Psychological Distress Among HIV Positive Ethnic/Racial Minority Males

Rocco Domanico

Loyola University Chicago

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LOYOLA UNIVERSITY OF CHICAGO

PSYCHOLOGICAL DISTRESS AMONG HIV POSITIVE ETHNIC/RACIAL MINORITY MALES

A DISSERTATION SUBMITTED TO
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DOCTOR OF PHILOSOPHY

DEPARTMENT OF PSYCHOLOGY

BY
ROCCO DOMANICO, M.A.

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CHAPTER I
LITERATURE REVIEW

With the discovery of the human immunodeficiency virus (HIV) in 1983 and its etiological basis for Acquired Immune Deficiency Syndrome (AIDS), a vast amount of research has been generated to further assess the etiology, methods of prophylaxis, and treatment of AIDS and AIDS-related clinical syndromes. Initially, the bulk of the research in this area focused on the biomedical, virological, and epidemiological aspects of the disease (Sheridan, Phair, & Sheridan, 1990); however, through the 1980's and into the 1990's there emerged an increasing awareness of the psychiatric correlates of AIDS. This resulted in researchers and clinicians increasingly directing their attention to the nature of psychiatric disturbance among persons with AIDS (PWAs). It also generated investigations into the psychological, social, neurological, and biological factors that contribute to the onset or exacerbation of psychiatric disturbances in HIV infected individuals.

In a review of the published research, it is apparent that most studies related to the AIDS epidemic focus on the experience of middle-class, Caucasian, gay males from either major coastal region of the United States. There appears to be a dearth of HIV related research on members of
ethnic/racial minority groups. Such an omission in scientific research on the psychosocial impact of the HIV virus on ethnic/racial minority populations is unfortunate given that the incidence rate of AIDS is proportionately greater for minority populations as compared to Caucasians (Peterson & Marin, 1988).

As Peterson and Marin (1988) indicate, there exists a large proportion of ethnic/racial minority members that have contracted HIV through intravenous drug use and heterosexual sexual activity. The researchers cite that in 1986, AIDS cases among ethnic/racial minorities comprised 40% of the total reported AIDS cases (24% among African-Americans and 14% among Latinos). A more recent estimate (Centers for Disease Control, 1992) indicates that African-Americans represent 29% of all national AIDS cases. Thus, it appears that the percentage of African-Americans with AIDS relative to Caucasians is increasing. In addition, given that African-Americans comprise approximately 12% of the total U.S. population and 29% of all national AIDS cases, the proportion of African-Americans with AIDS is more than two times higher than the percentage of all African-Americans in the U.S. population.

In general, ethnic/racial minorities have a much higher proportion of AIDS cases relative to Caucasians, and are more likely than Caucasians to contract the virus through non-homosexual sexual activities. The figures cited by Peterson
and Marin are that African-Americans and Latinos are two to three times as likely to acquire AIDS than are gay Caucasian males. Additionally, and more astoundingly, African-Americans and Latinos are 20 times more likely to develop AIDS than are heterosexual Caucasian males. Given the disproportionate distribution of AIDS cases among ethnic/racial minorities and that the majority of research focuses on Caucasian males in the gay community, more research needs to be generated to address the issues unique to members of ethnic/racial minority groups. This current project is an attempt to investigate a facet of the AIDS experience as it relates to the psychosocial phenomena among ethnic/racial minority males infected with HIV.

The following literature review will serve to highlight some of the relevant findings regarding the various psychological aspects related to HIV infection and AIDS. In particular, it will address past research investigating the psychiatric correlates of having HIV, as well as the links among psychosocial stressors, coping mechanisms, perceived health locus of control, health value, spirituality, and immunological functioning. Finally, the rationale and hypotheses underlying this research project, as well as its research design, will be presented.

