect to both clinical (alpha = .96) and non-clinical (alpha = .95) samples. He reported a median item-total correlation of .70 in the clinical sample and .63 in the non-clinical sample. Cook also reported a 7-week test-retest reliability of .84 in a subset of the non-clinical sample.

Depression

Depressive symptomatology was measured using the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977), a 20-item self-report scale designed to measure current depressive symptomatology in the general population. The CES-D items, culled from previously validated depression scales, were selected to emphasize the affective (as opposed to vegetative) aspects of depression, which include depressed mood and feelings of guilt, worthlessness, helplessness, and hopelessness, though psychomotor retardation and disturbances in sleep and appetite are also assessed.

Participants were instructed to indicate how often during the past week they felt or behaved in the way described by each item. Ratings were made on a 4-point scale, ranging from 0 = "rarely or none of the time" (< 1 day/past week) to 3 = "most or all of the time" (5-7 days/past week). Ratings were summed to obtain an overall depression score ranging from 0-60. The scale contains 4 positively-worded items that are reverse-coded when calculating the total depression score.

Radloff (1977) reported good internal consistency for the CES-D. Across four standardization samples (three general population samples and one clinical sample), item-whole correlations ranged from .30 to .79; 80-95% of the correlations were .40 or greater. Alphas across the four samples ranged from .84-.90, and split-half reliabilities ranged from .76 to .85. The highest internal consistency was found within the clinical sample. Test-retest reliabilities were more moderate, ranging from a high of .67 at four weeks to a low of .32 at twelve months. Radloff attributes these moderate test-retest correlations to the fact that the CES-D was designed to measure current symptomatology, which varies over time.

Chapter 3

RESULTS

PRESENTATION OF RESULTS

A number of conventions that may be less familiar to some readers are used in this study for the presentation of results. These conventions are described below.

Confidence Intervals

Following Hunter and Schmidt (1990), confidence intervals are used in place of most traditional tests of significance in this study. The confidence interval provides the same information as the traditional significance test, in that one may accept or reject the null hypothesis depending upon whether or not the hypothesized value of the null hypothesis is contained within the observed interval. In addition, the confidence interval is correctly centered about the observed value rather than a hypothetical null value, and provides information about the likelihood of committing a Type II error (see "Inference Probabilities and Odds Ratios," below).

In keeping with the tradition of the .05 alpha level for statistical significance, a 95% two-sided confidence interval will be used to test non-directional (exploratory or two-tailed) hypotheses. For testing directional (confirmatory or one-tailed) hypotheses, a 90% two-sided (i.e., equivalent to a 95% one-sided) confidence interval will be used.

Inference Probabilities and Odds Ratios

When a sample correlation is small in magnitude and/or the sample size is small, the sample correlation may be determined to be "non-significant" when in fact the true population correlation is non-zero (i.e., a Type II error). When this situation occurs, zero is contained within the confidence interval, but may be located very near to one of the boundaries of the interval. This suggests that zero is an improbable choice for the true population value, since values at the extremes of the confidence interval are less probable estimates of the true population parameter. In such cases, calculation of the inference probability and odds ratio can provide additional information regarding the sign of the true population value. The *inference probability* (IP) can be defined as the probability that the true population parameter lies in the predicted direction (negative or positive). Assuming a normal distribution centered about the sample correlation, the IP is the area under the normal curve above (or below, if the correlation is predicted to be negative) a *z*-score of 0 (i.e., the null hypothesis).

The *odds ratio* is simply the ratio of the inference probability to the *reverse probability* 1-IP; it is the odds that the directional hypothesis is true. Note that the IP and odds ratio make sense only with respect to directional (i.e., confirmatory or one-tailed) hypotheses.

Levine (class notes, p. 7-21) suggests a rule of thumb that an odds ratio greater than or equal to 2:1 (corresponding to an IP of .68 or higher) should be considered sufficient support for a directional hypothesis. This rule of thumb is observed in the present study, though the traditional 95% significance level is used as well to allow the reader to decide whether a given directional hypothesis is supported by the data.

The *d*-Statistic for the Difference in Means

Whenever a difference in means is tested, a *d*-statistic will be calculated in place of the traditional *t* or *F* to facilitate interpretation. The *d*-statistic is a standard score (like a *z*-score) and thus a straightforward measure of effect size because it expresses the difference in means in standard deviation units. The formula for *d* is as follows:

$$d = \frac{D}{\sqrt{\frac{v_1 + v_2}{2}}}$$

where D is the absolute value of the difference in means, and v_1 and v_2 are the variances of the two groups being compared.

Correcting for Attenuation

Hunter and Schmidt (1990) have demonstrated that error of measurement in either variable systematically attenuates the magnitude of sample bivariate correlations. Because this effect is systematic, it is correctable if the amount of measurement error can be estimated. Therefore, all sample correlations in this study have been corrected for attenuation using the following formula:

$$r_{corrected} = \frac{r_{xy}}{\sqrt{\alpha_x}\sqrt{\alpha_y}}$$

where r_{xy} is the observed correlation, and $\sqrt{\alpha_x}\sqrt{\alpha_y}$ is the product of the square roots of the reliabilities (alphas) for variables x and y. Where alpha is unknown, it is assumed to be equal to 1.00 (i.e., perfect measurement), a conservative assumption in the sense that it reduces the amount of correction provided by the formula.

If correction for attenuation is applied to a sample correlation, it must also be applied to the upper and lower boundaries of the confidence interval around that correlation. This insures a correct interpretation of whether or not the correlation is statistically significant. The formula used to correct the confidence interval is analogous to that used to correct the correlation coefficient, replacing the uncorrected correlation coefficient r_{xy} with the uncorrected upper or lower boundary of the confidence interval (both boundaries must be corrected).

SCALE PSYCHOMETRICS

The composition of (and rationale for) the scales used in this study are described above in the "Measures" section of the "Methods" chapter. Table 2 presents the results of a confirmatory factor analysis of these scales using Hunter and Hamilton's (1992) statistical program *CFA*. Hunter and Hamilton's program yields the traditional reliability coefficient (alpha) as well as the average inter-item correlation for each scale. In addition, the program provides tests of "unidimensionality" (i.e., internal consistency, or the degree to which items in the scale measure a single construct) and "parallelism" (i.e., external consistency, or the degree to which the items in the scale relate in a consistent way to items in other scales). The tests for unidimensionality and parallelism are each performed with and without the assumption of uniform or "flat" item quality (i.e., the correlation between an item and the construct it purports to measure). The results of these tests are expressed as chi-squares that indicate deviations from unidimensionality and parallelism. Thus, non-significant values of chi-square are desirable.

Table 2

Results of confirmatory factor analysis of the study scales (N = 228).

Scale Name	No. of items	Alpha	Average inter-item correlation
Stress	11	.74	.21
Control	11	.75	.21
Physical Symptoms	20	.86	.23
WOC[b]: Confrontive Coping	5	.66	.28
WOC: Planful Problem-Solving	7	.72	.27
WOC: Positive Reappraisal	10	.76	.24
WOC: Seeking Social Support	5	.77	.40
WOC: Behavioral Escape-Avoidance	5	.63	.26
WOC: Cognitive Escape-Avoidance	7	.81	.37
WOC: Distancing	8	.73	.26
WOC: Self-Blaming	3	.65	.38
WOC: Involvement Coping[c]	4	.73	.40
WOC: Detachment Coping[d]	4	.64	.31
Internalized Shame Scale	24	.96	.51
Depression (CES-D[e])	20	.93	.39

*$p < .05$; **$p < .01$; ***$p < .001$

[a]Values are Chi-squares; significant values indicate deviations from unidimensionality/parallelism.

[b]Ways of Coping.

[c]Second-order scale composed of Confrontive Coping, Planful Problem-Solving, Positive Reappraisal, and Seeking Social Support.

[d]Second-order scale composed of Behavioral Escape-Avoidance, Cognitive Escape-Avoidance, Distancing, and Self-Blaming.

[e]Center for Epidemiologic Studies Depression Scale.

(Table continues)

Table 2 (concluded)

Results of confirmatory factor analysis of the study scales (N = 228).

Deviation from unidimensionality[a]		Deviation from parallelism[a]	
Item quality		Item quality	
Flat	Gradient	Flat	Gradient
362.46***	243.74***	263.43***	311.76***
508.63***	486.01***	121.04*	129.30**
1430.84***	771.67***	22.34 ns	15.68 ns
8.75 ns	0.96 ns	100.04***	126.09***
57.08***	40.56**	98.50***	98.28***
121.57***	70.77**	150.22***	175.43***
63.49***	23.07**	32.43 ns	42.19 ns
42.58***	14.60 ns	77.32***	52.86*
174.16***	77.91***	78.24*	105.03***
95.23***	59.42***	117.56***	135.45***
2.17 ns	0.00 ns	30.36*	45.20***
5.79 ns	4.53 ns	27.28 ns	30.36*
22.09***	5.19 ns	63.09***	19.05 ns
3063.86***	1561.52***	85.31***	63.67*
1856.90***	553.84***	136.07***	81.44***

*$p < .05$; **$p < .01$; ***$p < .001$

[a]Values are Chi-squares; significant values indicate deviations from unidimensionality/parallelism.

[b]Ways of Coping.

[c]Second-order scale composed of Confrontive Coping, Planful Problem-Solving, Positive Reappraisal, and Seeking Social Support.

[d]Second-order scale composed of Behavioral Escape-Avoidance, Cognitive Escape-Avoidance, Distancing, and Self-Blaming.

[e]Center for Epidemiologic Studies Depression Scale.

As Table 2 indicates, alphas for the scales range from .63 for WOC Behavioral Escape-Avoidance to .96 for the ISS. Alphas for the WOC subscales tended to be lower than for the other scales, probably due to the relatively small number of items in these subscales. Average inter-item correlations ranged from .21 for the stress and control scales (perhaps reflecting the relative independence of the various life areas rated for stress and control) to .51 for the ISS.

Given these respectable alphas, it is surprising to note how poorly most of these scales performed on the "stricter" chi-square tests of internal and external consistency (see Table 2). Even the seemingly robust ISS, which had the highest coefficient alpha and inter-item correlation of all the scales, failed the tests for unidimensionality and parallelism, regardless of whether uniform or gradient item quality was assumed. The only scales that passed both tests were the second-order Detachment and Involvement Coping scales. These results may reflect the practice of relying on coefficient alpha as the primary measure of internal consistency/reliability during scale construction and validation. Since the value of coefficient alpha is based in part on the number of items in the scale, scales with large numbers of items may yield high alphas, yet still demonstrate poor internal and external consistency when stricter tests are used.

Attempts were made to improve the scales' internal and external consistency by deleting weaker items, but in no case did this improve any scale sufficiently to pass the unidimensionality and parallelism tests. The scales were therefore left as-is in the interest of preserving comparability to other studies using these scales. Hence, the following results should be interpreted with the caveat that these scales may not measure unitary constructs.

CHARACTERISTICS OF THE STUDY SAMPLES

Table 3 presents basic demographic data (age, ethnicity, education, and income) for the two study samples. As the table shows, the samples differed markedly in age, education, and annual income.[8] This was to be expected, given the student composition of the heterosexual sample. This sample was younger and less variable in age than the gay sample, averaging 19.3 years (SD = 2.7 years) compared to 36.6 years (SD = 9.6 years). The college student sample was (by definition) uniform in education level, while the gay sample showed considerable variability and was skewed toward the upper range (not surprising in a university community). The income distribution of the heterosexual sample was skewed toward the upper range, probably because most of these respondents are still being supported by their parents, while the income distribution of the gay sample was skewed toward the lower range, reflecting the fact that 78% (39 out of 50) of the HIV-positive men fell into the two lowest income categories. The two samples did not differ in ethnicity, with 84% of both samples self-identifying as Caucasian. Due to the small number of respondents falling into the other ethnicity categories, ethnicity was collapsed into White and Non-White for the purpose of statistical analysis.

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[8] Formal statistical comparisons of the two samples are found in Tables 6-9.

Table 3
Descriptive statistics for the study samples: demographic variables.

Variable	Gay Male Sample (N = 116)			Heterosexual Male Sample (N = 112)		
	Mean	**Std. Dev.**	**Range**	**Mean**	**Std. Dev.**	**Range**
Age	36.6	9.6	18 - 68	19.3	2.7	17 - 45
	N	**%**	**Cum. %**	**N**	**%**	**Cum. %**
Ethnicity						
African Am.	3	2.6	2.6	3	2.7	2.7
Asian	2	1.7	4.3	8	7.1	9.8
Caucasian	97	83.6	87.9	94	83.9	93.7
Latino	8	6.9	94.8	2	1.8	11.6
Mid. Eastern	1	0.9	95.7	2	1.8	13.4
Native Am.	2	1.7	97.4	1	0.9	14.3
Other	3	2.6	100.0	2	1.8	16.1
Total	116	100.0		112	100.0	
Education						
< HS Grad.	1	0.9	0.9	0	0.0	0.0
HS Grad.	11	11.2	12.1	0	0.0	0.0
Some College	48	39.6	51.7	107	95.5	95.5
College Grad.	24	20.7	72.4	5	4.5	100.0
Adv. Degree	32	27.6	100.0	0	0.0	100.0
Total	116	100.0		112	100.0	
Annual Income						
< $10K	30	25.9	25.9	7	6.3	6.3
$10-30K	42	36.2	62.1	7	6.3	12.5
$30-60K	28	24.1	86.2	32	28.6	41.1
$60-100K	8	6.9	93.1	40	35.7	76.8
> $100K	8	6.9	100.0	26	23.2	100.0
Total	116	100.0		112	100.0	

Table 4 presents descriptive statistics related to HIV/AIDS testing and diagnosis. It can be seen that over 92% of the gay sample had been tested for HIV, compared to less than 15% of the heterosexual sample. Of the 107 gay men with known HIV serostatus, 50 (46.7%) were HIV-positive; of these, 31 (62%) had been diagnosed with AIDS. None of the 16 heterosexual men with known HIV serostatus were HIV-positive.

Table 4

Descriptive statistics for the study samples: HIV/AIDS testing and diagnoses.

Variable	Gay Male Sample (N = 116)			Heterosexual Male Sample (N = 112)		
	N	**%**	**Cum. %**	**N**	**%**	**Cum. %**
Been tested for HIV?						
Yes	107	92.2	92.2	16	14.3	14.3
No	9	7.8	100.0	94	83.9	98.2
Don't Know	0	0.0	100.0	2	1.8	100.0
Total	116	100.0		112	100.0	
IF YES:						
HIV Positive?						
Yes	50	46.7	46.7	0	0.0	0.0
No	57	53.3	100.0	14	87.5	87.5
Don't Know	0	0.0	100.0	2	12.5	100.0
Total	107	100.0		16	100.0	
IF YES:						
AIDS Diagnosis?						
Yes	31	62.0	62.0			
No	17	34.0	96.0		**N/A**	
Don't Know	2	4.0	100.0			
Total	50	100.0				

Descriptive statistics for physical symptoms, stress, control, coping, shame, and depression are presented in Table 5. At a glance, the table indicates that gay respondents' scores on these variables are more elevated, more variable, and have a wider range than those of the heterosexual respondents. Formal statistical comparisons between samples on these variables are presented in Table 9.

Table 5

Descriptive statistics for the study samples: physical symptoms, stress, control, coping, shame, and depression.

Variable	Gay Male Sample (N = 116)				Heterosexual Male Sample (N = 112)			
	Mean	SD	Min.	Max.	Mean	SD	Min.	Max.
Physical Symptoms	3.11	3.87	.00	16.00	.99	1.53	.00	6.00
Stress Quotient	.44	.18	.04	1.00	.34	.14	.04	.70
Control Quotient	.51	.19	.05	.97	.59	.17	.23	1.00
Involvement Coping	33.48	13.05	3.00	64.00	31.13	10.88	3.00	63.00
Detachment Coping	23.87	10.90	.00	55.00	23.09	9.94	3.00	54.00
Shame	36.26	21.33	.00	87.00	29.79	19.01	3.00	86.00
Depression	18.84	13.27	.00	53.00	16.76	10.55	.00	48.00

Tables 6-9 show the results of statistical comparisons of the study samples. Table 6 presents a crosstabulation of the two samples by ethnicity (collapsed categories). Not surprisingly, the samples did not differ in ethnic composition (kappa = -.003, $p < .05$).

Table 6
Comparison of the study samples by ethnicity (collapsed categories).

Ethnicity	Gay Sample	Hetero. Sample	Total	Kappa	SE_{Kappa}	95% 2-sided Confidence Interval Lower	95% 2-sided Confidence Interval Upper	Sig. ($p < .05$)
White	97	94	191	-.003	.05	-.10	.09	ns
Non-White	19	18	37					
Total	116	112	228					

Tables 7 and 8 compare the samples on education and income, respectively. In both cases the samples differed significantly. The gay men evinced more variability and higher attainment in education than the heterosexual men, which as mentioned above is a sampling artifact. The gay men also reported lower annual household income than did the heterosexual men, which as previously noted probably reflects ongoing financial support of the college students by their parents as well as low income among HIV-positive gay men.

Table 7
Comparison of the study samples by education.

Education	Gay Sample	Hetero. Sample	Total
< HS Grad.	1	0	1
HS Grad.	11	0	11
Some College	48	107	155
College Grad.	24	5	29
Adv. Degree	32	0	32
Total	116	112	228

	value	df	sig. (2-tailed)
Chi-square	78.86	4	.000

Table 8
Comparison of the study samples by income.

Income	Gay Sample	Hetero. Sample	Total
< $10K	30	7	37
$10-30K	42	7	49
$30-60K	28	32	60
$60-100K	8	40	48
> $100K	8	26	34
Total	116	112	228

	value	df	sig. (2-tailed)
Chi-square	70.38	4	.000

Table 9 compares the study samples on age, physical symptoms, stress, control, involvement coping, detachment coping, shame, and depression. As the table indicates, the gay men were significantly older on average than the heterosexual men ($d = 2.46, p < .05$), which again is attributable to sampling.

The gay men as a group reported significantly more physical symptoms than the heterosexual men (3.11 symptoms versus .99 symptom, respectively; $d = .72, p < .05$). This effect is almost certainly attributable to the effects of HIV/AIDS within the gay sample; in fact, the HIV-negative gay men reported fewer symptoms on average than the heterosexual men (.75 versus .99 symptom, respectively), while the HIV-positive men (not diagnosed with AIDS) reported 3.77 symptoms and men with AIDS 7.77 symptoms.

Table 9
Comparison of the study samples: age, physical symptoms, stress, control, coping, shame, and depression.

Variable		Sample: Gay (N = 116)	Sample: Hetero. (N = 112)	Difference[a]	SE_{Diff}	95% 2-sided Confidence Interval: Lower	95% 2-sided Confidence Interval: Upper	d[b]	Sig. ($p < .05$)
Age	M	36.57	19.25	17.32	.93	15.49	19.15	2.46	sig
	SD	9.58	2.71						
Physical Symptoms	M	3.11	.99	2.12	.39	1.35	2.89	.72	sig
	SD	3.87	1.53						
Stress Quotient	M	.44	.34	.10	.02	.06	.14	.62	sig
	SD	.18	.14						
Control Quotient	M	.51	.59	.08	.02	.03	.12	.42	sig
	SD	.19	.17						
Involvement Coping	M	33.48	31.13	2.35	1.59	-.79	5.49	.20	ns
	SD	13.05	10.88						
Detachment Coping	M	23.87	23.09	.78	1.38	-1.95	3.50	.07	ns
	SD	10.90	9.94						
Shame	M	36.26	29.79	6.47	2.68	1.19	11.75	.32	sig
	SD	21.33	19.01						
Depression	M	18.84	16.76	2.08	1.59	-1.05	5.22	.17	ns
	SD	13.27	10.55						

[a]Absolute value of the difference in means.
[b]Effect size; the magnitude of the difference in means expressed in standard deviation units.

Table 9 indicates that the gay men reported significantly greater stress and significantly lower appraisals of control than did the heterosexual men. The gay men's mean stress quotient was .44, meaning that on average they experienced 44% of the amount of stress possible given the number of life areas they endorsed, compared to 34% for the heterosexual men ($d = .62, p < .05$). Further, the gay men felt in control of stressful situations only about half of the time (mean control quotient = .51), compared to 59% of the time for the heterosexual men ($d = .42, p < .05$).

Once again, these findings appear to be related in part to the HIV/AIDS-status of the gay men. When the gay sample is divided according to HIV serostatus, HIV-negative respondents reported significantly less stress than the HIV-positive men (.39 versus .48, respectively; $d = .51, p < .05$), though still not as little as the heterosexual men (.39 versus .34, respectively; $d = .38, p < .05$). Likewise, HIV-positive men reported less control than HIV-negative men (.46 versus .55, respectively; $d = .48, p < .05$); in this respect the HIV-negative gay men did not differ significantly from the heterosexual men (.55 versus .59, respectively; $d = .18$, ns). Interestingly, no significant differences in stress or control emerged when the HIV-positive group was divided according to absence versus presence of AIDS diagnosis.

Continuing with Table 9, the two samples did not differ significantly in the amount of involvement and detachment coping strategies used to deal with stress. Both groups tended to use involvement coping strategies more frequently than detachment coping strategies.

Table 9 indicates that the gay men reported significantly greater internalized shame than did the heterosexual men, with shame scores of 36.3 versus 29.8, respectively ($d = .32, p < .05$). Once again, this difference disappears when HIV serostatus is taken into account, with the HIV-negative gay men reporting a level of shame similar to that of the heterosexual men (32.4 versus 29.8, respectively; $d = .14$, ns).

Finally, as Table 9 indicates, the two samples did not differ significantly in mean depression level, though the gay men were slightly more elevated than the heterosexual men on this measure. This relationship will be examined in more detail below (see analysis for Hypothesis 2).

RELATIONSHIPS BETWEEN DEMOGRAPHIC FACTORS AND SUBSTANTIVE VARIABLES

Tables 10 and 11 examine the correlations between the demographic variables age, education, and income, and the substantive variables HIV serostatus (gay respondents only), physical symptoms, stress, control, involvement coping, detachment coping, shame and depression. Table 10 explores these relationships for the gay sample, and Table 11 for the heterosexual sample.

Looking first at Table 10, it can be seen that age is unrelated to the substantive variables for the gay sample. Education and income, however, are associated with many of these variables. More educated men were less likely to be HIV-positive, and reported fewer physical symptoms, than less educated men. More educated men also reported less stress and greater feelings of control over stressful situations than less educated men. Perhaps due to their decreased stress, more educated men reported using fewer coping

strategies (both detachment and involvement) than less educated men. Finally, more educated men reported less depression than less educated men. The only variable not significantly related to education among these men was shame, though there was a non-significant trend for more educated men to report less shame than less educated men.

Table 10

Correlational analysis between demographic variables (age, education, income) and substantive variables (gay sample; N = 107*).

Demographic Variable	r[a]	SE_r	95% 2-sided Confidence Interval[a] Lower	Upper	N	Sig. ($p < .05$)
Age						
HIV Serostatus[b]	.12	.10	-.07	.31	107	ns
Physical Symptoms	.05	.10	-.15	.26	107	ns
Stress Quotient	-.06	.10	-.28	.16	107	ns
Control Quotient	-.13	.10	-.34	.09	107	ns
Involvement Coping	.01	.10	-.22	.23	107	ns
Detachment Coping	-.12	.10	-.36	.11	107	ns
Shame	-.10	.10	-.29	.09	107	ns
Depression	-.02	.10	-.22	.18	107	ns
Education						
HIV Serostatus	-.47	.08	-.61	-.32	107	sig
Physical Symptoms	-.39	.08	-.56	-.21	107	sig
Stress Quotient	-.27	.09	-.48	-.06	107	sig
Control Quotient	.31	.09	.11	.51	107	sig
Involvement Coping	-.23	.09	-.44	-.02	107	sig
Detachment Coping	-.25	.09	-.47	-.02	107	sig
Shame	-.17	.09	-.36	.02	107	ns
Depression	-.26	.09	-.44	-.07	107	sig
Income						
HIV Serostatus	-.28	.09	-.46	-.11	107	sig
Physical Symptoms	-.39	.08	-.57	-.22	107	sig
Stress Quotient	-.30	.09	-.50	-.10	107	sig
Control Quotient	.35	.08	.16	.55	107	sig
Involvement Coping	-.19	.09	-.41	.02	107	ns
Detachment Coping	-.22	.09	-.45	.01	107	ns
Shame	-.27	.09	-.45	-.09	107	sig
Depression	-.33	.09	-.51	-.16	107	sig

*These analyses exclude gay men who have not been tested for HIV.

[a]Corrected for attenuation.

[b]HIV-Negative = 0; HIV-Positive = 1.

Similarly, Table 10 shows that higher income was associated with HIV-negative serostatus, fewer physical symptoms, less stress, greater control, less shame, and less depression among the gay respondents. Income was not significantly related to the coping strategies, though there were non-significant trends toward higher income being associated with decreased use of both kinds of coping.

These findings might suggest that education and income were "protective" factors that buffered the effects of stress and facilitated adjustment. However, the effects of education and income may also be explained by the nature of the sample, particularly with respect to the HIV-positive men. The majority of the HIV-positive men in the study were recruited through an HIV/AIDS service organization, and it is likely that poorer and less-well-educated persons are over-represented among the clientele of this organization. If a true community sample of gay men with HIV/AIDS were recruited, the relationship of income and education to physical and emotional well-being might differ from what is observed in the present data. In any case, the effects of income and education were controlled for in the multivariate path analyses for gay men.

Table 11 presents these data for the heterosexual men. Age and education were unrelated to the substantive variables, not surprising given the lack of variability in age and education in the sample. Income was related to physical symptoms and detachment coping, with higher income associated with fewer physical symptoms and decreased use of detachment coping strategies. This may be because higher income is associated with better access to health care and other resources that make it less necessary to detach in order to cope. Income was controlled for in the path analyses for heterosexual men.

Table 11

Correlational analysis between demographic variables (age, education, income) and substantive variables (heterosexual sample; N = 112).

Demographic Variable	r^a	SE_r	95% 2-sided Confidence Interval[a] Lower	Upper	N	Sig. ($p < .05$)
Age						
Physical Symptoms	-.09	.09	-.29	.11	112	ns
Stress Quotient	.08	.09	-.13	.30	112	ns
Control Quotient	-.13	.09	-.34	.08	112	ns
Involvement Coping	-.14	.09	-.35	.08	112	ns
Detachment Coping	.15	.09	-.07	.38	112	ns
Shame	.06	.09	-.13	.25	112	ns
Depression	.02	.09	-.17	.22	112	ns
Education						
Physical Symptoms	-.16	.09	-.36	.03	112	ns
Stress Quotient	.06	.09	-.16	.27	112	ns
Control Quotient	.01	.09	-.20	.23	112	ns
Involvement Coping	-.03	.09	-.25	.19	112	ns
Detachment Coping	.01	.09	-.22	.24	112	ns
Shame	-.06	.09	-.25	.12	112	ns
Depression	.01	.09	-.19	.20	112	ns
Income						
Physical Symptoms	-.30	.09	-.48	-.11	112	sig
Stress Quotient	.01	.09	-.21	.22	112	ns
Control Quotient	.10	.09	-.12	.31	112	ns
Involvement Coping	-.13	.09	-.34	.08	112	ns
Detachment Coping	-.30	.09	-.51	-.09	112	sig
Shame	-.12	.09	-.30	.07	112	ns
Depression	-.06	.09	-.25	.13	112	ns

[a]Corrected for attenuation.

Tables 12-14 examine the relationship between ethnicity and the substantive variables. Table 12 presents a crosstabulation of ethnicity and HIV serostatus within the gay sample. As the table indicates, ethnicity was unrelated to HIV serostatus within this sample (kappa = -.02, ns). This is an interesting finding, given the fact that ethnic minorities (particularly African Americans and Latinos) are over-represented among persons living with HIV/AIDS in the US. If the sample had included more people of color or had been drawn from a larger urban area, these results may have been quite different. In their large multiracial sample of gay and bisexual men living in the Chicago area, DeMarco, Ostrow, DiFranceisco, and Halman (1997) found that African Americans were over-represented among HIV-positive respondents. This is the case nationally as well; African Americans represent 36% of all US AIDS cases, while making up only about 15% of the population (Centers for Disease Control, 1997).

Table 12
Crosstabulation of ethnicity (collapsed categories) by HIV serostatus (gay sample; N = 107*).

	HIV Serostatus					95% 2-sided Confidence Interval		Sig.
Ethnicity	Negative	Positive	Total	Kappa	SE_{Kappa}	Lower	Upper	($p < .05$)
Non-White	9	9	18	-.02	.07	-.16	.11	ns
White	48	41	89					
Total	57	50	107					

*This analysis excludes gay men who have not been tested for HIV.

Table 13 examines the differences between white and non-white gay men with respect to physical symptoms, stress, control, coping, shame, and depression. As the table shows, the only significant differences between ethnic categories within the gay sample was in the use of coping strategies. Non-white gay men reported more frequent use of both involvement (d = .72) and detachment (d = .50) coping strategies. This may reflect the greater amount of stress reported by the non-white gay men, though this difference in stress level (d = .41) fell short of statistical significance.

Table 13
Differences between ethnic groups (collapsed categories) on variables to be used in the path analyses (gay sample; N = 107*).

Variable		Ethnic category: Non-White (N = 18)	Ethnic category: White (N = 89)	Difference[a]	SE_{Diff}	95% 2-sided Confidence Interval: Lower	95% 2-sided Confidence Interval: Upper	d[b]	Sig. (p < .05)
Physical Symptoms	**M**	3.67	3.24	.43	1.03	-1.58	2.44	.10	ns
	SD	4.61	3.84						
Stress Quotient	**M**	.50	.42	.08	.05	-.01	.17	.41	ns
	SD	.21	.18						
Control Quotient	**M**	.50	.51	.01	.05	-.09	.11	.05	ns
	SD	.21	.19						
Involvement Coping	**M**	41.39	32.32	9.07	3.21	2.77	15.37	.72	sig
	SD	12.63	12.40						
Detachment Coping	**M**	28.72	22.72	6.00	2.78	.55	11.45	.50	sig
	SD	13.49	10.15						
Shame	**M**	32.33	35.94	3.61	5.39	-6.95	14.17	.16	ns
	SD	24.41	20.08						
Depression	**M**	19.89	18.54	1.35	3.46	-5.44	8.14	.10	ns
	SD	13.49	13.39						

*These analyses exclude gay men who have not been tested for HIV.

[a]Absolute value of the difference in means.

[b]Effect size; the magnitude of the difference in means expressed in standard deviation units.

Turning next to Table 14, it can be seen that no differences on these variables existed between ethnic categories within the heterosexual sample.

Table 14
Differences between ethnic groups (collapsed categories) on variables to be used in the path analyses (heterosexual sample; N = 112).

Variable		Ethnic category: Non-White (N = 18)	Ethnic category: White (N = 94)	Difference[a]	SE_{Diff}	95% 2-sided Confidence Interval: Lower	95% 2-sided Confidence Interval: Upper	d[b]	Sig. ($p < .05$)
Physical Symptoms	**M**	1.00	.99	.01	.39	-.76	.78	.01	ns
	SD	1.41	1.56						
Stress Quotient	**M**	.29	.35	.06	.03	-.01	.13	.48	ns
	SD	.10	.14						
Control Quotient	**M**	.61	.58	.02	.04	-.06	.11	.14	ns
	SD	.15	.18						
Involvement Coping	**M**	32.53	30.86	1.66	2.81	-3.84	7.17	.16	ns
	SD	9.96	11.08						
Detachment Coping	**M**	21.67	23.36	1.69	2.57	-3.33	6.72	.16	ns
	SD	10.82	9.81						
Shame	**M**	30.20	29.71	.49	4.91	-9.14	10.12	.03	ns
	SD	15.84	19.63						
Depression	**M**	17.67	16.59	1.08	2.72	-4.26	6.42	.10	ns
	SD	11.63	10.39						

[a]Absolute value of the difference in means.

[b]Effect size; the magnitude of the difference in means expressed in standard deviation units.

TESTS OF BIVARIATE HYPOTHESES

Tables 15-25 present the results of tests of the 11 bivariate hypotheses outlined above. Note that 90% 2-sided confidence intervals are used to test these directional (i.e., 1-tailed) hypotheses; this is equivalent to using a 95% 1-sided confidence interval (i.e., alpha level = .05).

Hypothesis 1: The gay sample will evince greater internalized shame than the heterosexual sample.

Table 15
Test of bivariate hypothesis 1: The gay men will evince greater internalized shame than the heterosexual

		Group				90% 2-sided Confidence Interval					
		Gay	Hetero.							Odds	Sig.
Variable		(N = 107)	(N = 112)	Diff.[a]	SE_{Diff}	Lower	Upper	d[b]	IP[c]	Ratio[d]	($p < .05$)
Shame	M	35.34	29.79	5.55	2.69	1.10	9.99	.28	.98	49.00	sig
	SD	20.79	19.01								

		Group				90% 2-sided Confidence Interval					
		HIV- Gay	Hetero.							Odds	Sig.
		(N = 57)	(N = 112)	Diff.	SE_{Diff}	Lower	Upper	d	IP	Ratio	($p < .05$)
Shame	M	32.36	29.79	2.57	3.04	-2.46	7.59	.14	.80	4.00	ns
	SD	17.99	19.01								

		Group				90% 2-sided Confidence Interval					
		HIV+ Gay	Hetero.							Odds	Sig.
		(N = 50)	(N = 112)	Diff.	SE_{Diff}	Lower	Upper	d	IP	Ratio	($p < .05$)
Shame	M	38.73	29.79	8.94	3.75	2.69	15.19	.42	.99	99.00	sig
	SD	23.30	19.01								

[a]Value of the difference in means.

[b]Effect size; the magnitude of the difference in means expressed in standard deviation units.

[c]Inference Probability; the probability that the true population difference is positive.

[d]Ratio of the inference probability (IP) to the reverse probability (1-IP); the odds that the directional hypothesis is true.

As the table indicates, gay men as a group reported over a fourth of a standard deviation ($d = .28$) more shame than heterosexual men. This difference was statistically significant and the IP was .98, corresponding to an odds ratio of about 49:1.

However, as noted earlier, the magnitude of the difference in shame between gay and heterosexual men varied according to the HIV serostatus of the gay men. As Table 15

shows, the mean shame score for HIV-negative men was 32.36, compared to 29.79 for heterosexual men (d = .14, ns; IP = .80). This difference was not statistically significant, though the odds are still 4:1 that the true population difference is positive (IP = .80). In contrast, when HIV-positive gay men were compared to heterosexual men, a more pronounced difference emerged, with HIV-positive gay men on average reporting about 9 points more shame than heterosexual men (d = .42, $p < .05$; IP = .99).

In summary, Hypothesis 1 is supported by the data, though the difference in shame between gay and heterosexual men is smaller when comparing HIV-negative gay men to heterosexual men, and larger when comparing HIV-positive gay men to heterosexual men.

Hypothesis 2: The gay sample is expected to manifest more depressive symptomatology than the heterosexual sample.

Table 16
Test of bivariate hypothesis 2: The gay men will evince greater depression than the heterosexual men.

		Group				90% 2-sided Confidence Interval					
		Gay	Hetero.							Odds	Sig.
Variable		(N = 107)	(N = 112)	Diff.[a]	SE_{Diff}	Lower	Upper	d[b]	IP[c]	Ratio[d]	($p < .05$)
Depression	M	18.76	16.76	2.00	1.63	-.69	4.70	.17	.89	8.09	ns
	SD	13.35	10.55								

		Group				90% 2-sided Confidence Interval					
		HIV- Gay	Hetero.							Odds	Sig.
Variable		(N = 57)	(N = 112)	Diff.	SE_{Diff}	Lower	Upper	d	IP	Ratio	($p < .05$)
Depression	M	14.81	16.76	-1.95	1.75	-4.84	.93	-.18	.13	.15	ns
	SD	11.07	10.55								

		Group				90% 2-sided Confidence Interval					
		HIV+ Gay	Hetero.							Odds	Sig.
Variable		(N = 50)	(N = 112)	Diff.	SE_{Diff}	Lower	Upper	d	IP	Ratio	($p < .05$)
Depression	M	23.27	16.76	6.51	2.26	2.74	10.28	.52	.99	99.00	sig
	SD	14.37	10.55								

[a]Value of the difference in means.

[b]Effect size; the magnitude of the difference in means expressed in standard deviation units.

[c]Inference Probability; the probability that the true population difference is positive.

[d]Ratio of the inference probability (IP) to the reverse probability (1-IP); the odds that the directional hypothesis is true.

Gay men as a group reported slightly more depression ($d = .17$) than heterosexual men, as shown in Table 16. This difference did not reach statistical significance, but the odds are better than 8:1 (89% probability) that the true population difference is non-zero.

When HIV serostatus was taken into account, however, a different picture emerged. As Table 16 shows, HIV-negative gay men actually reported slightly *less* depression than heterosexual men ($d = -.18$, ns). HIV-positive men, on the other hand, reported significantly more depression than heterosexual men ($d = .52$, $p < .05$; IP = .99). Thus, Hypothesis 2 is supported, but for HIV-positive gay men only.

Hypothesis 3: Within the gay sample, HIV-positive serostatus will be associated with greater internalized shame.

Table 17
Test of bivariate hypothesis 3: HIV+ gay men will evince greater internalized shame than HIV- gay

Variable		HIV Serostatus: Positive (N = 50)	HIV Serostatus: Negative (N = 57)	Diff.[a]	SE_{Diff}	90% 2-sided Confidence Interval: Lower	90% 2-sided Confidence Interval: Upper	d[b]	IP[c]	Odds Ratio[d]	Sig. ($p < .05$)
Shame	**M**	38.73	32.36	6.37	4.00	-.27	13.01	.31	.94	15.67	ns
	SD	23.30	17.99								

[a]Absolute value of the difference in means.

[b]Effect size; the magnitude of the difference in means expressed in standard deviation units.

[c]Inference Probability; the probability that the true population difference is positive.

[d]Ratio of the inference probability (IP) to the reverse probability (1-IP); the odds that the directional hypothesis is true.

Table 17 shows the difference between HIV-positive and HIV-negative gay men with respect to internalized shame. The HIV-positive men reported more shame ($d = .31$) than the HIV-negative men. This difference did not reach statistical significance, but the odds are nearly 16:1 (94% probability) that the true population difference is non-zero. Thus, the data support Hypothesis 3.

Tables 18-25 present the results of bivariate correlational tests of hypotheses 4 through 11. In these tables, correlations are displayed separately for heterosexual men (N = 112) and gay men (N = 107), for HIV-negative (N = 57) and HIV-positive (N = 50) gay men, and for HIV-positive gay men with (N = 31) and without (N = 17) an AIDS diagnosis. By presenting the results in this way, the applicability of a given hypothesis to each subgroup can be evaluated.

Hypothesis 4: More physical symptoms will be associated with greater internalized shame.

Table 18
Test of bivariate hypothesis 4: Physical symptoms will be positively correlated with internalized shame.