**Psychological Correlates of HIV Infection**

A consensus among the literature indicates that anxiety,
depression, and anger are the most prevalent psychological correlates of HIV infection (Faulstich, 1987; Kim, & Rickman, 1988; King, 1989). However, as King reported, most individuals with HIV infection do not become psychopathologically disturbed; they tend to respond adaptively despite the obviously poor prognosis. In his survey of 192 outpatients with HIV infection at two London hospital based clinics, King found that approximately 69% of the individuals examined tested negative for psychiatric disturbance. The remaining 31% of the sample presented with diagnosable psychiatric problems. Of the 31% of patients presenting with psychiatric difficulties, half experienced the onset of psychiatric problems following being apprised of their HIV infection, whereas the remaining half had previous or existing psychiatric problems. The majority of International Classification of Diseases-9 (ICD-9) psychiatric diagnoses in this sample, in decreasing frequency of occurrence, were adjustment reactions, neurotic depression, and neurotic anxiety. This strongly suggests that some variable related to having HIV infection is associated with the onset or recurrence of psychopathology. King stated that the best predictor for identifying individuals most likely to experience emotional difficulty related to HIV infection is those who have a history of psychiatric disturbance that predates the diagnosis of HIV infection. As King pointed out, it is these HIV infected individuals who are at greatest need
of social support and counseling services.

Faulstich (1987) reported that the manifestation of psychiatric symptoms in a PWA or an individual who is HIV+symptomatic but does not have AIDS is similar to those reported by individuals suffering from terminal cancer. The typical progression of psychiatric symptoms as reported by Faulstich is initial denial and disbelief, followed by feelings of depression, anger, and anxiety, and ultimately feelings of hopelessness and possible suicidal ideation. In effect, the bereavement process for PWAs and HIV+symptomatic individuals is noted to be similar to that of individuals confronting other terminal illnesses (Tross, & Hirsch, 1988).

Nichols (1985), in his work on studying the nature of psychological reaction to dealing with AIDS, delineates four general stages of reaction. The general progression of psychological manifestations related to confronting AIDS as stated by Nichols is similar to the course of psychological reaction that is described by Kubler-Ross (1969) in her study of terminally ill cancer patients. Kubler-Ross describes how, in general, when confronted with terminal illness, an individual experiences the following progression of psychological effects: denial, anger, bargaining, depression, and acceptance. Nichols similarly posits that individuals dealing with the diagnosis of AIDS, generally respond within the context of four stages of psychological reaction. These four stages parallel Kubler-Ross' five stages and include a
crisis stage, transitional stage, acceptance stage, and adaptation stage.

As described by Nichols, the stage of crisis generally occurs at the time of diagnosis of AIDS. During this stage an individual is likely to respond with any of the following reactions including shock, denial, fear, and/or sadness. During the transitional stage feelings of guilt and anger replace initial feelings of shock, fear, and sadness. It is during this stage that an individual begins to form a new sense of self and embarks upon trying to integrate the presence of AIDS into his/her identity. It also posited by Nichols that during the transitional stage an individual may attempt to bargain with God or other perceived powerful entities to prolong the life of the PWA. During the stage of acceptance an individual has forged a new identity that incorporates the diagnosis of AIDS and the concomitant implications for increased morbidity and mortality. In effect, the individual is more apt to accept and live within the limits that the presence of AIDS imposes on his/her life. The final stage, adaptation, refers to an individual's preparation for imminent death. Adaptation implies a release of denial and the realization of and preparation for one's physical finiteness and impending mortality.

A formal diagnosis of AIDS increases the psychological turmoil for many individuals who are HIV infected due to the actualization of increased morbidity and impending mortality.
Bereavement is further magnified by the death of friends who are similarly HIV positive, decreases in social supports due to the death of friends or rejection and alienation by significant sources of social/emotional support, loss of economic viability, decreases in self-esteem and body-image, and increases in physical debilitation (Tross, & Hirsch, 1988). These causal factors related to increased psychological distress are elaborated upon further along in this chapter.