Group	r[a]	SE$_r$	90% 2-sided Confidence Interval[a] Lower	Upper	IP[b]	Odds Ratio[c]	N	Sig. ($p < .05$)
Heterosexual Men	.18	.09	.02	.35	.98	49.00	112	sig
Gay Men (all)	.28	.09	.12	.45	.99	99.00	107	sig
HIV-	.18	.13	-.05	.41	.92	11.50	57	ns
HIV+	.27	.13	.03	.51	.98	49.00	50	sig
AIDS Dx	.47	.14	.22	.73	.99	99.00	31	sig
No AIDS Dx	.25	.23	-.18	.67	.85	5.67	17	ns

[a]Corrected for attenuation.

[b]Inference Probability; the probability that the true population correlation is positive.

[c]Ratio of the inference probability (IP) to the reverse probability (1-IP); the odds that the directional hypothesis is

Table 18 presents the correlation between physical symptoms and internalized shame for each of the study subgroups. As the table shows, there was a modest but significant correlation ($r = .18, p < .05$) between these variables for heterosexual men. For gay men, the effect was stronger ($r = .28, p < .05$); however, when the gay sample was broken down by HIV serostatus it can be seen that the relationship between symptoms and shame for HIV-negative gay men was the same as that for heterosexual men ($r = .18$). This correlation did not reach statistical significance for the HIV-negative men due to the smaller size of this subgroup (N = 57), but the odds are nearly 12:1 (92% probability) that the true population correlation is positive.

For HIV-positive men, the correlation between physical symptoms and shame was .27 ($p < .05$). This effect was much stronger, however, when AIDS diagnosis was taken into account. For men with AIDS, the correlation between symptoms and shame increased to .47 ($p < .05$), while for HIV-positive men without AIDS the effect was similar to that for HIV-positive men in general ($r = .25$). Again, due to the small number

of HIV-positive men without AIDS (N = 17), the latter correlation did not reach statistical significance, but the odds are nearly 6:1 (85% probability) that the true population correlation is positive.

In general, the data support Hypothesis 4, particularly among HIV-positive gay men, and especially among gay men with AIDS.

Hypothesis 5: More physical symptoms will be associated with greater overall stress level.

Table 19
Test of bivariate hypothesis 5: Physical symptoms will be positively correlated with stress.

Group	r[a]	SE_r	90% 2-sided Confidence Interval[a] Lower	Upper	IP[b]	Odds Ratio[c]	N	Sig. ($p < .05$)
Heterosexual Men	.29	.09	.11	.47	.99	99.00	112	sig
Gay Men (all)	.55	.07	.41	.69	.99	99.00	107	sig
HIV-	.40	.11	.17	.63	.99	99.00	57	sig
HIV+	.53	.10	.32	.74	.99	99.00	50	sig
AIDS Dx	.69	.09	.50	.89	.99	99.00	31	sig
No AIDS Dx	.25	.23	-.23	.74	.86	6.14	17	ns

[a]Corrected for attenuation.

[b]Inference Probability; the probability that the true population correlation is positive.

[c]Ratio of the inference probability (IP) to the reverse probability (1-IP); the odds that the directional hypothesis is

Table 19 presents the correlation between physical symptoms and stress for each of the study subgroups. For heterosexual men, there was a moderate significant correlation between these variables ($r = .29, p < .05$). For gay men, the effect was more pronounced ($r = .55, p < .05$), especially for HIV-positive men ($r = .53, p < .05$) as compared to HIV-negative men ($r = .40, p < .05$).

When the HIV-positive group was broken down by AIDS diagnosis, the observed correlation between symptoms and stress was very strong for the men with AIDS ($r = .69$, $p < .05$), not surprisingly. However, for HIV-positive men *without* AIDS, the correlation between symptoms and stress was relatively modest ($r = .25$, ns), and in fact was more similar in magnitude to the correlation observed for heterosexual men than to those observed for either HIV-negative gay men or HIV-positive gay men with AIDS. It may be the case that, for HIV-negative gay men, physical symptoms cause increased stress due to fears about becoming HIV-infected. For men with AIDS, on the other hand, symptoms may cause increased stress due to fears of impending death. But for HIV-positive men

without an AIDS diagnosis, the weaker correlation between symptoms and stress may be due to the fact that they are no longer living in fear of HIV infection, nor are they sick enough to fear imminent death. In any case, the data provide strong support for Hypothesis 5, especially among HIV-negative gay men and gay men with AIDS.

Hypothesis 6: Greater perceived control will be associated with increased use of involvement coping.

Table 20
Test of bivariate hypothesis 6: Control will be positively correlated with involvement coping.

Group	r[a]	SE_r	90% 2-sided Confidence Interval[a] Lower	Upper	IP[b]	Odds Ratio[c]	N	Sig. ($p < .05$)
Heterosexual Men	.01	.09	-.20	.22	.53	1.13	112	ns
Gay Men (all)	-.30	.09	-.49	-.10	.00	.00	107	sig[d]
HIV-	-.39	.11	-.64	-.14	.00	.00	57	sig[d]
HIV+	-.05	.14	-.37	.26	.36	.56	50	ns
AIDS Dx	.35	.16	-.01	.70	.99	99.00	31	ns
No AIDS Dx	-.56	.17	-.94	-.17	.00	.00	17	sig[d]

[a]Corrected for attenuation.
[b]Inference Probability; the probability that the true population correlation is positive.
[c]Ratio of the inference probability (IP) to the reverse probability (1-IP); the odds that the directional hypothesis is
[d]Relationship is in opposite direction of what was predicted.

Table 20 presents the correlation between appraisals of control and use of involvement coping for each of the study subgroups. For heterosexual men, these variables were unrelated ($r = .01$, ns). For gay men, however, the results were mixed. For HIV-negative gay men, contrary to expectations, feeling in control of stressful situations was *negatively* correlated with involvement coping ($r = -.39, p < .05$). For HIV-positive gay men without AIDS, this negative relationship was even stronger ($r = -.56, p < .05$). However, for HIV-positive gay men with AIDS, the effect was in the expected direction ($r = .35$). This correlation fell short of statistical significance, but there is about a 99% probability (99:1 odds) that the true population correlation is positive.

These mixed findings are difficult to explain. It may be the case that for HIV-negative gay men, as well as HIV-positive gay men without AIDS, feeling more in control lessens the need for coping behaviors of any kind (involvement or detachment), especially since control is negatively correlated with stress. However, for the men with AIDS, who reported the most stress (mean stress quotient = .50) and least control (mean

control quotient = .46) of any subgroup, coping in an involved and active way may be crucial to maintaining their sense of control. Strictly speaking, this interpretation deviates from Lazarus and Folkman's (1984) conceptualization, which holds that appraisals of control precede coping responses. However, it seems reasonable to suggest that appraisals of control and coping responses have a reciprocal effect on one another. That is, feeling in control may spur one to engage in positive, involvement-oriented coping behaviors, which in turn may reinforce one's sense of control.

In summary, the data support Hypothesis 6 only among gay men with AIDS; while the observed positive correlation for this subgroup was not statistically significant, the odds are 99:1 that the true population correlation is positive (IP = .99).

Hypothesis 7: Lower perceived control will be associated with increased use of detachment coping.

Table 21
Test of bivariate hypothesis 7: Control will be negatively correlated with detachment coping.

Group	r[a]	SE$_r$	90% 2-sided Confidence Interval[a] Lower	Upper	IP[b]	Odds Ratio[c]	N	Sig. ($p < .05$)
Heterosexual Men	-.27	.09	-.48	-.07	.99	99.00	112	sig
Gay Men (all)	-.52	.07	-.69	-.36	.99	99.00	107	sig
HIV-	-.39	.11	-.66	-.12	.99	99.00	57	sig
HIV+	-.52	.10	-.76	-.27	.99	99.00	50	sig
AIDS Dx	-.17	.18	-.59	.25	.84	5.25	31	ns
No AIDS Dx	-.82	.08	-.99	-.62	.99	99.00	17	sig

[a]Corrected for attenuation.

[b]Inference Probability; the probability that the true population correlation is negative.

[c]Ratio of the inference probability (IP) to the reverse probability (1-IP); the odds that the directional hypothesis is

Table 21 presents the correlation between appraisals of control and use of detachment coping for each of the study subgroups. As the table shows, heterosexual men with lower appraisals of control were more likely to use detachment coping strategies (r = -.27, $p < .05$), as predicted. This effect is nearly twice as strong for gay men (r = -.52, $p <$ .05). Much of this effect is attributable to HIV-positive men (r = -.52, $p < .05$), and is particularly strong for HIV-positive men without an AIDS diagnosis (r = -.82, $p < .05$). Interestingly, the relationship between control and detachment is much weaker for men diagnosed with AIDS (r = -.17, ns) than for any other subgroup, particularly when compared to HIV-positive men without AIDS. This difference cannot be explained by lesser use of detachment coping among men with AIDS, since men with and without AIDS reported similar levels of use of detachment coping (means = 27.29 and 26.42, respectively). Perhaps for men diagnosed with AIDS, a relatively "stable" (i.e., less reactive to changes in such factors as appraisals of control) level of detachment is maintained in order to stave off intolerable levels of worry and anxiety.

In summary, Hypothesis 7 is supported by the data. The effect was strongest among HIV-positive men without AIDS, and weakest among those with AIDS, for whom detachment coping was less tied to changes in their appraisals of control.

Hypothesis 8: Lower perceived control will be associated with greater internalized shame.

Table 22
Test of bivariate hypothesis 8: Control will be negatively correlated with shame.

Group	r[a]	SE_r	90% 2-sided Confidence Interval[a] Lower	Upper	IP[b]	Odds Ratio[c]	N	Sig. ($p < .05$)
Heterosexual Men	-.37	.08	-.53	-.21	.99	99.00	112	sig
Gay Men (all)	-.57	.07	-.70	-.44	.99	99.00	107	sig
HIV-	-.36	.12	-.58	-.13	.99	99.00	57	sig
HIV+	-.69	.07	-.83	-.55	.99	99.00	50	sig
AIDS Dx	-.69	.10	-.87	-.51	.99	99.00	31	sig
No AIDS Dx	-.69	.13	-.94	-.44	.99	99.00	17	sig

[a]Corrected for attenuation.

[b]Inference Probability; the probability that the true population correlation is negative.

[c]Ratio of the inference probability (IP) to the reverse probability (1-IP); the odds that the directional hypothesis is

Table 22 presents the correlation between appraisals of control and internalized shame for each of the study subgroups. As predicted, decreased control was associated with increased shame for all of the subgroups. This effect was particularly pronounced among HIV-positive gay men, regardless of whether or not they were diagnosed with AIDS ($r = -.69, p < .05$). Hypothesis 8 is supported by the data.

Hypothesis 9: Greater use of involvement coping will be negatively associated with depression.

Table 23
Test of bivariate hypothesis 9: Involvement coping will be negatively correlated with depression.

Group	r^a	SE_r	90% 2-sided Confidence Interval[a] Lower	Upper	IP[b]	Odds Ratio[c]	N	Sig. ($p < .05$)
Heterosexual Men	.10	.09	-.08	.29	.13	.15	112	ns
Gay Men (all)	.15	.09	-.04	.34	.06	.06	107	ns
HIV-	.14	.13	-.12	.40	.14	.16	57	ns
HIV+	-.07	.14	-.35	.21	.68	2.13	50	ns
AIDS Dx	-.21	.17	-.56	.13	.89	8.09	31	ns
No AIDS Dx	.18	.24	-.30	.66	.23	.30	17	ns

[a]Corrected for attenuation.
[b]Inference Probability; the probability that the true population correlation is negative.
[c]Ratio of the inference probability (IP) to the reverse probability (1-IP); the odds that the directional hypothesis is true.

Table 23 presents the correlation between involvement coping and depression for each of the study subgroups. In general, the data do not support Hypothesis 9, although a modest negative correlation was observed for men with AIDS (r = -.21); this effect failed to reach statistical significance, but the odds are better than 8:1 that the true population correlation is negative (IP = .89). Similarly to what was suggested above with respect to the relationship between involvement coping and control (Hypothesis 6), it may be the case that men living with AIDS are in particular need of continual involvement and active coping in order to stave off depression.

Hypothesis 10: Greater use of detachment coping will be positively associated with depression.

Table 24
Test of bivariate hypothesis 10: Detachment coping will be positively correlated with depression.

Group	r^a	SE_r	90% 2-sided Confidence Interval[a] Lower	Upper	IP[b]	Odds Ratio[c]	N	Sig. ($p < .05$)
Heterosexual Men	.55	.07	.41	.69	.99	99.00	112	sig
Gay Men (all)	.78	.04	.70	.86	.99	99.00	107	sig
HIV-	.67	.07	.51	.82	.99	99.00	57	sig
HIV+	.79	.05	.67	.90	.99	99.00	50	sig
AIDS Dx	.65	.11	.42	.87	.99	99.00	31	sig
No AIDS Dx	.93	.03	.86	.99	.99	99.00	17	sig

[a]Corrected for attenuation.

[b]Inference Probability; the probability that the true population correlation is positive.

[c]Ratio of the inference probability (IP) to the reverse probability (1-IP); the odds that the directional hypothesis is

Table 24 presents the correlation between detachment coping and depression for each of the study subgroups. As the table shows, Hypothesis 10 is strongly supported by the data. The effect was stronger for gay men (r = .78) than for heterosexual men (r = .55), and among gay men was stronger for HIV-positive men (r = .79) than for HIV-negative (r = .67) men. Within the HIV-positive group, the effect was much stronger for men without AIDS (r = .93) than for men with AIDS (r = .65). As suggested above in the discussion of Hypothesis 7, perhaps detachment plays a different, less malignant role for men with AIDS than for HIV-positive men without an AIDS diagnosis. In any case, detachment is strongly related to depression for all of the study subgroups.

Hypothesis 11: Greater internalized shame will be positively associated with depression.

Table 25
Test of bivariate hypothesis 11: Shame will be positively correlated with depression.

Group	r^a	SE_r	90% 2-sided Confidence Interval[a] Lower	Upper	IP[b]	Odds Ratio[c]	N	Sig. ($p < .05$)
Heterosexual Men	.83	.03	.78	.88	.99	99.00	112	sig
Gay Men (all)	.87	.02	.83	.91	.99	99.00	107	sig
HIV-	.82	.04	.75	.90	.99	99.00	57	sig
HIV+	.90	.03	.86	.95	.99	99.00	50	sig
AIDS Dx	.82	.06	.72	.93	.99	99.00	31	sig
No AIDS Dx	.96	.02	.92	.99	.99	99.00	17	sig

[a]Corrected for attenuation.

[b]Inference Probability; the probability that the true population correlation is positive.

[c]Ratio of the inference probability (IP) to the reverse probability (1-IP); the odds that the directional hypothesis is

Table 25 presents the correlation between internalized shame and depression for each of the study subgroups. As the table indicates, shame was strongly positively associated with depressed mood for each of the subgroups. This effect was particularly pronounced for HIV-positive men without AIDS ($r = .96$).

Table 26 summarizes the results of the tests of the 11 bivariate hypotheses. A hypothesis is considered to have been supported by the data if:

a) the result was statistically significant *and/or*

b) the odds of the true population parameter lying in the predicted direction were estimated at 2:1 or greater (i.e., IP $\geq .68$).

Table 26
Summary of results of bivariate tests.

Hypo-thesis	Prediction	Result	Table
1	The gay sample will evince greater internalized shame than the heterosexual sample.	Supported	15
2	The gay sample will manifest more depressive symptomatology than the heterosexual sample.	Supported for HIV+ gay men only.	16
3	Within the gay sample, HIV-positive serostatus will be associated with greater internalized shame.	Supported	17
4	More physical symptoms will be associated with greater internalized shame.	Supported	18
5	More physical symptoms will be associated with greater overall stress level.	Supported	19
6	Greater perceived control will be associated with increased use of involvement coping.	Supported for gay men with AIDS only.	20
7	Lower perceived control will be associated with increased use of detachment coping.	Supported	21
8	Lower perceived control will be associated with greater internalized shame.	Supported	22
9	Greater use of involvement coping will be negatively associated with depression.	Supported for gay men with AIDS only.	23
10	Greater use of detachment coping will be positively associated with depression.	Supported	24
11	Greater internalized shame will be positively associated with depression.	Supported	25

MULTIVARIATE ANALYSES

The path models described in Chapter 1 were tested using Hunter and Hamilton's (1995) *PATH* software, a least squares path analysis program. Results of these analyses are shown in Figures 3 and 4. These figures depict statistically significant paths with solid bold arrows. Paths that did not reach statistical significance but had odds ratios greater than or equal to 2:1 (corresponding to an IP of .68 or greater) are depicted with bold two-tone arrows. Figure 4 denotes a "missing link" with a bold dotted arrow.[9] Non-significant paths are shown with thin arrows.

Results of the chi square test for goodness-of-fit, as well as the multiple R^2 for depression, are given. The chi square test indicates deviation from goodness-of-fit; therefore, non-significant values of chi square are desirable. R^2 quantifies the proportion of the variance in the dependent variable (depression) accounted for by its antecedent variables (involvement and detachment coping).

Finally, associated with each figure is a table showing the results for individual links in the model. Because each path represents a directional bivariate hypothesis, a 90% 2-sided confidence interval is built around each path coefficient, and the inference probability and odds ratio are calculated for each path coefficient.

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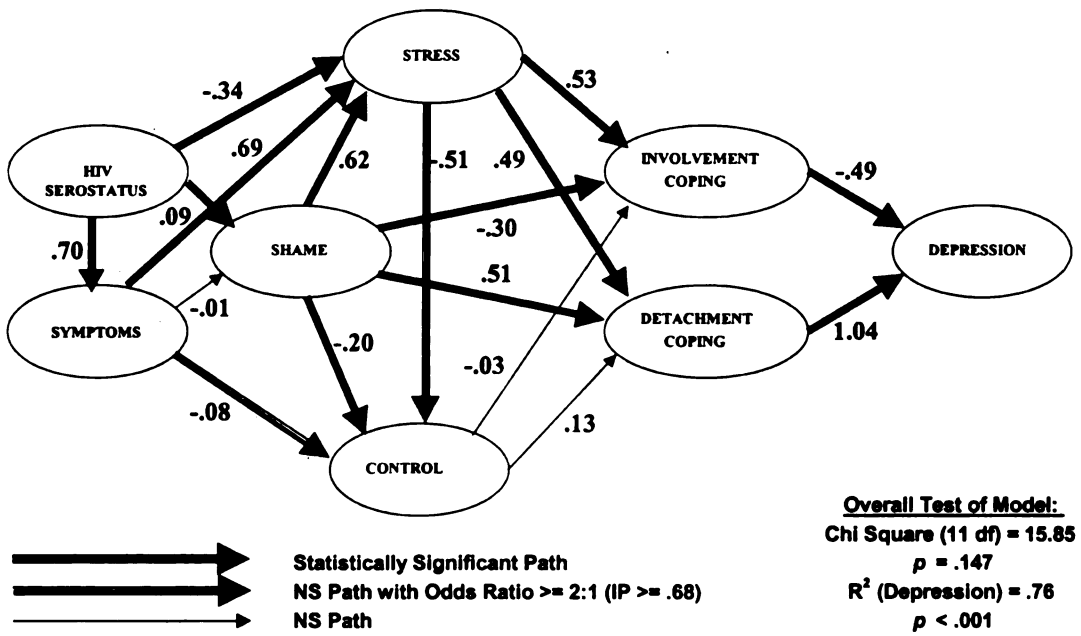
[9] The Hunter and Hamilton *PATH* program provides a "missing link" analysis that evaluates whether any paths not specified in the model would be significant if included in the model.

Figure 3 shows the results of Path Model 1, tested for gay men (N = 107). Income and education were controlled for since these variables were found to be correlated with a number of the variables in the path analysis (see Table 10). Table 27 shows analyses for the individual links in the model.