Holland and Tross (1985) noted in their clinical observations of PWAs that given the increase in psychological distress, suicidal ideation is common, but that suicidal gestures and attempts are not typical. However, Marzuk, Tierney, Tardiff, Gross, Morgan, Hsu, and Mann (1988) and Rundell, Thomason, Zajac, and Beatty (1988) discovered that suicide attempts and successes are much more prevalent for HIV positive individuals than for the overall population. Aside from blatant suicide attempts, Marzuk, et al also stated that some PWAs engage in deleterious behaviors, such as not attending clinic appointments, which undermine their well-being and are as such self-injurious behaviors of an omissible nature.

Dilley, Ochitill, and Perl (1985) reported in their investigation of AIDS-related psychopathology that adjustment disorder with depressed mood was the most frequently diagnosed psychiatric disturbance, followed in decreasing frequency by
major depression, dementia, delirium, and panic disorder. In a more recent review of the literature, Maj (1990) has elaborated upon the presence of acute stress reactions, adjustment disorders, acute psychotic disorders, and mood disorders related to PWAs and HIV infected individuals. According to Maj, in part, the origins of such disturbances include a number of factors including neurological dysfunctions, psychosocial distress, and the possibility of an HIV generated predisposition to psychiatric vulnerabilities.

The onset and exacerbation of psychiatric symptoms for individuals with HIV infection appear related to a number of psychosocial stressors. Such stressors include social stigmatization, rejection, alienation, poor prognosis with an inevitable deteriorating course (Faulstich, 1987; King, 1989), "loss of employment and housing, disfigurement, and increased dependence on others" p. 39 (Bor, Perry, Miller, & Salt, 1989). The psychological impact of these factors may lead to varying degrees of depression, anger, and anxiety.

**Psychological Correlates of Immunological Functioning and HIV Infection**

A number of investigations indicate that not only do psychosocial stressors lead to psychiatric problems, but also that the experience of stress can lead to decreases in immunological functioning (Antoni, LaPerriere, Schneiderman, & Fletcher, 1989; Levy & Heiden, 1991; Schlesinger & Yodfat, 1989). The relevant findings indicate that HIV infected
individuals with elevated levels of psychosocial stress may be compromising their maximal immune system functioning and increasing their susceptibility to opportunistic infections.

In O'Leary's (1990) review of the relevant literature, she discovered that chronic stress is correlated with decreased immunological functioning; however, the effects of acute stress are not consistent and appear to be contingent upon other factors such as degree of physical pain, nutrition, sleep, substance abuse, and exercise. Although these are not psychological variables in and of themselves, they are behaviors which are ultimately affected by mood, cognition, and personality variables. Hence, psychological factors may directly and indirectly impinge upon immunological functioning and subsequent physiological resistance to viral infections.

A number of recent studies (Antoni, et al., 1989; Levy & Heiden, 1991; Schlesinger & Yodfat, 1989) focus on the fluctuations in natural killer (NK) cell activity as a function of stress. Natural killer cells are a component of the lymphatic system that specifically serve to detect and eliminate abnormal cells, such as cancer cells, before they multiply. Levy and Heiden concluded that compromises in NK abilities were more related to a stress-proneness rather than actual stressors. Specifically, individuals in their study who responded more intensely and negatively to life stressors were significantly correlated with lower NK functioning and a higher incidence of contracting infectious diseases. The
findings from this research imply that PWAs who perceive burdens as extremely stressful may be further compromising their immune system's ability to combat opportunistic infections. Additionally, it appears that psychological variables as mediators of immunological functioning have various degrees of impact depending on disease progression. According to Kiecolt-Glaser and Glaser (1988), immunological resistance is more vulnerable to the deleterious effects of psychosocial stressors in the later stages of AIDS when immunological functioning is increasingly impaired and vulnerable.