Figure 3
Results of Path Model 1 (gay sample; N = 107).



As Figure 3 shows, Path Model 1 fits the data well overall (chi square 11 df = 15.85, $p = .147$). About 76% of the variance in depression is accounted for by involvement and detachment coping among gay men in this sample ($R^2 = .76$, $p < .001$).

Table 27
Individual link analyses for Path Model 1 (gay sample; N = 107)[a].

Path	Predicted Direction	Path Coeff.	SE	90% 2-sided Confidence Interval Lower	Upper	IP[b]	Odds Ratio[c]	Sig. ($p < .05$)
HIV → Symptoms	+	.70	.06	.60	.80	.99	99.00	sig
HIV → Shame	+	.09	.15	-.16	.34	.73	2.70	ns
HIV → Stress	+	-.34	.18	-.64	-.04	.03	.03	sig[d]
Symptoms → Shame	+	-.01	.16	-.27	.25	.48	.92	ns
Symptoms → Stress	+	.69	.18	.39	.99	.99	99.00	sig
Symptoms → Control	-	-.08	.17	-.36	.20	.68	2.13	ns
Shame → Stress	+	.62	.09	.47	.77	.99	99.00	sig
Shame → Control	-	-.20	.18	-.50	.10	.87	6.69	ns
Shame → Involvement	-	-.30	.18	-.60	.00	.95	19.00	ns
Shame → Detachment	+	.51	.14	.28	.74	.99	99.00	sig
Stress → Control	-	-.51	.22	-.87	-.15	.99	99.00	sig
Stress → Involvement	-	.53	.25	.12	.94	.02	.02	sig[d]
Stress → Detachment	+	.49	.22	.13	.85	.99	99.00	sig
Control → Involvement	+	-.03	.22	-.39	.33	.44	.79	ns
Control → Detachment	-	.13	.23	-.25	.51	.28	.39	ns
Involvement → Depression	-	-.49	.23	-.87	-.11	.78	3.55	sig
Detachment → Depression	+	1.04	.20	.71	1.37	.83	4.88	sig

[a]Controlling for income & education.
[b]Inference Probability; the probability that the true population value lies in the predicted direction.
[c]Ratio of the inference probability (IP) to the reverse probability (1-IP); the odds that the directional hypothesis is true.
[d]Relationship is in opposite direction of what was predicted.

Looking next at the results for individual paths, Table 27 shows that HIV-positive serostatus was associated with increased physical symptoms, as expected ($b = .70, p < .05$). However, contrary to expectations, being HIV-positive was *negatively* correlated with stress ($b = -.34, p < .05$). The predicted positive relationship between HIV-positive serostatus and shame was weak and did not reach statistical significance ($b = .09, p < .05$), though the odds that the true population parameter is positive are nearly 3:1 (IP = .73).

Physical symptoms were positively correlated with stress, as predicted ($b = .69, p < .05$). However, the paths between symptoms and shame and between symptoms and control were non-significant (b's = -.01 and -.08, respectively), though the odds are about

2:1 (IP = .68) that the true population parameter for the relationship between symptoms and control is negative in direction.

Shame was significantly positively related to stress ($b = .62, p < .05$) and to detachment coping ($b = .51, p < .05$). The path from shame to control ($b = -.20$) was not statistically significant, but the odds are nearly 7:1 (IP = .87) that the true population parameter is negative, as predicted. Likewise, the path between shame and involvement coping ($b = -.30$) fell short of statistical significance, but the odds are 19:1 (IP = .95) that the true population parameter is negative, as predicted.

Stress was negatively related to control ($b = -.51, p < .05$), and positively related to both involvement ($b = .53, p < .05$) and detachment ($b = .49, p < .05$) coping. This finding is somewhat contrary to expectations, as it was predicted that stress would be positively related to detachment coping but negatively related to involvement coping.

The paths from control to involvement ($b = -.03$) and detachment ($b = .13$) coping were non-significant.

The paths from involvement and detachment coping to depression were significant, with involvement coping negatively related ($b = -.49, p < .05$) and detachment coping positively related to depression ($b = 1.04, p < .05$), as predicted.

Finally, no "missing links" were indicated for direct paths between stress and depression or between control and depression. In other words, the data do not indicate that stress or control have any direct effect upon depression, but instead exert their effects through the other variables in the model, as predicted. This was true for all four of the path models tested.

Overall, these results provide strong support for Path Model 1. The main exceptions were the failure of control to predict either type of coping, the positive relationship between stress and involvement coping, and the negative relationship between HIV-positive serostatus and stress.

The failure of appraisals of control to predict either type of coping is not entirely unprecedented; both Folkman et al. (1993) and DeMarco et al. (1997) found that control failed to predict detachment coping, and was only modestly related to involvement coping, among gay men. It was hoped that the more global measure of coping used in the present study (i.e., measuring coping across all life domains rather than only the most stressful domain) would improve its predictive value, but this was not the case.

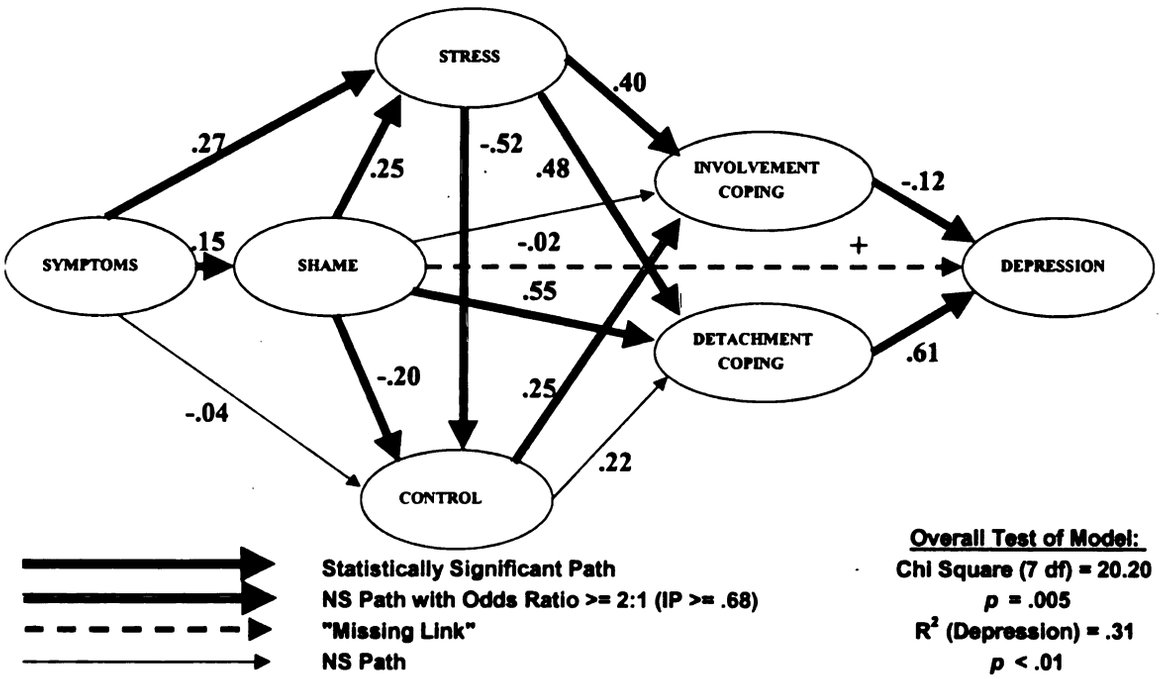
Also unexpected was the positive relationship between stress and involvement coping. Both Folkman et al. (1993) and DeMarco et al. (1997) found that increased stress was related to increased use of detachment coping, but that stress and involvement coping were unrelated. The present data indicate that increases in stress mobilized both types of coping responses among gay men in this sample. This deviation from past findings may be due to the fact that the present investigation employed the full length version of the WOC questionnaire, while the earlier investigations cited above utilized shortened versions of that instrument.

Finally, the significant negative relationship between HIV serostatus and stress is counterintuitive. Among gay men in this sample (N = 107), these two variables have a positive bivariate correlation of .25 (p = .004). The multivariate findings, however, indicate that once other variables in the model (such as physical symptoms and shame) are accounted for, being HIV-positive is actually related to *decreased* stress. These

findings suggest that emotionally well-adjusted HIV-positive gay men in good physical health may actually experience less stress than their HIV-negative counterparts. One can only speculate as to why this might be the case; perhaps HIV-positive men have been forced to mobilize coping resources such as social support, which serves to reduce stress as long as they remain healthy and emotionally well-adjusted. Or perhaps HIV-positive men are able to abdicate certain social roles and obligations, thus reducing potential sources of stress. This paradoxical and interesting finding warrants future investigation, as it may prove fruitful in suggesting ways for HIV-positive men to reduce stress.

Figure 4 shows the results of Path Model 2, tested for heterosexual men (N = 112). Income was controlled for since it was found to be correlated with a number of the variables in the path analysis (see Table 11). Table 28 shows analyses for the individual links in the model.

Figure 4
Results of Path Model 2 (heterosexual sample; N = 112).



As Figure 4 shows, Path Model 2 does not fit the data particularly well (chi square 7 df = 20.2, $p = .005$). About 31% of the variance in depression among the heterosexual men is accounted for by the antecedent variables involvement and detachment coping ($R^2 = .31$, $p < .001$), considerably less than was the case for gay men. As the dotted arrow indicates, there was a "missing link" between shame and depression; that is, the data indicate that there was a significant positive direct effect of shame on depression for these men that was not specified in the path model. This direct effect would have been

significant if included in the model, even after accounting for the effects of the other variables.

Table 28
Individual link analyses for Path Model 2 (hetero. sample; N = 112)[a].

Path	Predicted Direction	Path Coeff.	SE	90% 2-sided Confidence Interval Lower	Upper	IP[b]	Odds Ratio[c]	Sig. ($p < .05$)
Symptoms→ Shame	+	.15	.10	-.01	.31	.93	13.29	ns
Symptoms→ Stress	+	.27	.11	.09	.45	.99	99.00	sig
Symptoms→ Control	-	-.04	.13	-.25	.17	.62	1.63	ns
Shame→ Stress	+	.25	.11	.07	.43	.99	99.00	sig
Shame→ Control	-	-.20	.11	-.38	-.02	.97	32.33	sig
Shame→ Involvement	-	-.02	.13	-.23	.19	.56	1.27	ns
Shame→ Detachment	+	.55	.11	.37	.73	.99	99.00	sig
Stress→ Control	-	-.52	.12	-.72	-.32	.99	99.00	sig
Stress→ Involvement	-	.40	.18	.10	.70	.01	.01	sig[d]
Stress→ Detachment	+	.48	.18	.18	.78	.99	99.00	sig
Control→ Involvement	+	.25	.20	-.08	.58	.89	8.09	ns
Control→ Detachment	-	.22	.21	-.12	.56	.15	.18	ns
Involvement→ Depression	-	-.12	.14	-.35	.11	.81	4.26	ns
Detachment→ Depression	+	.61	.12	.41	.81	.99	99.00	sig

[a]Controlling for income.
[b]Inference Probability; the probability that the true population value lies in the predicted direction.
[c]Ratio of the inference probability (IP) to the reverse probability (1-IP); the odds that the directional hypothesis is true.
[d]Relationship is in opposite direction of what was predicted.

Table 28 allows examination of the results of the individual link analyses for Path Model 2. For the heterosexual men, physical symptoms were positively related to increased stress as predicted ($b = .27, p < .05$), though this effect was not as strong as that observed for the gay men (see Table 27). Physical symptoms were also weakly related to increased shame among the heterosexual men ($b = .15$, ns; IP = .93), which was not the case for the gay men once HIV status was accounted for in the model. No relationship was observed between physical symptoms and control for heterosexual men, unlike for the gay men, who showed a weakly negative relationship between symptoms and control.

Shame was related to increased stress ($b = .25, p < .05$) and decreased feelings of control ($b = .20, p < .05$) among heterosexual men, as it was for gay men, though the

latter reported a stronger relationship between shame and stress. For the heterosexual men, as for the gay men, shame was related to increased use of detachment coping (b = .55, $p < .05$); unlike for the gay men, however, shame was not related to decreased use of involvement coping among the heterosexual men (b = -.02, ns; IP = .56).

Stress was positively related to both involvement (b = .40, $p < .05$) and detachment (b = .48, $p < .05$) coping, and negatively associated with control (b = -.52, $p <$ .05). The direction and magnitude of these effects were quite similar to what was found for gay men. Once again, contrary to expectations, stress was positively correlated with both kinds of coping, rather than being negatively related to involvement and positively related to detachment as predicted.

Control was modestly related to increased use of involvement coping among the heterosexual men (b = .25, ns; IP = .89), unlike for the gay men. However, control was unrelated to detachment coping (b = .22, ns), which was the case for the gay men as well.

Finally, for the heterosexual men, involvement coping was negatively associated with depression (b = -.12, ns; IP = .81), though this effect was weak compared to that observed for the gay men. Detachment coping was positively related to depression (b = .61, $p < .05$) among the heterosexual men, though once again this effect was not as pronounced as that observed for gay men.

In general, Model 2 does not fit the data for heterosexual men as well as Model 1 fits the data for gay men. In one important respect the two models are not directly comparable, since HIV serostatus was unknown among the heterosexual men. In addition, the theoretical model tested was derived primarily from literature pertaining to HIV-positive and –negative gay men. Nevertheless, there are some important similarities in

results between the two samples. For both samples, physical symptoms were related to increased stress, which in turn was negatively related to feeling in control and positively related to increased use of both involvement and detachment coping strategies. For both heterosexual and gay men, involvement coping was associated with decreased depression, and detachment coping with increased depression, with the latter effect being particularly strong. Finally, for both samples, increased shame was related to higher stress, lower control, and increased use of detachment coping, which as stated above leads to increased depression.

Thus, for both gay and heterosexual men in this study, physical health has an important impact on stress level, which in turn reduces feelings of control and leads to the mobilization of various coping strategies. Some of these coping strategies are adaptive with respect to emotional well-being, while others are detrimental. In general, coping behaviors that involve active confrontation of problems and the utilization of social support lead to better emotional adjustment, while those that involve detachment or denial are associated with poorer adjustment. The results for both samples also suggest that increased feelings of shame may exacerbate adjustment problems by increasing stress, decreasing feelings of control, and increasing the use of detrimental detachment coping strategies.

SUPPLEMENTAL ANALYSIS

One of the clearest findings emerging from the preceding multivariate analyses was that greater use of detachment coping was associated with increased depression, while greater use of involvement coping was related to decreased depression. Less clear,

however, were factors affecting the specific type of coping a person might tend to use. Degree of perceived control, for example, was a poor predictor of coping among gay men, and for heterosexual men showed only a modest positive correlation with involvement coping. Level of internalized shame, on the other hand, was a fairly good predictor of involvement versus detachment coping among gay men, but was associated only with detachment coping among heterosexual men. Finally, increased stress was associated with greater use of both types of coping, and therefore did not improve our ability to differentiate which type of coping a person might tend to use.

To address this problem, a single measure of "coping preference" was created to assess whether any factors were clearly associated with greater use of one type of coping *relative to the other*. For each participant, a new variable was computed by subtracting the involvement coping score from the detachment coping score. The resulting variable therefore had a positive sign if the person's detachment score was greater than his involvement score, and a negative sign if the person preferred involvement coping over detachment. In other words, the larger the value of the new variable, the greater was the person's preference for detachment coping relative to involvement coping.

Bivariate correlations were then calculated between the coping preference variable and a variety of demographic and substantive variables. The results are shown in Table 29. Correlations are presented separately for heterosexual men, gay men, HIV-positive gay men, and gay men with AIDS. Note that because of the way the coping preference variable was calculated (detachment score minus involvement score), positive correlations in Table 29 indicate factors related to greater use of detachment coping

relative to involvement coping, while negative correlations indicate factors related to greater use of involvement coping relative to detachment coping.

Table 29

Correlations between detachment coping preference [a] and other variables in the study.

Group	Variable	*r*	*p*
Heterosexual Men (N = 112)	Age	.20	.037
	Caucasian Race	.10	.304
	Education	.03	.778
	Annual Income	-.10	.321
	Physical Symptoms	.12	.209
	Stress Quotient	.11	.268
	Control Quotient	-.15	.106
	Shame	.36	.000
	Depression	.26	.006
Gay Men (N = 107)	HIV Positive	-.10	.290
	AIDS Diagnosis	-.03	.742
	Age	-.09	.382
	Caucasian Race	.09	.369
	Education	.03	.780
	Annual Income	.01	.890
	Physical Symptoms	-.01	.906
	Stress Quotient	.13	.176
	Control Quotient	-.09	.367
	Shame	.41	.000
	Depression	.38	.000
HIV+ Gay Men (N = 50)	AIDS Diagnosis	.01	.917
	Age	-.06	.699
	Caucasian Race	.29	.043
	Education	.04	.794
	Annual Income	-.07	.651
	Physical Symptoms	.11	.439
	Stress Quotient	.27	.063
	Control Quotient	-.26	.074
	Shame	.60	.000
	Depression	.54	.000
Gay Men with AIDS (N = 31)	Age	.17	.375
	Caucasian Race	.15	.407
	Education	.01	.963
	Annual Income	-.15	.409
	Physical Symptoms	.24	.185
	Stress Quotient	.50	.004
	Control Quotient	-.35	.055
	Shame	.57	.001
	Depression	.57	.001

[a]Detachment score minus involvement score. Larger values indicate preference for detachment coping.

Table 29 indicates that, for heterosexual men, age, shame, and depression were positively correlated with preference for detachment coping. The only surprising finding here is the correlation between age and detachment, particularly given the small variance in age within the heterosexual sample. It is unclear why slightly older college students would indicate a significant preference for detachment coping behaviors.

Among gay men as a group, only shame and depression were significantly related to coping preference; both of these variable were positively associated with a preference for detachment coping. When considering only HIV-positive gay men, a slightly different picture emerged. For these men, Caucasian ethnicity, as well as shame and depression, were significantly correlated with detachment coping. Further, the correlations between shame, depression, and detachment were larger for these men compared to gay men in general. An unexpected finding here is that Caucasian men were more likely to prefer detachment coping than ethnic minority men. It is unclear why white men would be more likely than minority men to cope using detachment-oriented strategies. Unfortunately, the number of minority respondents in this sample is too small to permit meaningful analysis of the differences between white and non-white respondents.

Finally, for men with AIDS, stress, shame, and depression were all positively correlated with a preference for detachment coping. In addition, the negative correlation between control and detachment fell just short of statistical significance for these men (r = -.35, p = .055).

These findings lend further support to the overall model proposed in this study, particularly with respect to HIV-positive men and men with AIDS. For these at-risk men,

minimizing stress, increasing perceived control over stressful situations, and addressing shame issues may be critical to maintaining healthy, involvement-oriented coping behaviors, which in turn may result in better emotional adjustment and decreased depression.

Chapter 4

DISCUSSION

METHODOLOGICAL CONSIDERATIONS

A number of methodological issues must be taken into account when interpreting the results of this research. These are outlined in the following sections.

Sampling Issues

The use of non-random sampling techniques in this study may limit the generalizability of the results. The heterosexual sample was a sample of convenience recruited through the Psychology Department subject pool, and was homogenous with respect to age, ethnicity, and educational attainment. This sample differed considerably from the gay sample with respect to age, educational attainment, and annual income, and therefore comparisons made on the basis of sexual orientation should be viewed with caution since the two samples differed along so many other dimensions as well. The HIV-positive sample was a sample of convenience recruited through a local HIV/AIDS service organization (LAAN), and was probably skewed toward more economically disadvantaged men with more advanced HIV disease. Further, the response rate of 63% for LAAN clients, while adequate, nevertheless begs the question of whether there were important differences between the men who decided to fill out the survey and those who did not (or could not) do so. HIV-negative gay men volunteered for the study after reading an advertisement or hearing about the project from a friend or acquaintance.

Again, it is impossible to know whether men who volunteered to participate in this research differed in important ways from men not volunteering. Finally, both the gay and heterosexual samples were ethnically homogenous and (by design) restricted to men; thus, the results reported here should not be generalized to women or ethnic minorities.

Lack of HIV Information for the Heterosexual Sample

Because of the low base rate of HIV testing among heterosexual male college students, it was not possible to recruit a sample of heterosexual men with known HIV serostatus using the Psychology Department subject pool. This precluded strict comparisons between the gay and heterosexual samples, as well as the assessment of HIV serostatus/sexual orientation interactions.

Limitations Of Cross-Sectional Data

The cross-sectional design of this study precluded strict replication of Folkman et al.'s (1993) prospective research, in which they were able to control for the effects of past depressed mood. Since past emotional distress is perhaps the best predictor of current and future distress, this represents a serious limitation of the current study. In addition, inferences based on cross-sectional results are limited to correlation. Thus, although path modeling was employed here to propose structural relationships among variables, it should be understood that the results in no way demonstrate causal relationships among these variables. Language such as *"these results suggest that X may lead to Y, which in turn affects Z"* is used merely to suggest possible interpretations of the results.

Scale Psychometrics

Confirmatory factor analysis of the scales used in this study indicated that most of them may not measure unitary constructs (see Table 2). Deletion of weaker items did not

significantly improve the scales' performance on Hunter and Hamilton's (1992) chi-square tests of internal and external consistency. These results are somewhat alarming considering that several of these scales (such as the WOC and the CES-D) are well-established, widely-used research instruments. Caution should therefore be used in interpreting results based on these scales.

Possible Confounding of Shame and Depression

As shown in Table 25 (above), respondents' ISS scores were highly correlated with their scores on the CES-D depression measure. Corrected correlations between shame and depression ranged from .82 to .96 (.78 to .90 uncorrected), which are unusually large for behavioral science constructs (Hunter, class notes). Correlations of this magnitude suggest possible confounding between the measures of shame and depression used in this study (Neter, Wasserman, & Kutner, 1985). The Internalized Shame Scale (ISS; Cook, 1994) measures shame by asking respondents to endorse certain experiences and beliefs about the self. It may be that the ISS actually measures depressive thoughts and beliefs more than shame affect per se, thus confounding it with the measure of depression.

This criticism is not unique to the ISS; it may be true of any attempt to measure internal psychological phenomena (such as affect) indirectly through the use of paper-and-pencil questionnaires. With the ISS, the degree of internalized shame is inferred from the respondent's endorsement of experiences and beliefs thought to be consistent with or indicative of shame affect. It may certainly be the case that the experiences and beliefs reflected in the ISS items are related to underlying shame; however, many of these items could just as easily be related to underlying depression, which, while possibly related, is

not the same thing as shame. In testing terms, the ISS may demonstrate good sensitivity to underlying shame, but at the same time demonstrate poor specificity in that it also measures things other than shame (e.g., depression). This is consistent with the results of the CFA (Table 2) which suggest that the ISS and CES-D may not measure unitary constructs.

DISCUSSION OF RESULTS

Sexual Orientation, HIV, and Internalized Shame

Gay men as a group reported higher levels of internalized shame than heterosexual men in this study. However, the magnitude of this difference depended on the HIV serostatus of the gay men. HIV-positive gay men reported .42 SD greater shame than heterosexual men, whereas HIV-negative gay men reported only a .14 SD difference. Thus, the gap in reported shame between gay and heterosexual men is three times greater for HIV-positive gay men than for HIV-negative. Further, within the gay sample, HIV-positive men reported about .31 SD more internalized shame than HIV-negative gay men.

These results suggest that gay men in general, and HIV-positive gay men in particular, may be especially vulnerable to shame, which was found here to be associated with greater use of detachment coping and increased depression. This may reflect the compound societal stigmatization of homosexuality and HIV infection (Herek & Glunt, 1988; Neisen, 1990), as well as the powerlessness and increasing dependency that may accompany HIV infection (Kaufman, 1989). More about shame and powerlessness will be discussed in the section on shame and control, below.

Sexual Orientation, HIV, and Depression

Gay men as a group reported slightly greater (.17 SD) depressive symptomatology than heterosexual men. However, as was the case with internalized shame, this difference was affected dramatically by the HIV serostatus of the gay men. HIV-negative gay men actually reported slightly *less* (.18 SD) depression than heterosexual men, while HIV-positive gay men reported significantly more depression than either heterosexual men (d = .52) or HIV-negative gay men (d = .66). These results indicate that, within this sample, HIV serostatus was a much better predictor of depressed mood than sexual orientation, since HIV-positive gay men were more different from HIV-negative gay men than from heterosexual men with respect to depression level, while HIV-negative gay men were similar to (and even slightly less depressed than) heterosexual men. These results contrast with earlier findings that suggested that homosexuality per se is associated with increased depression and poorer emotional adjustment (e.g., Bungener et al., 1993; Chuang et al., 1992; Folkman et al., 1993; Krikorian et al., 1995; Rosenberger et al., 1993).

Physical Symptoms, Stress, and Internalized Shame

Not surprisingly, physical symptoms have been cited as perhaps the most potent stressor for people living with HIV/AIDS (Folkman et al., 1993; Hays et al., 1992; Ostrow, Monjan, et al., 1989). The results of the present study lend further support to this conclusion. For all of the groups studied here, physical symptoms were positively correlated with increased stress, and this effect was especially strong for gay men diagnosed with AIDS (r = .69). Interestingly, HIV-negative gay men reported a stronger association between physical symptoms and stress than HIV-positive gay men without AIDS. This finding may reflect fears among "worried well" HIV-negative gay men who

perceive themselves to be at risk for HIV infection, and who therefore experience greater stress when physical symptoms are present.

As predicted, physical symptoms were also associated with increased shame for all of the groups studied here. Once again, this relationship was particularly strong for gay men diagnosed with AIDS (r = .47), and may reflect the stigmatizing and disfiguring nature of many AIDS-related symptoms, as well as the increasing sense of powerlessness one experiences with declining health (Kaufman, 1989).

Appraisals of Control and Internalized Shame

As predicted, feeling less in control of stressful situations was associated with increased shame, particularly among HIV-positive gay men. Tomkins (1995), as well as Kaufman (1989) and Kaufman and Raphael (1996), have written about the relationship between powerlessness and shame. Kaufman (1989) describes the "affect dynamics" of powerlessness in PWAs, for whom the diagnosis evokes a sense of acute helplessness and uncertainty. According to Kaufman (1989) and Kaufman and Raphael (1996), fear and shame may become magnified into humiliation and terror for PWAs, and for HIV-positive gay men may also reactivate or potentiate shame scenes involving sexuality. Kaufman (1989) also warns of a "powerlessness-affect-stress" cycle that begins with feelings of powerlessness or lack of control and culminates in increased stress and physical symptoms. The results presented here are consistent with Kaufman's theory, as decreased control was found to be associated both with increased stress and increased shame, which in turn were both associated with increased physical symptoms.

Stress and Coping

The data presented here indicate that increased stress was associated with greater use of both involvement and detachment coping strategies. While a positive relationship between stress and detachment coping was predicted, the finding that stress was also related to increased use of involvement coping was somewhat unexpected based on previous findings. Specifically, Folkman et al. (1993) reported a weakly negative bivariate relationship between these variables, which became non-significant in their multivariate analysis. It must be remembered, however, that these studies are not directly comparable, since Folkman and her colleagues used a shortened version of the WOC while the present study used the full-length "gay male" version of the instrument. It is difficult to say whether differences in the two versions of the scale account for the differing relationships observed between stress and involvement coping. In any case, the present findings indicate that among both heterosexual and gay men, increased stress was associated with the mobilization of a wide variety of coping behaviors. In other words, the effects of stress appeared to be non-specific with respect to the type of coping behaviors (detachment versus involvement) elicited.

The above comments pertain when assessing detachment and involvement coping as separate variables. When a single measure of relative coping preference was calculated, however, it was shown that among gay men with AIDS, increased stress was in fact related to relatively greater use of detachment as opposed to involvement coping strategies, as predicted. Thus, while heightened stress may be associated with increases in a variety of different behaviors intended to help the person cope, the data suggest a relatively greater use of detachment over involvement-oriented strategies as gay men with

AIDS become more stressed. This relative preference for detachment over involvement coping was also associated with increased shame and depression among HIV-positive gay men (regardless of AIDS diagnosis).

Appraisals of Control and Coping

Lazarus and Folkman's (1984) theory suggests that greater feelings of control over stressors should lead to increased use of active, involvement-oriented coping behaviors, while feeling less control over stressors should lead to greater detachment. The data presented here lend mixed support to this hypothesis. Multivariate analyses showed that control was not significantly related to either type of coping for gay men as a group, while among heterosexual men there were modest (non-significant) positive correlations between control and *both* types of coping. When a relative measure of coping preference was used, a trend ($r = -.35$, $p = .055$) was found for decreased control to be associated with a relative preference for detachment over involvement coping, consistent with Lazarus and Folkman's theory. This moderate effect would have been statistically significant if the N of gay men with AIDS (31) had been larger.

Coping and Depression

The results of this investigation are consistent with the hypothesis that the type of behaviors used to cope with stressors affects emotional adjustment and distress. Active, involvement-oriented coping strategies were associated with decreased depressive symptomatology among all of the study subgroups, especially gay men with AIDS. On the other hand, coping that emphasized detachment from or denial of problems was associated with increased depression among all of the subgroups, with the strongest

effects observed for gay men in general and HIV-positive gay men in particular. These findings hold important implications for clinical intervention, as will be discussed below.

Internalized Shame and the Stress and Coping Model

One of the key questions addressed by this research was whether Lazarus and Folkman's (1984) cognitive-behavioral stress and coping model could be improved by the addition of an affect component, i.e., shame. Bivariate analyses indicated that gay men in general, and HIV-positive gay men in particular, reported more shame than heterosexual men, and that increased shame was related to increased physical symptoms, increased stress, decreased control, greater use of detachment coping, decreased use of involvement coping, and increased depression. Further, the multivariate path analyses indicated that, for gay men, shame was the best predictor of the use of involvement versus detachment coping strategies. For these men, increased shame was associated with increased use of detachment coping, which in turn was related to increased depression. On the other hand, decreased shame was associated with increased use of involvement coping, which was related to decreased depression. Thus, level of reported shame differentiated between the types of coping used, unlike control, which was unrelated to either type of coping among gay men, or stress, which was positively associated with both types of coping but did not differentiate between them. Shame also proved important for heterosexual men in the multivariate analysis, in that it was related to increased use of detachment coping, as well as showing a direct positive effect on depression. Taken together, these findings suggest that shame is an important addition to the stress and coping model.

IMPLICATIONS FOR CLINICAL INTERVENTION

The results of this investigation hold important implications for clinical practice and intervention, particularly with respect to PWAs. The data presented here suggest that HIV-positive gay men, especially those diagnosed with AIDS, may be particularly vulnerable to the deleterious effects of stress. Increased stress, and the decrease in perceptions of control associated with it, may lead to greater use of maladaptive coping strategies involving detachment and denial, which in turn may be associated with increased emotional distress.

In addition, the data presented here indicate that shame is related to the greater use of maladaptive avoidance-oriented coping behaviors, which are related to increased depression. Psychologist Gershen Kaufman has focused his clinical practice on the psychotherapy of "shame-based syndromes" (Kaufman, 1989) and has written extensively on the deleterious effects of shame on mental health, particularly as this relates to gay men and lesbians. Kaufman and Raphael (1996) argue that the societal stigmas associated with homosexuality and AIDS have become inextricably intertwined, a situation which may lead to compound shame for HIV-positive gay men:

> The cultural shame and disgust about homosexuality have been displaced onto AIDS and thus transferred directly to people with AIDS. But the reverse is also happening: the shame, dissmell, and disgust about AIDS have been displaced onto gays. Because of these two factors, being gay unfortunately equals having AIDS in the minds of many people. By perceiving AIDS as a "gay disease," our culture equally repudiates gays and people with AIDS via dissmell and contempt (p. 102).

The present study suggests that mental health professionals working with HIV-positive gay men should help these at-risk men better manage stress by teaching and reinforcing active, involvement-oriented coping strategies, thereby helping them to

maintain or increase their sense of personal control, which has often been compromised by their experiences living with the uncertainties of HIV/AIDS. In addition, addressing shame issues with these men is critical, particularly due to the demonstrated relationship between shame and coping.

SUGGESTIONS FOR FUTURE RESEARCH

Recruitment of research participants is challenging, and this is even more the case when studying specialized populations such as gay men or persons living with HIV/AIDS. The current study was fortunate to have access to both an agency sample of gay men living with HIV and a community sample of HIV-negative gay men. Future studies could benefit from including a non-agency related (i.e., community-based) sample of gay men living with HIV to determine if these men differ in important ways from those recruited through HIV/AIDS service organizations. Further, if large sampling frames of potential respondents could be identified, random sampling from within those frames could improve the quality of the statistical inferences drawn from the data. Finally, attempts should be made to recruit samples that are similar to one another with respect to demographic variables such as age, education, and income.

Future studies would also benefit from including other groups at increased risk for HIV infection, such as women, ethnic minorities, sex trade workers, and IV drug users. These groups have been underrepresented in the literature despite representing a growing proportion of new HIV infections (CDC, 1997).

If feasible given available resources, prospective (longitudinal) research designs should be utilized in future investigations to study changes in stress and coping processes

and emotional adjustment over time, and to allow cross-sectional analyses to control for previous levels of the dependent variable.

Future investigations should use different assessment techniques for measuring shame. Fortunately, a number of new measures of shame and guilt have been developed in recent years (Tangney, 1996). It would be instructive to note the degree of correspondence between different methods for measuring shame, as well as assess their relationship to other variables of interest such as depression.

Future studies should consider measuring coping within more than one domain. In particular, investigations of coping among PWAs should assess both "general" coping (i.e., coping with "typical" everyday stressors and life events) and coping with HIV/AIDS-specific stressors such as physical symptoms, AIDS-related worries, losing a loved one to AIDS, etc. (DeMarco et al., 1997). By assessing coping across domains, the researcher can discern whether PWAs cope differently with AIDS-related stressors than they do with non-AIDS-related stressors, as well as assess whether coping in one domain has different implications for emotional adjustment than coping in other domains. This knowledge would allow helping professionals to better focus their clinical interventions with PWAs.

Researchers should make an effort to improve the quality of the measurement scales used in social science research. The results of the confirmatory factor analysis of the scales used in the present study clearly show that well-known, widely-used instruments with high coefficient alphas can nevertheless demonstrate poor internal and external consistency when subjected to stricter tests.

Finally, future research should investigate the effects of the new combination drug therapies on the psychosocial functioning of HIV-infected persons. Since these new treatments were introduced in 1996 there have been dramatic decreases in morbidity and mortality attributable to HIV disease in the US (CDC, 1997). In many cases, persons thought to be terminally ill have demonstrated a remarkable response to the medications. Opportunistic infections disappear, and often the person's viral load drops to undetectable levels within the bloodstream. These treatment advances seem almost miraculous, and offer renewed hope for an eventual cure for HIV disease. However, for persons "snatched from the jaws of death" by the new treatments, there may be new stressors to cope with as well. These might include planning for an indefinite extension of life after having already made arrangements for death, survivor's guilt, existential issues, and the like. Future research will need to map out this new territory so that our understanding keeps pace with the growing complexities of living with HIV/AIDS.

APPENDICES

APPENDIX A

APPENDIX A

EXAMPLE OF WRITTEN NOTICE USED IN PARTICIPANT RECRUITMENT

PARTICIPANTS NEEDED for a research study at Michigan State University examining the emotional well-being of gay men with and without HIV/AIDS. The study will focus on how stress affects emotional wellness. Participation will involve filling out a questionnaire that takes 30-45 minutes to complete. All responses to the research questions will be kept strictly confidential. All respondents will receive a $10 Meijer gift certificate for their participation. QUALIFICATIONS: Gay men 18 years of age or older who have undergone HIV antibody testing and know their results. If you are interested in participating, please contact Frank DeMarco by phone at (517) 355-9561 (leave name, number, and the message "research project"), by electronic mail at demarcof@pilot.msu.edu, or by US mail c/o Department of Psychology, 129 Psychology Research Bldg., Michigan State University, East Lansing, MI 48824-1117.

APPENDIX B

APPENDIX B

RESEARCH INSTRUMENT

Research Questionnaire

for a study of

Health, Stress, Coping, And Emotional Well-Being

Principal Investigator:
Frank J. DeMarco, MA

Supervising Faculty Member:
Robert Caldwell, Ph.D.

Department of Psychology
Michigan State University

RESEARCH CONSENT STATEMENT

1. I have freely consented to take part in a scientific study being conducted by Frank DeMarco, under the supervision of Professor Robert Caldwell (MSU Department of Psychology).

2. I certify that I am 18 years of age or older.

3. I understand that this study concerns health, stress, and coping, and how they affect a person's emotional well-being.

4. I understand that my participation involves filling out the following questionnaire, which takes approximately 20-30 minutes to complete.

5. Although I am encouraged to complete the entire questionnaire, I understand that I am free to discontinue my participation in this study at any time without penalty.

6. I understand that my individual responses to this survey will be kept ***strictly confidential*** and that I will remain ***completely anonymous***. Study results will be presented in summary form only, without reference to responses given by individual participants. **At no time will Frank DeMarco or anyone other than authorized staff members of the agency that referred me to this study have access to my name, address, or phone number unless I choose to reveal this information.**

7. **I understand that I will receive a ten dollar ($10) Meijer gift certificate for my participation in this study.** The gift certificate will be mailed to me by the agency that referred me to this study as soon as my completed questionnaire is received by Frank DeMarco. **I understand that I must return the questionnaire directly to Frank DeMarco, using the pre-addressed postage-paid envelope provided.**

8. I understand that a summary of the study results will be made available to me at my request once the study is completed (summer 1997), within the restrictions outlined in section (6) above. I may request this summary by contacting the agency that referred me to this study and stating that I participated in Frank DeMarco's survey.

9. I understand that my participation in this study does not guarantee any benefits to me beyond what is stated in sections (7) and (8) above.

10. I understand that, at my request, I can receive additional explanation of the study after my participation is completed by contacting Frank DeMarco at (517) 355-9561 (MSU Department of Psychology, 129 Psychology Research Bldg., East Lansing 48824-1117).

By completing and returning this questionnaire you indicate your understanding of this consent statement and your voluntary agreement to participate in this study.

We all experience stress in our lives from time to time.

To what extent have each of the following areas of your life been *stressful* for you during the *past month*? Please circle one number for each item.

IMPORTANT: If you feel that an item does not apply to you, please write "N/A" next to that item and skip to the next one.

DURING THE PAST MONTH:

	Not At All Stressful	A Little Bit Stressful	Quite A Bit Stressful	Extremely Stressful
a) Romantic relationship(s)	0	1	2	3
b) Relationships with friends	0	1	2	3
c) Relationships with family	0	1	2	3
d) Work	0	1	2	3
e) School	0	1	2	3
f) Your finances	0	1	2	3
g) Illness of someone close to you	0	1	2	3
h) Death of someone close to you	0	1	2	3
i) Your own health	0	1	2	3
j) Political issues	0	1	2	3
k) Other (please specify):	0	1	2	3

Now, please look over the list above. Which of these areas has been the *MOST* stressful for you during the *past month*? If two or more seem equally stressful, pick one.

Write your choice in here: _____

Most stressful area of my life in the past month

You will be asked to refer to this choice later in the questionnaire.