Several investigations have specifically attempted to identify the interactions of psychological processes and biological functions as they relate to AIDS (e.g., Levy & Heiden, 1991; Solomon & Temoshok, 1987). In particular, these studies have assessed the psycho-immunologic and neuro-immunologic aspects of AIDS and how variations of these factors affect the onset and course of the disease. The underlying assumption guiding much of this research is that if chronic psychosocial stressors compromise immunological functioning, individuals with HIV infection are at risk of eliciting or exacerbating AIDS-related symptomatology when subjected to chronic stress; therefore, decreases in subjective stress should result in decreases in immunological vulnerability.
Coping Strategies & Spirituality

One suggested means of facilitating stress reduction is through a network of salubrious coping strategies (Kelly & St. Lawrence, 1988). In this area, mental health workers are equipped to assist individuals in fostering more adaptive coping strategies and ultimately increasing feelings of well-being and immunological functioning.

In consideration of the concomitant psychiatric difficulties and the compromises that psychosocial stress affords an already vulnerable or decreasingly effective immunological system for individuals with HIV, the role of mental health workers appears twofold. Not only may mental health workers serve to decrease the psychological pain experienced in individuals with AIDS, they may also function to enhance immunological functioning by decreasing stress; consequently, mental health workers should pursue a number of means by which to decrease psychosocial stress, attenuate psychiatric disturbances, and indirectly maintain or increase immunological functioning through stress reduction.

One potential method of clinical intervention to decrease the subjective experience of psychosocial stress is to foster adaptive coping strategies in patients with HIV infection. There are numerous ways of initiating or strengthening existing coping strategies ranging from increasing social networks, emphasizing spirituality, and/or altering deleterious behavioral or cognitive patterns. Carson, Soeken,
Shandy, and Terry (1990) address the importance of confronting the existential aspects of one's life, and discuss the impact of finding meaning in life and affirming a value in continuing to live.

Finding answers that fulfill these existential or spiritual questions has been found to lead to increased hope, decreased negative affect, and a desire to live life to its fullest. In fact, many PWAs are cognizant of the importance of hope, spirituality, and existential issues in coping with HIV positive status. A majority of long-term patients with AIDS in the Carson, et al study linked their well-being to their own ability to address existential and religious aspects of their lives. In comparing PWAs to individuals with HIV infection (non-AIDS), the researchers discovered that spirituality in general was directly correlated with feelings of hope. Individuals were considered more hopeful if they had future expectations and positive feelings about the future.

In the aforementioned research, Carson and her colleagues used the Spiritual Well-Being Scale (SWBS) to measure participants' degree of spirituality. This measure is composed of two subscales that address the global concept of spirituality: existential well-being and religious well-being. Existential well-being is conceptualized as being related to finding meaning and importance in life and developing a positive understanding of one's contribution or place in the world. It also refers to overall life satisfaction.
Religious well-being refers to one's relationship to God, and is usually associated with an alliance to a formal religious organization.

In their study, Carson and her colleagues discovered that the supraordinate concept of spirituality and the two underlying factors—existential well-being and religious well-being—significantly correlated with elevated feelings of hope; however, religious well-being was only weakly correlated. Carson and her colleagues speculated that because much of their sample (approximately 73%) admitted to contracting the virus through homosexual sexual activities, it is likely that most of these men experienced or perceived rejection from formal religious institutions, and hence devalued the significance of religious institutions, per se, as a source of hope and support. Apparently, many of the individuals assessed found meaning and purpose in life via existential issues and hope.

In effect, the aforementioned study suggests that confronting and grappling with existential issues (e.g., the purpose of life) is more strongly correlated with elevations in hope than religiosity; however, in accordance with the findings one cannot discount the value of religion as it relates to hope or positive expectations about the future. Religious well-being, although not as robust in its relationship to elevations in positive expectations for the future, is still significantly related to the latter variable.
Another finding of interest in the Carson, et al study is that PWAs tested with a significantly greater degree of hope than did HIV infected (non-AIDS) individuals despite their being no difference between the two groups on factors of overall spiritual well-being, religious well-being, and existential well-being. This is somewhat ironic given that PWAs have relatively poorer health than individuals who are HIV+ without AIDS. The authors cited that the long-term survivors with AIDS in their study believed that their well-being was linked to their ability to confront the existential questions that having AIDS elicits, and that feelings of being a survivor may serve to increase feelings of hope for PWAs.