Now here is the same list of life areas that you just rated for stress.

To what extent have you felt that you had *control* over each of these areas of your life during the *past month*? Please circle one number for each item.

IMPORTANT: If you feel that an item does not apply to you, please write "N/A" next to that item and skip to the next one.

DURING THE PAST MONTH:

	Almost Never Felt In Control	Sometimes Felt In Control	Often Felt In Control	Almost Always Felt In Control
a) Romantic relationship(s)	0	1	2	3
b) Relationships with friends	0	1	2	3
c) Relationships with family	0	1	2	3
d) Work	0	1	2	3
e) School	0	1	2	3
f) Your finances	0	1	2	3
g) Illness of someone close to you	0	1	2	3
h) Death of someone close to you	0	1	2	3
i) Your own health	0	1	2	3
j) Political issues	0	1	2	3
k) Other (please specify):	0	1	2	3

On page 2 above you indicated which area of your life has been the most stressful for you during the past month. Please review your choice, and write it in here:

***Most stressful area of my life during the past month*:**

_____

The following is a list of ways that people attempt to cope with stressful situations.

Please read each item below and indicate, by circling the appropriate number, *the extent to which you used it in the situation you have just described as being the most stressful area of your life during the past month.* (If an item does not apply to your situation, circle 0.)

	Not Used	Used somewhat	Used quite a bit	Used a great deal
1. Just concentrated on what I had to do next—the next step.	0	1	2	3
2. I tried to analyze the problem in order to understand it better.	0	1	2	3
3. Turned to work or substitute activity to take my mind off things.	0	1	2	3
4. I felt that time would make a difference—the only thing to do was to wait.	0	1	2	3
5. Bargained or compromised to get something positive from the situation.	0	1	2	3
6. I did something which I didn't think would work, but at least I was doing something.	0	1	2	3
7. Tried to get the person responsible to change his or her mind.	0	1	2	3
8. Talked to someone to find out more about the situation.	0	1	2	3
9. Criticized or lectured myself.	0	1	2	3
10. Tried not to burn my bridges, but leave some things open.	0	1	2	3
11. Hoped a miracle would happen.	0	1	2	3
12. Went along with fate; sometimes I just have bad luck.	0	1	2	3

	Not Used	Used somewhat	Used quite a bit	Used a great deal
13. Went on as if nothing had happened.	0	1	2	3
14. I tried to keep my feelings to myself.	0	1	2	3
15. Looked for the silver lining, so to speak; tried to look on the bright side of things.	0	1	2	3
16. Slept more than usual.	0	1	2	3
17. I expressed anger to the person(s) who caused the problem.	0	1	2	3
18. Accepted sympathy and understanding from someone.	0	1	2	3
19. I told myself things that helped me to feel better.	0	1	2	3
20. I was inspired to do something creative.	0	1	2	3
21. Tried to forget the whole thing.	0	1	2	3
22. I got professional help.	0	1	2	3
23. Changed or grew as a person in a good way.	0	1	2	3
24. I waited to see what would happen before doing anything.	0	1	2	3
25. I apologized or did something to make up.	0	1	2	3
26. I made a plan of action and followed it.	0	1	2	3
27. I accepted the next best thing to what I wanted.	0	1	2	3
28. I let my feelings out somehow.	0	1	2	3
29. I realized I brought the problem on myself.	0	1	2	3
30. I came out of the experience better than when I went in.	0	1	2	3

	Not Used	Used somewhat	Used quite a bit	Used a great deal
31. I talked to someone who could do something concrete about the problem.	0	1	2	3
32. I got away from it for awhile; tried to rest or take a vacation.	0	1	2	3
33. I tried to make myself feel better by eating.	0	1	2	3
34. I tried to make myself feel better by drinking.	0	1	2	3
35. I tried to make myself feel better by using recreational drugs (e.g., cocaine, crack, marijuana).	0	1	2	3
36. I tried to make myself feel better by using prescribed mood-altering drugs (e.g., Valium, Halcion, Xanax).	0	1	2	3
37. I took a big chance or did something very risky.	0	1	2	3
38. I tried not to act too hastily or follow my first hunch.	0	1	2	3
39. I found new faith.	0	1	2	3
40. I maintained my pride and kept a stiff upper lip.	0	1	2	3
41. I rediscovered what is important in life.	0	1	2	3
42. I changed something so things would turn out all right.	0	1	2	3
43. I avoided being with people in general.	0	1	2	3
44. I didn't let it get to me; I refused to think too much about it.	0	1	2	3
45. I asked a relative or friend I respected for advice.	0	1	2	3
46. I kept others from knowing how bad things were.	0	1	2	3
47. I made light of the situation; I refused to get too serious about it.	0	1	2	3

	Not Used	Used somewhat	Used quite a bit	Used a great deal
48. I talked to someone about how I was feeling.	0	1	2	3
49. I stood my ground and fought for what I wanted.	0	1	2	3
50. To feel better, I had sex with my primary partner.	0	1	2	3
51. I took it out on other people.	0	1	2	3
52. I drew on my past experiences; I was in a similar situation before.	0	1	2	3
53. I knew what had to be done, so I doubled my efforts to make things work.	0	1	2	3
54. I refused to believe that it had happened.	0	1	2	3
55. I made a promise to myself that things would be different next time.	0	1	2	3
56. I came up with a couple of different solutions to the problem.	0	1	2	3
57. I accepted it, since nothing could be done.	0	1	2	3
58. I tried to keep my feelings from interfering with other things too much.	0	1	2	3
59. I wished that I could change what had happened or how I felt.	0	1	2	3
60. I changed something about myself.	0	1	2	3
61. I daydreamed or imagined a better time or place than the one I was in.	0	1	2	3
62. I wished that the situation would go away or somehow be over with.	0	1	2	3
63. I had fantasies or wishes about how things might turn out.	0	1	2	3
64. I prayed.	0	1	2	3
65. I had anonymous sex to feel better.	0	1	2	3

	Not Used	Used somewhat	Used quite a bit	Used a great deal
66. I had non-anonymous sex with someone to feel better.	0	1	2	3
67. I prepared myself for the worst.	0	1	2	3
68. I went over in my mind what I would say or do.	0	1	2	3
69. I thought about how a person I admire would handle this situation and used that as a model.	0	1	2	3
70. I tried to see things from the other person's point of view.	0	1	2	3
71. I reminded myself how much worse things could be.	0	1	2	3
72. I jogged or exercised.	0	1	2	3
73. I meditated or used imagery.	0	1	2	3

Below is a list of statements describing feelings or experiences that you may have from time to time. Most of these statements describe feelings and experiences that are generally painful or negative in some way. *We have all had some of these feelings at some time.* Read each statement carefully and circle the number to the right of the item that indicates *how frequently* you find yourself feeling or experiencing what is described in the statement.

	NEVER	SELDOM	SOME-TIMES	OFTEN	ALMOST ALWAYS
1. I feel like I am never quite good enough.	0	1	2	3	4
2. I feel somehow left out.	0	1	2	3	4
3. I think that people look down on me.	0	1	2	3	4
4. All in all, I am inclined to feel that I am a success.	0	1	2	3	4
5. I scold myself and put myself down.	0	1	2	3	4
6. I feel insecure about others' opinions of me.	0	1	2	3	4
7. Compared to other people, I feel like I somehow never measure up.	0	1	2	3	4
8. I see myself as being very small and insignificant.	0	1	2	3	4
9. I feel I have much to be proud of.	0	1	2	3	4
10. I feel intensely inadequate and full of self doubt.	0	1	2	3	4
11. I feel as if I am somehow defective as a person, like there is something basically wrong with me.	0	1	2	3	4
12. When I compare myself to others I am just not as important.	0	1	2	3	4
13. I have an overpowering dread that my faults will be revealed in front of others.	0	1	2	3	4
14. I feel I have a number of good qualities.	0	1	2	3	4
15. I see myself striving for perfection only to continually fall short.	0	1	2	3	4
16. I think others are able to see my defects.	0	1	2	3	4
17. I could beat myself over the head with a club when I make a mistake.	0	1	2	3	4

	NEVER	SELDOM	SOME-TIMES	OFTEN	ALMOST ALWAYS
18. On the whole, I am satisfied with myself.	0	1	2	3	4
19. I would like to shrink away when I make a mistake.	0	1	2	3	4
20. I replay painful events over and over in my mind until I am overwhelmed.	0	1	2	3	4
21. I feel I am a person of worth at least on an equal plane with others.	0	1	2	3	4
22. At times I feel like I will break into a thousand pieces.	0	1	2	3	4
23. I feel as if I have lost control over my body functions and my feelings.	0	1	2	3	4
24. Sometimes I feel no bigger than a pea.	0	1	2	3	4
25. At times I feel so exposed that I wish the earth would open up and swallow me.	0	1	2	3	4
26. I have this painful gap within me that I have not been able to fill.	0	1	2	3	4
27. I feel empty and unfulfilled.	0	1	2	3	4
28. I take a positive attitude toward myself.	0	1	2	3	4
29. My loneliness is more like emptiness.	0	1	2	3	4
30. I feel like there is something missing.	0	1	2	3	4

We all have times when we feel mostly happy, and other times when we feel down or blue.

Below is a list of some ways you might have felt or behaved recently. Please indicate how often you have felt or behaved in these ways *during the past week* by circling the appropriate number to the right of each item. Use the scale given below:

0	1	2	3
RARELY OR NONE OF THE TIME (Less than 1 day out of the past week)	**SOME OR A LITTLE OF THE TIME (1-2 days out of the past week)**	**OCCASIONALLY OR A MODERATE AMOUNT OF THE TIME (3-4 days)**	**MOST OR ALL OF THE TIME (5-7 days)**

During the past week:

1. I was bothered by things that usually don't bother me.	0	1	2	3
2. I did not feel like eating; my appetite was poor.	0	1	2	3
3. I felt I couldn't shake off the blues, even with help from family/friends.	0	1	2	3
4. I felt that I was just as good as other people.	0	1	2	3
5. I had trouble keeping my mind on what I was doing.	0	1	2	3
6. I felt depressed.	0	1	2	3
7. I felt that everything I did was an effort.	0	1	2	3
8. I felt hopeful about the future.	0	1	2	3
9. I thought my life had been a failure.	0	1	2	3
10. I felt fearful.	0	1	2	3
11. My sleep was restless.	0	1	2	3
12. I was happy.	0	1	2	3
13. I talked less than usual.	0	1	2	3
14. I felt lonely.	0	1	2	3
15. People were unfriendly.	0	1	2	3
16. I enjoyed life.	0	1	2	3
17. I had crying spells.	0	1	2	3
18. I felt sad.	0	1	2	3
19. I felt that people dislike me.	0	1	2	3
20. I could not get "going."	0	1	2	3

Please tell us about your health.

Have you ever been *tested* for exposure to tuberculosis (TB)?

Yes _____

No _____

Don't know _____

If *yes*, have you ever tested *positive* for exposure to TB?

Yes _____

No _____

Don't know _____

Have you ever been *tested* for exposure to the *human immuno-deficiency virus* (HIV)—the virus that is believed to cause AIDS?

Yes _____

No _____

Don't know _____

If you answered <u>no</u> or <u>don't know</u>, please go on to the next page. →

If *yes*: How long ago was your *most recent* HIV test? Less than 3 months ago ____

3 - 6 months ago _____

6 - 12 months ago _____

Over 12 months ago _____

Have you ever tested *positive* for HIV? Yes _____

No _____

Don't know _____

If *HIV-positive*: Have you been diagnosed with AIDS? Yes _____

No _____

Don't know _____

Please indicate which of the following *physical symptoms*, if any, you have experienced during the *past year* (check all that apply):

Thrush, candida, or white patches in the mouth or throat for at least 2 weeks _____

Unintentional weight loss of at least 10 pounds (*not* related to dieting) _____

Diarrhea that lasted at least 2 weeks _____

Sweating at night for at least 2 weeks _____

Hairy leukoplakia (a white coating) on the tongue _____

A new or unusual dry cough lasting at least 2 weeks _____

Persistent sore mouth or throat lasting at least 2 weeks _____

An unusual bruise, bump, or skin discoloration that lasted at least 2 weeks _____

Persistent fatigue for at least 2 weeks _____

Persistent or recurring fever of at least 100° for at least 2 weeks _____

Tender or enlarged glands or lymph nodes (*not* counting groin) _____

Herpes zoster (shingles) _____

Persistent shortness of breath for at least 2 weeks _____

A new skin rash that lasted at least 2 weeks _____

Persistent, frequent, or unusual headaches for at least 2 weeks _____

Blurred vision, light flashes, or other unusual vision problems for at least 2 weeks _____

Other (please describe): _____

_____

_____

Finally, please tell us about yourself.

What is your date of birth? _____
MM-DD-YY

Which of the following best describes your *racial or cultural origin*?

Asian/Pacific Islander _____

Black/African American _____

Latino/Hispanic _____

Middle Eastern _____

Native American _____

White/Caucasian _____

Other (please explain below) _____

_____

Which of the following best describes your *level of education*?

Less than HS diploma _____

HS diploma _____

Some college _____

4-yr. college degree _____

Advanced degree _____

Which of the following best describes your *sexual orientation*?

Heterosexual _____

Bisexual _____

Gay _____

Which of the following best describes your *total ANNUAL household income*? (NOTE: If you depend on someone else for most of your income, please indicate *that person's* total household income to the best of your knowledge.)

Under $10,000 _____

$10,000-$30,000 _____

$30,001-$60,000 _____

$60,001-$100,000 _____

Over $100,000 _____

Which of the following best describes your *use of computers*?

Never _____

Occasionally (several times a month) _____

Frequently (several times a week) _____

Daily _____

Do you have access to the Internet?

Yes _____

No _____

Don't know _____

Do you have access to a *World Wide Web browser* (such as Netscape®)?

Yes _____

No _____

Don't know _____

If this survey had been available on the Internet or the World Wide Web, would you have been *more inclined* to fill it out, *less inclined* to fill it out, or would it have *made no difference* to you?

More inclined _____

Less inclined _____

No difference _____

Don't know _____

Thank you very much for participating in this study.

RESEARCH CONSENT STATEMENT (for student participants)

1. I have freely consented to take part in a scientific study being conducted by Frank DeMarco, under the supervision of Professor Robert Caldwell (MSU Department of Psychology).

2. I certify that I am 18 years of age or older.

3. I understand that this study concerns health, stress, and coping, and how they affect a person's emotional well-being.

4. I understand that my participation involves filling out the following questionnaire, which takes approximately 20-30 minutes to complete.

5. Although I am encouraged to complete the entire questionnaire, I understand that I am free to discontinue my participation in this study at any time without penalty.

6. I understand that my individual responses to this survey will be kept ***strictly confidential*** and that I will remain ***completely anonymous***. Study results will be presented in summary form only, without reference to responses given by individual participants.

7. **I understand that I will receive two (2) psychology experiment credits for my participation in this study.**

8. I understand that a summary of the study results will be made available to me at my request once the study is completed (summer 1997), within the restrictions outlined in section (6) above. I may request this summary by contacting Frank DeMarco at (517) 355-9561 (MSU Department of Psychology, 129 Psychology Research Bldg., East Lansing 48824-1117).

9. I understand that my participation in this study does not guarantee any benefits to me beyond what is stated in sections (7) and (8) above.

10. I understand that, at my request, I can receive additional explanation of the study after my participation is completed by contacting Frank DeMarco at (517) 355-9561 (MSU Department of Psychology, 129 Psychology Research Bldg., East Lansing 48824-1117).

By completing and returning this questionnaire you indicate your understanding of this consent statement and your voluntary agreement to participate in this study.

APPENDIX C

APPENDIX C

EXPANDED DISCUSSION OF
AFFECT THEORY VS. PSYCHOANALYTIC APPROACHES
TO UNDERSTANDING SHAME

THE PSYCHOANALYTIC PERSPECTIVE ON SHAME: THE WORK OF HELEN BLOCK LEWIS

Definition of Shame

Helen Block Lewis is widely recognized as the foremost modern proponent of the psychoanalytic perspective on shame. Shame is defined by Lewis (1971) as an affective state evoked by the internal self-monitoring regulatory agency (i.e., the superego) to control the drives, especially sexual, and to maintain or repair attachment bonds to others.

According to Lewis (1987), shame arises out of a failure of the central attachment bond between self and other. This failure evokes humiliated rage directed both at the other for the perceived scorning and rejecting of the self, and toward the self for being unworthy of the other's esteem, for caring so deeply about the other's opinion of the self, and for being passive and dependent. Additional rage is then deflected toward the self due to guilt about directing "unjust" rage at the other.

Lewis distinguishes between shame and guilt as being *different* affects, tied to different aspects of the superego. For Lewis (1971), the structure of the superego incorporates both a "castration threat" (threat of punishment) which makes possible the sense of guilt, and an "ego ideal," which makes possible the sense of shame (or pride) about failing (or succeeding) to live up to an internalized standard. Shame and guilt can thus be viewed as equally advanced, but different, superego functions. An overly harsh

superego has long been implicated as pathogenic in psychoanalytic thought. Freud (1923) contended that a malfunctioning or "archaic" superego is connected to neurotic symptoms. Kohlberg (1968) wrote that the neurotic has trouble maintaining a balanced self-evaluation due to an overly harsh superego.

Lewis contends that the one-sided emphasis in psychoanalytic thought and writing on the castration threat and guilt-related aspects of the superego has led to the neglect of shame. Lewis (1987) refers to shame as the "sleeper" of psychopathology.

Phenomenology of Shame and Guilt

In guilt, one's *value system* is the referent or focal point of awareness. Guilt is the affect that accompanies a transgression of rules. In shame, it is the internalized "*other*" that serves as the referent. The shame experience is one of feeling exposed as falling short "in the eyes of" the other, i.e., of failing to live up to the ego ideal. The "other" is thus experienced as rejecting the self because the self is defective or unworthy. "Shame...involves more self-consciousness and more self-imaging than guilt" (1971, p. 30). The self in general is the focus of shame; a specific behavior is the focus in guilt. With shame, the source of the negative evaluation of the self is localized as "out there"; in guilt, it is localized as originating from within the self, as a violation of internal standards. The shame experience involves feedback from all perceptual modalities and considerable autonomic stimulation; thus, there is much greater body awareness in the shame state than in the guilt state. Shame is therefore more autonomic, whereas guilt is more cognitive. Because shame is less rational than guilt, it can be evoked by a "rationally trivial" stimulus which feels disproportionately painful.

Dissipation of Shame

Shame and guilt are acutely disturbing affects and must be discharged or dissipated as quickly as possible in order for the individual to return to a state of emotional equilibrium. Shame & guilt thus evoke defenses which force compromises of affect and behavior in an attempt to maintain or reestablish emotional homeostasis, self-esteem, and relationships with others. Lewis refers to this as a "righting tendency" (1971, p. 26) which serves to dissipate shame and guilt. For example, shame reactions can be dissipated through some gesture of kindness or reassurance from another, while guilt can be dissipated by some action that makes amends for the transgression.

Shame, however, is often difficult to discharge. First, it is often difficult to *recognize* the shame state. Shame is often fused and *con*fused with guilt; the more autonomic nature of shame as compared to the more cognitive guilt state makes shame less accessible, and leads to denial or *by-passing* of the shame affect. Shame is therefore difficult to identify, and thus is not easily dissipated. This split between cognition and affect, and the global generalization of shame to the entire self, make shame difficult to resolve.

Second, shame leads to a "malfunctioning" of the self. The self is reduced in size and efficiency of functioning during shame. The shamed self seeks to hide, but is also at the center of the experience, painfully exposed and self-aware. Shame feels involuntary and irrational, and the self is experienced as passive. Thus the shamed self feels impotent and is less able to mobilize mature ego defenses to dissipate the shame.

Third, hostility evoked by the shame reaction is difficult to discharge because it is directed toward a valued other and thus is often redirected back toward the self as guilt. This inward-directed hostility leads to symptoms such as depression, both directly and via the strangulation of shame affect.

Shame and Psychological Symptoms

Lewis writes that "states of shame and/or guilt which cannot be discharged or righted lead into 'primary process' transformations or psychic symptoms" (p. 27). Shame and guilt that cannot be dissipated by more mature defenses (such as intellectualization, for example) are often driven out of awareness by more primitive defenses (such as repression). These affects are thereby repressed or "strangulated." Strangulated affect finds compromise expression in symptoms. Feelings such as worry, anxiety, and depression can appear without awareness of the underlying states of guilt or shame that evoke them.

Lewis (1987) describes a pattern in which shame leads quickly to humiliated fury and retaliatory urges, which then evoke guilt over "unjust" or "irrational" rage. This rage is redirected back against the self, leading to a further lowering of self-esteem which makes the self more susceptible to subsequent shaming and leads to psychological problems such as depression. This cycle is referred to by Scheff (1987) as the "shame-rage spiral."

This cycle is further amplified by the fact that people feel shame about being ashamed. Adult life, with its emphasis on rationality, leaves little room for the shame

experience, which relies largely on imagery and autonomic reactions. Thus the feeling of shame itself has stigma attached to it due to its "irrational" and out-of-control nature.

Lewis argues that shame has been largely neglected in psychoanalytic writing, and where it is discussed it has often been misunderstood. Most psychoanalytic (as well as behavioral) theory has viewed human nature as essentially individualistic or narcissistic. Lewis feels that greater emphasis needs to be placed on crucial attachments to others across the life span. Although shame is fundamentally "about the self," it is intimately other-connected as well—it arises in relation to the other when attachment bonds are threatened and when the self is experienced as falling short of the other's expectations.

Another way in which shame has been misunderstood in classical psychoanalytic theory according to Lewis is that it has been considered a more primitive emotion than guilt. Shame has been viewed as pre-oedipal, and guilt as oedipal. Lewis argues that there is no evidence that shame is a more primitive affect than guilt.

Thus, in a reformulation of the role of shame within psychoanalytic theory, shame affect functions not only to control drives but to maintain attachments, according to Lewis. Shame is the universal human response to loss of love or other failure of the central attachment bond to the other. Shame is so disturbing and so disorienting that it motivates one to repair or reestablish damaged or severed attachment bonds (Lewis, 1987).

In this schema depression results from a sequence in which shame is followed by humiliated fury which, in turn, is guiltily redirected back at the self. This results in a further lowering of self-esteem and increased feelings of worthlessness, helplessness,

impotence, passivity, and ultimately depression. Women in Lewis's view may be more prone to depression in our culture because they are less free to openly express hostility or aggression (therefore increasing the likelihood that aggression will be redirected against the self) and because they place greater value on interpersonal attachment bonds. Women are therefore more disturbed when those bonds are compromised.

THE AFFECT THEORY PERSPECTIVE ON SHAME: THE WORK OF SYLVAN TOMKINS

A General Introduction To Affect Theory

The perspective on shame offered by Silvan Tomkins is rooted in his seminal work on *affect theory*. Tomkins views affect as the primary motivating factor in human behavior. This view differs markedly from the traditional psychoanalytic perspective in which the drives are primary in governing behavior.

Tomkins was the first theorist to conceive of drives and affects as constituting *separate systems* (Kaufman & Raphael, 1996). The drive system, according to Tomkins, functions to meet physiological needs for food, water, oxygen, sleep, warmth, and sex, and the avoidance of pain. The innate affect system consists of six *primary affects* (three positive and three negative), one *affect auxiliary*, and two *drive auxiliaries*. All but the drive auxiliaries are described by a pair of terms representing a range of intensity.

Positive Primary Affects:

Interest—Excitement, Enjoyment—Joy, Surprise—Startle

Negative Primary Affects:

Distress—Anguish, Fear—Terror, Anger—Rage

Affect Auxiliary:

Shame—Humiliation

Drive Auxiliaries:

Dissmell and Disgust (innate defensive responses tied to the oxygen, hunger, and thirst drives)

The positive affects are innately *rewarding* and we are motivated to maximize them. The negative affects are innately *punishing* and we are motivated to minimize them. Negative affect magnifies more quickly and easily than positive affect, and will often overwhelm positive affect (Kaufman & Raphael, 1996). It is easy to see how this arrangement is adaptive; for instance, survival requires that fear of a potentially dangerous stimulus be able to quickly overcome interest in that stimulus.

In Tomkins's schema, the affect system is considered primary over the drive system because the drives require amplification by affects in order to function. For example, the sex drive must be fused with excitement affect in order to function properly; any impediment to excitement, such as shame, disgust, or fear, will quickly disrupt the sex drive and in many instances make it impossible for individuals to function sexually until the impediment is removed. Likewise, the hunger and thirst drives can be quickly

overridden by disgust, which functions to prevent the ingestion of toxic or noxious substances (Kaufman & Raphael, 1996).

Both the primary and auxiliary affects are considered by Tomkins to be innate, not learned; they are biologically endowed, and therefore part of our evolutionary inheritance. However, various *combinations* of the innate affects, which constitute our more complex emotional reactions such as contempt, depression, and jealousy, *are* learned through experience (Kaufman & Raphael, 1996). Similarly, the *association* of certain affects or combinations of affects with particular stimuli (situations, objects, events, etc.) is also learned through experience.

A distinction is made in affect theory between affects, drives, and interpersonal needs. Kaufman defines an interpersonal need as "a fundamental patterning of interpersonal interaction that becomes amplified by and fused with affect, positive or negative, and that becomes stored within the self as an interpersonal scene" (1989, p. 66). Kaufman (1989) has identified seven innate primary interpersonal needs: the need for relationship, the need for touching/holding, the need for identification, the need for differentiation, the need to nurture, the need for affirmation, and the need for power or control over one's life.

Combinations of affects, along with the stimuli or situations that trigger them (represented by imagery and/or language), are stored in memory as *scenes* according to Tomkins. The more intense the affect attached to the original object or event, the more memorable and powerful the scene. Because negative affects often overwhelm positive affects, negative affect scenes are usually more powerful and enduring than positive ones.

Scenes involving similar affects can become interconnected and *magnified*, thereby increasing their psychological "footprint" and exerting a greater influence over one's psychic life.

Scenes in turn generate *scripts*, which Tomkins defines as rules for action and cognition that allow one to predict, interpret, control, and respond to specific scenes (Kaufman & Raphael, 1996). The affect theory concept of script appears similar to the notion of *coping strategies* found in the work of Lazarus & Folkman. Also like Lazarus & Folkman, the affect theory paradigm is a dynamic, process-oriented approach. The scripts that emerge from particular scenes subsequently help to determine (via approach or avoidance behaviors, for example) the likelihood that other scenes will be experienced. For instance, if sexuality becomes fused with shame, one might avoid sexual contact and intimacy, thereby avoiding the trauma of further sex-shame scenes, but at the same time be deprived of beneficial love-intimacy scenes.

Scenes eventually disappear from full consciousness until they are later reactivated by a similar scene, or by language that evokes the old scene. When scenes are reactivated, a substantial portion of the original scene may remain inaccessible to conscious experience. In these instances, one may be aware only of the affect associated with the old scene, or of the imagery, or of the language. As long as the scene in its entirety (i.e., combining affect, imagery, and language) remains inaccessible, it resists control or modification, and one is prone to relive the scene again and again.

The Affect Of Shame

Tomkins defines shame as "an innate *affect auxiliary* response and a specific inhibitor of continuing interest and enjoyment....The innate activator of shame is the incomplete reduction of interest or joy...." (Tomkins, 1995, p. 84, emphasis in original). Thus, according to Tomkins, shame is evoked whenever one experiences a *partial* reduction in the positive affects of interest—excitement or enjoyment—joy. In other words, shame is triggered when there is a breach or interruption in the self's experience of positive affect vis-à-vis self or other, *but only when the breach or interruption is incomplete*, leaving vestiges of the positive affect intact. This creates a sense of longing for reinstatement or reparation of the relationship or situation that existed prior to the breach (Kaufman, 1989). If the positive affect is *completely* reduced—if there is *no* longing for a continuation or reinstatement of the previous positive affective state—then shame will not be experienced. There needs to be an ongoing investment in the relationship in order for shame to be evoked. Tomkins, in characteristic fashion, describes this idea beautifully and poetically:

> "The experience of shame is inevitable for any human being *insofar as desire outruns fulfillment sufficiently to attenuate interest without destroying it.* 'I want, but...' is the essential condition for the activation of shame....Insofar as human beings are excited by or enjoy their work, other human beings, their bodies, selves, and the surrounding inanimate world, they are vulnerable to a variety of vicissitudes in the form of barriers, lacks, losses, accidents, imperfections, conflicts, and ambiguities that will impoverish, attenuate, impair, or otherwise

> prevent total pursuit and enjoyment of work, of others, of sexuality and other drive satisfactions, and of the surrounding physical and social world." (Tomkins, 1995, p. 406, emphasis added).

This idea can very readily be applied to interpersonal relationships and affective bonds. Kaufman (1980; 1989) refers to the affective bond between two people as the "interpersonal bridge." Whenever this bridge is severed or damaged, whether due to a fight, betrayal, or other failure, strong negative emotions ensue, including shame. The same occurs if a person one cares about offers criticism, insult, blame, or belittlement (Kaufman & Raphael, 1996). The deeply disturbing feeling of shame strongly motivates one to restore or repair the breach to the interpersonal bridge. Thus shame functions to motivate the reparation and maintenance of interpersonal bonds.

Shame Vs. Guilt

Unlike Lewis, Tomkins does not differentiate shame and guilt as different affects per se. Rather, they represent different "affect complexes" consisting of shame as the core affect, but with differing "causes and consequences." The same may be said of shyness, inferiority, embarrassment, etc. All are considered by Tomkins to be variants of the shame experience.

> "Shyness, shame, and guilt are identical as affects, though not so experienced because of differential coassembly of perceived causes and consequences. Shyness is about strangeness of the other; guilt is about moral transgression; shame is about inferiority; but the core affect in all three is identical...." (Tomkins, 1995, p. 85).

Kaufman clarifies this point in his discussion of the variants of shame.

> "Variants of shame become manifest in a broad range of interpersonal contexts....Because of the differential coassembly of perceived causes and consequences, including perceptions, cognitions, and intentions, these [inner] states are actually experienced, overall, as quite different. Yet their core affect is identical" (1989, p. 22).

That core affect is shame. Discouragement, for example, is shame about temporary defeat. Self-consciousness is shame about being seen, being scrutinized, in the context of performance. Embarrassment is social shame, shame before an audience. Shyness is shame in the presence of strangers. Guilt is shame over moral transgression. And shame itself, in its "purest" sense, involves a loss of face, dishonor, a sense of being small, diminished, found wanting. Shame can be felt in the presence of another, or in the presence of the self alone. The self can and does shame the self (Kaufman, 1989).

Phenomenology Of Shame

"Shame....is an affect auxiliary to the affect of interest—excitement. Any perceived barrier to positive affect with the other will evoke lowering the eyelids and loss of tonus in the face and neck muscles, producing a head hung in shame" (Tomkins, 1995, p. 85). This image of shame as "loss of face" is similar to the phenomenology of shame described by Lewis (1971). Both affect theory and psychoanalytic theory view shame as a deeply disturbing experience in which one feels profoundly defective, diminished, inferior. These feelings are accompanied by hanging the head and lowering the eyes, along with increased autonomic activity and heightened self-awareness. Kaufman (1989)

describes shame as feeling "*seen* in a painfully diminished sense" (p. 17). It is the experience of being exposed as inferior, unworthy, lacking. Shame is experienced as an interruption of the smooth functioning of the self, and as a breach in the interpersonal bond between self and other. Shame thus divides the self from the self and the self from the other, producing an intensely alienating experience. Shame is so disturbing precisely because it is so central to the self and to the formation of identity and self-concept, as well as to interpersonal relationships. It is also disturbing because of the ambivalence it engenders toward the perceived source of that shame. There exists a longing for a reestablishment of the interpersonal bridge between self and other, a yearning to heal of the rift within the self (Kaufman, 1989), while simultaneously there may be rage and hatred experienced toward the shaming other as well as the shameful self. The emphasis on the significance of shame to interpersonal affective bonds is another similarity between Lewis's psychoanalytic approach and Tomkins's affect theory approach to shame. In an evolutionary sense, shame may be seen as adaptive because it motivates individuals to maintain and repair interpersonal relationships, which contribute to survival.

Shame And Mental Health

Shame, though always disturbing, is not necessarily harmful in and of itself, and in fact plays the important role of motivating one to reestablish a positive emotional connection with the source of one's shame.

However, shame, like all affects, can be "magnified in frequency, duration, and intensity" according to Tomkins (1995), and thereby becomes psychologically harmful or

"malignant." The shame experience may also be made malignant by combining it with other affects such as distress; when if prolonged, that combination of affects results in depression. Shame also evokes additional emotional responses such as distress or anger, and even shame about shame. Shame may also recruit disgust or dissmell about aspects of the self, which then can result in total rejection and splitting off of those parts of the self.

> "Magnification of shame occurs not only by combining multiple affects about the same scene, as when a rape victim may experience not only shame, but disgust, dissmell, anger, and distress as well as terror, but also by combining multiple sources of *shame* about the same scene. Thus an impotent failure of sexuality may generate multiple feelings of deep shame such that the individual not only feels the shame of sexual inferiority, but of a totally inferior self, along with shyness, along with discouragement, guilt, defeat, and alienation. These are *all* the same affect of shame but to different aspects of the same scene" (Tomkins, 1995, pg. 403, emphasis in original).

This process of *psychological magnification* or interconnection of shame scenes, in combination with the *internalization* of shame through shame binds, results in a self that is profoundly and malignantly bound by shame (Kaufman, 1989).

Internalized shame scenes develop around affects, drives, and interpersonal needs. Affective expression (positive or negative), drive expression, and expression of interpersonal needs can all be shamed. When the shaming is sufficient in frequency, duration, and intensity, then scenes surrounding these affects, drives, or interpersonal

needs become imprinted with shame. Kaufman refers to such internalized linkages as *binds* (1989, p. 61), and differentiates affect-shame binds, drive-shame binds, and interpersonal need-shame binds. These constitute three general classes of scenes that can become infused with shame and thereby profoundly hinder the self's functioning by impeding the expression of affect, gratification of drives, and satisfaction of needs (Kaufman, 1989).

All internalized shame scenes consist of three interrelated components, according to Kaufman (1989). First, each scene has an *affect-belief* component. This refers to a cognitive label or self-appraisal that originated in an earlier scene and was infused with shame affect (e.g., "You're stupid" or "Hey, fatso"). This appraisal is reexperienced along with recurring shame whenever the earlier scene is reactivated. In the original scene the shame affect may be fused with a verbal message (e.g., being called "stupid," "fatso," or "lazy") and with imagery such as a disgusted, contemptuous, or mocking face. Once the scene is internalized, the visual aspects fade, but the shaming "voice" remains and typically is reexperienced again and again.

Second, every scene contains an *image of interaction patterns* that mirror the actual interpersonal relations that the person encountered within his family. These images are more complex than simple cognitive self-appraisals; they involve repeated patterns of interaction between the person and a significant other that become fused with affect and language. Kaufman uses the example of a child who is repeatedly blamed for errors in judgment and eventually internalizes the image of a blaming parent; once this

image is internalized it is likely that he will grow up learning to blame himself whenever things go wrong.

Third, each scene includes an *identification image* or "internalized other" usually based on one or both parents. This identification image results from a coalescence of various scenes. It is originally experienced as affectively charged imagery (e.g., the shocked or disappointed face of the parent) combined with an auditory voice admonishing the self. However, as with the affect-belief component, the visual aspect fades over time while the shaming voice remains conscious.

Kaufman (1989) posits that shame in combination with other negative affects will lead to a variety of shame-based syndromes. For the purposes of the present study, the relationship of shame to depressive syndromes is most relevant. Both Kaufman and Tomkins view depression as a prolonged state of shame combined with distress. Unlike traditional views that consider depression to be a direct result of inwardly-directed anger, Kaufman suggests that while this dynamic does exist, it is secondary to the more important shame-distress dynamic. *Self-blame* and *self-contempt* identity scripts are also common according to Kaufman. An *identity script* is a higher-order script that is built up from numerous lower-order scripts, all of which originate in scenes. Identity is defined by Kaufman as "the *conscious* experience of [the] self together with the active, living relationship the self comes to have with the self" (1989, p. 104). According to Kaufman, self-blame identity scripts recruit anger and direct it at the self in an accusatory manner. These scripts develop within blame-oriented families that are more concerned with determining fault than with reparation of mistakes. In the self-blame script, the self is

repeatedly accused by the self for real or imagined transgressions, with the blaming accompanied by angry denouncement and humiliation of the self. The self-contempt identity script, on the other hand, actually *rejects* the self entirely. Contempt combines dissmell and anger, two innate affects, to produce a violent, rejecting affect blend which in its most extreme form is akin to a lynching. Contempt manifests through hypercritical attitudes directed toward others as well as the self. When directed against the self, contempt creates a split within the self: one part becomes the offending object of contempt while the other becomes brutally critical and punishing. Self-blame and self-contempt scripts reactivate and intensify powerful shame-distress scenes and thereby exacerbate depression.

Comparison Of The Psychoanalytic And Affect Theory Perspectives

The psychoanalytic and affect theory perspectives on shame are similar in many respects. Both view shame as a critical variable for understanding the organization of the self. Both consider shame to be central to certain psychopathological syndromes. The two perspectives are also similar in their description of the phenomenology of shame. Finally, both perspectives share the view that shame functions as a signal that critical interpersonal bonds have been broken or compromised, and as a motivating factor in the restoration of those bonds.

There are, however, important differences in these two perspectives. Lewis's conceptualization of shame, rooted in psychoanalytic language, does not differentiate the affects from the drives, and considers the drive system to be the primary motivator of behavior. In this conceptualization, shame is a superego function tied to the control of

drives. In contrast, the affect theory perspective considers the affect system to be distinct from, and primary over, the drive system. According to this schema, the drives require fusion with affect in order to function. The affect system is viewed as the universal, innate biological motivating mechanism which gives urgency to both drives and interpersonal needs.

Another important difference between Lewis's and Tomkins's perspectives is the relationship between shame and guilt. According to Lewis, guilt and shame are different affects, tied to different facets of the superego. Tomkins, in contrast, considers guilt to be merely one of several variants of shame—it is immorality shame, shame felt over moral transgression. Each of the variants of shame (guilt, embarrassment, shyness, etc.) is phenomenologically distinct because of differing causes and consequences, but the core affect in each is shame.

This distinction between the psychoanalytic perspective on shame and guilt, which views them as *distinct* affects tied to different superego functions, and affect theory, which views guilt as a variant of shame, is fundamental. In the psychoanalytic approach, shame and guilt arise from the superego, which itself emerges to restrain and channel the drives. Hence, the drives are primary. In affect theory, the affect of shame is innate, and experiencing shame in connection with specific attempts at drive satisfaction or interpersonal interaction, or in combination with other affects, leads to distinct affective states such as guilt or embarrassment. In this schema, affect is primary.

The two perspectives also differ in their conceptualization of the dynamics by which shame influences psychological functioning and mental health. Lewis posits that

shame is difficult to recognize and therefore to discharge, causing shame affect to remain unacknowledged and in some cases not be experienced at all ("bypassed shame"). This unacknowledged or bypassed shame is problematic because the rage ("humiliated fury") which invariably accompanies shame is "strangulated," leading to a "shame-rage" spiral and symptom formation. Tomkins, as well as Kaufman, agrees that shame affect is often difficult to recognize as such (largely due to shame about shame itself), and that this failure to recognize or acknowledge shame allows it to have a continuing influence over psychological existence. However, rather than positing an inevitable shame-rage sequence, affect theory assumes a more flexible approach rooted in the concept of internalized "scenes." Shame-anger sequences or scenes can and do exist, but shame can be bound to any affect, positive or negative, as well as to drives and interpersonal needs. Shame can also be *followed* by any affect, not just anger. This conceptualization allows for more precise predictions about the types of psychopathological symptoms and syndromes that will result from varying combinations of shame with interpersonal needs, drives, and other affects.

Affect theory has been selected as the theoretical viewpoint which can best guide the present investigation for several reasons. First, as Kaufman (1989) argues, affect theory differentiates the affect system from the drive system, and thereby provides a more precise language with which to describe and predict emotional experience. Secondly, Tomkins and Kaufman argue persuasively for the primacy of the affect system over the drive system. "It is affect that gives texture to experience, urgency to drives, satisfaction to relationships, and motivating power to purposes envisioned in the future. The affect

system and drive system are distinct, interrelated motivators. They empower and direct both behavior and personality, but the drives must borrow their power from affect" (Kaufman, 1989, p. 61). Affect theory subsumes and integrates classical psychoanalytic theory and object relations theory within a general theory of the emotions, one in which innate drives and relationships with both "real" and internalized objects derive their power over behavior and personality through their fusion with affect. Thirdly, from a practical standpoint, affect theory, unlike Lewis's approach, has led directly to the development of standardized instruments for measuring internalized shame. Hence, rather than attempting to infer shame from clinical material as Lewis has, instruments such as the Internalized Shame Scale (ISS; Cook, 1994) allow for more precise investigations of the impact of internalized shame on psychological health. Affect theory may therefore prove to be a more useful perspective through which to advance the empirical investigation of shame.

REFERENCES

REFERENCES

Aldwin, C. (1991). Does age affect the stress and coping process? Implications of age differences in perceived control. Journal of Gerontology, 46, 174-180.

Atkinson, J. H., Grant, I., Kennedy, C. J., Richman, D. D., Spector, S. A., & McCutchan, J. A. (1988). Prevalence of psychiatric disorders among men infected with human immunodeficiency virus. Archives of General Psychiatry, 45, 859-864.

Barret, R. L. (1989). Counseling gay men with AIDS: Human dimensions. Journal of Counseling and Development, 67, 573-575.

Batchelor, W. F. (1984). AIDS: A public health and psychological emergency. American Psychologist, 39, 1279-1284.

Billings, A., & Moos, R. (1981). The role of coping responses and social resources in attenuating the impact of stressful life events. Journal of Behavioral Medicine, 4, 139-157.

Bradley, L. N. (1991). The place of psychotherapy in the treatment of people who are HIV positive. British Journal of Psychotherapy, 8, 26-35.

Bungener, C., Kosmadakis, C. S., Jouvent, R., & Widlocher, D. (1993). Emotional and psychopathological disturbances in HIV-infection. Progress in Neuro-Psychopharmacology and Biological Psychiatry, 17, 927-937.

Carr, E. W. (1989). Psychosocial issues of AIDS patients in hospice: Case studies. Hospice Journal, 5, 135-151.

Catalan, J., Klimes, I., Day, A., Garrod, A., Bond, A., & Gallwey, J. (1992). The psychosocial impact of HIV infection in gay men: A controlled investigation and factors associated with psychiatric morbidity. British Journal of Psychiatry, 161, 774-778.

Cazzullo, C. L., Gala, C., Martini, S., Pergami, A., Rossini, M., & Russo, R. (1990). Psychopathologic features among drug addicts and homosexuals with HIV infection. International Journal of Psychiatry in Medicine, 20, 285-292.

Centers for Disease Control and Prevention (1997). HIV/AIDS Surveillance Report, 9 (1).

Chuang, H. T., Jason, G. W., Pajurkova, E. M., & Gill, M. J. (1992). Psychiatric morbidity in patients with HIV infection. Canadian Journal of Psychiatry, 37, 109-115.

Chung, J. Y., & Magraw, M. M. (1992). A group approach to psychosocial issues faced by HIV-positive women. Hospital and Community Psychiatry, 43, 891-894.

Cohen, J. (1992). A power primer. Psychological Bulletin, 112, 155-159.

Conwell, Y. (1994). Suicide and terminal illness: Lessons from the HIV pandemic. Crisis, 15, 57-58, 64.

Cook, D. R. (1994). Internalized Shame Scale: Professional manual. Menomonie, WI: Channel Press.

DeMarco, F., Ostrow, D., DiFranceisco, W., & Halman, J. (1997). General and AIDS-specific stress, coping, and mental health within the Coping & Change cohort of gay men. Paper presented at the meeting of the Midwestern Psychological Association, Chicago, IL, May 1997.

Derogatis, L., & Melisaratos, N. (1983). Brief Symptom Inventory (BSI): An introductory report. Psychological Medicine, 13, 595-605.

Dew, M. A., Ragni, M. V., & Nimorwicz, P. (1990). Infection with human immunodeficiency virus and vulnerability to psychiatric distress: A study of men with hemophilia. Archives of General Psychiatry, 47, 737-744.

Dilley, J. W., Ochitill, H. N., Perl, M., & Volberding, P. A. (1985). Findings in psychiatric consultations with patients with acquired immune deficiency syndrome. American Journal of Psychiatry, 142, 82-86.

Folkman, S., Chesney, M. A., Cooke, M., Boccellari, A., & Collette, L. (1994). Caregiver burden in HIV+ and HIV- partners of men with AIDS. Journal of Consulting and Clinical Psychology, 62, 746-756.

Folkman, S., Chesney, M., Pollack, L., & Coates, T. (1993). Stress, control, coping and depressive mood in human immunodeficiency virus-positive and -negative gay men in San Francisco. Journal of Nervous and Mental Disease, 181, 409-416.

Folkman, S., & Lazarus, R. S. (1985). If it changes it must be a process: Study of emotion and coping during three stages of a college examination. Journal of Personality and Social Psychology, 48, 150-170.

Folkman, S., & Lazarus, R. S. (1988). The ways of coping questionnaire. Palo Alto, CA: Consulting Psychologists Press.

Folkman, S., Lazarus, R. S., Pimley, S., & Novacek, J. (1987). Age differences in stress and coping processes. Psychology and Aging, 2, 171-184.

Forsythe, C. J. & Compas, B. E. (1987). Interaction of cognitive appraisals of stressful events and coping: Testing the goodness of fit hypothesis. Cognitive Therapy and Research, 11, 473-485.

Gala, C. Pergami, A. Catalan, J., & Riccio, M. (1992). Risk of deliberate self-harm and factors associated with suicidal behaviour among asymptomatic individuals with human immunodeficiency virus infection. Acta Psychiatrica Scandinavica, 86, 70-75.

Gala, C., Pergami, A., Catalan, J., Durbano, F., Musicco, M., Riccio, M., Baldeweg, T., & Invernizzi, G. (1993). The psychosocial impact of HIV infection in gay men, drug users and heterosexuals. British Journal of Psychiatry, 163, 651-659.

Gorman, J. M., Kertzner, R., Todak, G., Goetz, R. R., Williams, J. B. W., Rabkin, J., Meyer-Bahlburg, H. F. L., Mayeux, R., Stern, Y., Lange, M., Dobkin, J., Spitzer, R., & Ehrhardt, A. A. (1991). Multidisciplinary baseline assessment of homosexual men with and without human immunodeficiency virus infection: I. Overview of study design. Archives of General Psychiatry, 48, 120-123.

Hays, R. B., Turner, H., & Coates, T. J. (1992). Social support, AIDS-related symptoms, and depression among gay men. Journal of Consulting and Clinical Psychology, 60, 463-469.

Herek, G., & Glunt, E. (1988). An epidemic of stigma: Public reactions to AIDS. Special issue: Psychology and AIDS. American Psychologist, 43, 886-891.

Hestad, K., Aukrust, P., Ellersten, B., & Klove, H. (1994). Psychological difficulties related to human immunodeficiency virus-1 infection in intravenous drug users. Acta Psychiatrica Scandinavica, 90, 25-31.

Hunter, J., & Hamilton, M. (1992). CFA: A program in BASICA [computer software].

Hunter, J., & Hamilton, M. (1995). Path: A program in BASICA [computer software].

Hunter, J., & Schmidt, F. (1990). Methods of meta-analysis: Correcting error and bias in research findings. Newbury Park: Sage.

Jacobsen, P. B., Perry, S. W., & Hirsch, D. A.(1990). Behavioral and psychological responses to HIV antibody testing. Special Series: Acquired Immune Deficiency. Journal of Consulting and Clinical Psychology, 58, 31-37.

James, M. E., Rubin, C. P., & Willis, S. E. (1991). Drug abuse and psychiatric findings in HIV-seropositive pregnant patients. General Hospital Psychiatry, 13, 4-8.

Johannet, C., & Muskin, P. R. (1990). Mood and behavioral disturbances in hospitalized AIDS patients. Psychosomatics, 31, 55-59.

Jones, J. M. (1988). Scientific issues: Section introduction. Special issue: Psychology and AIDS. American Psychologist, 43, 899.

Kaufman, G. (1989). The psychology of shame. New York: Springer.

Kaufman, G. (1992). Shame: The power of caring (3rd ed.). Rochester, VT: Schenkman Books.

Kaufman, G., & Raphael, L. (1996). Coming out of shame: Transforming gay and lesbian lives. New York: Doubleday.

Kessler, R. C. (1991). Comorbidity of substance use disorders and other psychiatric disorders: An ADAMHA report on prevalence, etiology, implications for prevention, course of illness and research. Unpublished manuscript, University of Michigan, Ann Arbor.

Krikorian, R., Kay, J., & Liang, W. M. (1995). Emotional distress, coping, and adjustment in human immunodeficiency virus infection and acquired immune deficiency syndrome. Journal of Nervous and Mental Disease, 183, 293-298.

Lackner, J. B., Joseph, J. G., Ostrow, D. G., Kessler, R. C., Eshleman, S., Wortman, C. B., O'Brien, K., Phair, J. P., & Chmiel, J. (1993). A longitudinal study of psychological distress in a cohort of gay men: Effects of social support and coping strategies. Journal of Nervous and Mental Disease, 181, 4-12.

Lazarus, R. S., & Folkman, S. (1984). Stress, appraisal, and coping. New York: Springer.

Levenson, A. I. (1988). Psychiatric aspects of AIDS. 55th annual meeting of the National Association of Private Psychiatric Hospitals (Phoenix, Arizona). Psychiatric Hospital, 19, 109-113.

Lewis, H. B. (1971). Shame and guilt in neurosis. New York: International Universities Press.

Lewis, H. B. (1987). Introduction: Shame—the "sleeper" in psychopathology. In H. B. Lewis (Ed.), Role of shame in symptom formation. Hillsdale, NJ: Lawrence Erlbaum Associates.

Lippmann, S. B., James, W. A., & Frierson, R. L. (1993). AIDS and the family: Implications for counseling. Special Issue: The family and HIV disease. AIDS Care, 5, 71-78.

Lipsitz, J. D., Williams, J. B. W., Rabkin, J. G., Remien, R. H., Bradbury, M., el Sadr, W., Goetz, R., Sorrell, S., & Gorman, J. M. (1994). Psychopathology in male and female intravenous drug users with and without HIV infection. American Journal of Psychiatry, 151, 1662-1668.

Lynd, H. M. (1958). On shame and the search for identity. New York: Harcourt, Brace.

Martin, M., & Henry-Feeney, J. (1989). Clinical services to persons with AIDS: The parallel nature of the client and worker processes. Clinical Social Work Journal, 17, 337-349.

McKegney, F. P., & O'Dowd, M. A. (1992). Suicidality and HIV status. VI International Conference on AIDS (1990, San Francisco, California). American Journal of Psychiatry, 149, 396-398.

Michels, R., & Marzuk, P. M. (1993). Progress in psychiatry: II. New England Journal of Medicine, 329, 628-638.

Michigan Department of Public Health (1995). Statistics. Michigan HIV Report, 10, 8-9.

Millan, F., & Ivory, L. I. (1994). Group therapy with the multiply oppressed: Treating Latino, HIV-infected injecting drug users. Special Issue: The challenge of AIDS. Group, 18, 154-166.

Miller, D., & Riccio, M. (1990). Non-organic psychiatric and psychosocial syndromes associated with HIV-1 infection and disease. AIDS, 4, 381-388.

Morin, S. F. (1988). AIDS: The challenge to psychology. Special Issue: Psychology and AIDS. American Psychologist, 43, 838-842.

Morin, S. F., Charles, K. A., Malyon, A. K. (1984). The psychological impact of AIDS on gay men. American Psychologist, 39, 1288-1293.

Namir, S., Wolcott, D. L., Fawzy, F. I., & Alumbaugh, M. J. (1987). Coping with AIDS: Psychological and health implications. Special Issue: Acquired Immune Deficiency Syndrome (AIDS). Journal of Applied Social Psychology, 17, 309-328.

Nathanson, D. L. (1994). Shame and pride: Affect, sex, and the birth of the self. New York: Norton.

Neisen, J. H. (1990). Heterosexism: Redefining homophobia for the 1990s. Journal of Gay & Lesbian Psychotherapy, 1, 21-35.

Nichols, S. E. (1983). Psychiatric aspects of AIDS. Psychosomatics, 24, 1083-1089.

Odets, W. (1995). Introduction. In W. Odets & M. Shernoff (Eds.), The second decade of AIDS: A mental health practice handbook (pp. 1-10). New York: Hatherleigh.

O'Dowd, M. A., & McKegney, F. P. (1990). AIDS patients compared with others seen in psychiatric consultation. General Hospital Psychiatry, 12, 50-55.

O'Dowd, M. A., Biderman, D. J., & McKegney, F. P. (1993). Incidence of suicidality in AIDS and HIV-positive patients attending a psychiatry outpatient program. Psychosomatics, 34, 33-40.

O'Dowd, M. A., Natali, C., Orr, D., & McKegney, F. P. (1991). Characteristics of patients attending an HIV-related psychiatric clinic. Hospital and Community Psychiatry, 42, 615-619.

Ostrow, D. G., Joseph, J. G., Kessler, R., Soucy, J., Tal, M., Eller, M., Chmiel, J., & Phair, J. P. (1989). Disclosure of HIV antibody status: Behavioral and mental health correlates. AIDS Education and Prevention, 1, 1-11.

Ostrow, D. G., Monjan, A., Joseph, J., VanRaden, M., Fox, R., Kingsley, L., Dudley, J., & Phair, J. (1989). HIV-related symptoms and psychological functioning in a cohort of homosexual men. American Journal of Psychiatry, 146, 737-742.

Pakesch, G., Loimer, N., Grunberger, J., Pfersmann, D., Linzmayer, L., & Mayerhofer, S. (1992). Neuropsychological findings and psychiatric symptoms in HIV-1 infected and noninfected drug users. Psychiatry Research, 41, 163-177.

Parker, J. D., Endler, N. S., & Bagby, R. M. (1993). If it changes, it might be unstable: Examining the factor structure of the Ways of Coping Questionnaire. Psychological Assessment, 5, 361-368.

Perry, S., Jacobsberg, L. B., Fishman, B., Frances, A., Bobo, J., & Jacobsberg, B. K. (1990). Psychiatric diagnosis before serological testing for the human immunodeficiency virus. American Journal of Psychiatry, 147, 89-93.

Perry, S., Jacobsberg, L. B., Card, C. A., & Ashman, T. (1993). Severity of psychiatric symptoms after HIV testing. American Journal of Psychiatry, 150, 775-779.

Rabkin, R., & Rabkin, J. (1995). Management of depression in patients with HIV infection. In W. Odets & M. Shernoff (Eds.), The second decade of AIDS: A mental health practice handbook (pp. 11-25). New York: Hatherleigh.

Radloff, L. S. (1977). The CES-D Scale: A self-report depression scale for research in the general population. Applied Psychological Measurement, 1, 385-401.

Rajs, J., & Fugelstad, A. (1992). Suicide related to human immunodeficiency virus infection in Stockholm. Acta Psychiatrica Scandinavica, 85, 234-239.

Reed, G. M., Taylor, S. E., & Kemeny, M. E. (1993). Perceived control and psychological adjustment in gay men with AIDS. Journal of Applied Social Psychology, 23, 791-824.

Rosenberger, P. H., Bornstein, R. A., Nasrallah, H. A., Para, M. F., Whitaker, C. C., Fass, R. J., & Rice, R. R., Jr. (1993). Psychopathology in human immunodeficiency virus infection: Lifetime and current assessment. Comprehensive Psychiatry, 34, 150-158.

Sacks, M., Burton, W., Dermatis, H., Looser-Ott, S., & Perry, S. (1995). HIV-related cases among 2,094 admissions to a psychiatric hospital. Psychiatric Services, 46, 131-135.

Schaffner, B. (1994). Psychotherapy with HIV-infected persons. New Directions for Mental Health Services, 48, 5-20.

Shernoff, M. (1990). Why every social worker should be challenged by AIDS. Social Work, 35, 5-8.

Shernoff, M. (1995). Counseling chemically dependent clients with HIV infection. In W. Odets & M. Shernoff (Eds.), The second decade of AIDS: A mental health practice handbook (pp. 27-46). New York: Hatherleigh.

Tangney, J. P. (Ed.) (1995). Self-conscious emotions: The psychology of shame, guilt, embarrassment, and pride. New York: Guilford Press.

Tangney, J. P. (1996). Conceptual and methodological issues in the assessment of shame and guilt. Behaviour Research and Therapy, 34, 741-754.

Tomkins, S. S. (1995). Role of the specific affects. In E. V. Demos (Ed.), Exploring affect: The selected writings of Silvan S. Tomkins (pp. 68-85). Cambridge, UK: Cambridge University Press.

Tomkins, S. S. (1995). The varieties of shame and its magnification. In E. V. Demos (Ed.), Exploring affect: The selected writings of Silvan S. Tomkins (pp. 397-410). Cambridge, UK: Cambridge University Press.

Tross, S., & Hirsch, D. A. (1988). Psychological distress and neuropsychological complications of HIV infection and AIDS. (Special Issue: Psychology and AIDS.) American Psychologist, 43, 929-934.

Volberding, P. A., & Cohen, P. T. (1990). Clinical spectrum of HIV infection. In P. T. Cohen, M. A. Sande, & P. A. Volberding (Eds.), The AIDS knowledge base: A textbook on HIV disease from the University of California, San Francisco, and the San Francisco General Hospital (section 4.1.1). Waltham, MA: Medical Publishing Group.

Williams, J. B. W., Rabkin, J. G., Remien, R. H., Gorman, J. M., & Ehrhardt, A. A. (1991). Multidisciplinary baseline assessment of homosexual men with and without human immunodeficiency virus infection: II. Standardized clinical assessment of current and lifetime psychopathology. Archives of General Psychiatry, 48, 124-130.

Wolf, T. M., Balson, P. M., Morse, E. V., Simon, P. M., Gaumer, R. H., Dralle, P. W., & Williams, M. H. (1991). Relationship of coping style to affective state and perceived social support in asymptomatic and symptomatic HIV-infected persons: Implications for clinical management. Journal of Clinical Psychiatry, 52, 171-173.

World Health Organization (1997). The Current Global Situation of the HIV/AIDS Pandemic as of 15 December 1995. Joint United Nations Programme on HIV/AIDS [On-line]. Available: http://www.us.unaids.org/highband/document/epidemio/report97.html.

Wurmser, L. (1981). The mask of shame. Baltimore, MD: Johns Hopkins University Press.