Clearly, psychotherapy is a means of exploring the existential issues that confront an HIV infected individual. In particular, psychotherapy may serve to guide an individual with HIV infection in exploring the existential issues that potentially can foster meaning in life and decrease the overall sense of loss, emptiness, meaninglessness, and existential anguish that is often associated with individuals facing death in young or middle adulthood. The authors suggest that methods of fostering existential well-being include "participation in health care, involvement in AIDS activity organizations, support to other sufferers of AIDS, participation in research, and spiritual activities such as meditation, imagery and prayer" (p.33).

In their review of the relevant literature, Kelly and St.
Lawrence (1988) discussed the importance of psychological interventions in improving coping abilities for HIV infected individuals who are symptomatic or asymptomatic. The authors identified five different areas in which more adaptive levels of coping can be achieved. In particular, they suggested fostering more adaptive coping strategies through establishing social supports, using stress management and cognitive techniques to reduce tension and psychological strain, increasing a sense of control, and increasing the availability of other social services to deal with the many needs of an individual infected with HIV.

Kendall, Gloersen, Gray, McConnell, Turner, and West (1989) developed a group of five "themes" related to adaptive coping strategies for individuals with AIDS. These themes are autonomy/mastery over the disease; existential/spiritual journey toward understanding; self-acceptance; staying active and involved (behavioral coping mechanisms); and positive thinking (cognitive coping mechanism). In their case study of three men with AIDS, the adoption or exercise of the above themes served to decrease feelings of stress, alienation and physical pain, and increase psychological well-being.

Similar to Kendall, et al's (1989) work, Namir, Wolcott, Fawzy, and Alumbaugh (1987) assessed the relationship among coping strategies, psychological variables, and physical well-being among 50 patients diagnosed with AIDS. In their research, Namir and her colleagues describe three types of
"coping methods." These include active-cognitive coping methods which "deal with the appraisal of the stressful components of the illness and includes one's beliefs, attitudes, and thoughts about the illness;" active-behavioral coping methods which "deal directly with the problem and its events and relying on others for emotional, informational, and instrumental support;" and avoidance coping methods which "attempt to avoid things about or behaving in direct response to the illness and includes self-medication with alcohol and drugs" (p.333). In particular, these researchers investigated how three global "coping methods" (1, active-cognitive; 2, active-behavioral; and 3, avoidance) and eight subcomponent "coping strategies" (1, active positive involvement; 2, active expressive-information seeking; 3, active reliance on other; 4, distraction; 5, cognitive positive understanding--create meaning; 6, cognitive passive--ruminative; 7, passive resignation; and 8, avoidance) correlated with psychological and subjective physical well-being. Using this system of categorizing coping behaviors, the researchers correlated psychological distress with coping methods and strategies. They found that individuals who tended to engage in avoidant coping behaviors were more likely to feel depressed and have poor self-esteem. Whereas, individuals who presented with a primarily active-behavioral coping style were less depressed and possessed higher levels of self-esteem.

In a biopsychosocial study of men infected with HIV
(Wolf, Dralle, Morse, Simon, Balson, Gaumer, & Williams, 1991), coping behaviors were measured with Namir and her colleagues' aforementioned method of assessment. Wolf and his colleagues were primarily concerned with assessing the psychiatric, neuropsychological, family supports, and immunological functioning of men infected with HIV. Their sample included 29 homosexual/bisexual men with various HIV statuses including 13 with AIDS, 2 HIV+symptomatic (non-AIDS), and 14 HIV+asymptomatic (non-AIDS). Among their findings were that all 29 subjects exhibited elevated levels of psychological distress and that those individuals who primarily engaged in active-behavioral coping methods were generally less psychologically distressed. In addition, they discovered that the most symptomatic group (men with AIDS) more frequently engaged in active-cognitive coping styles than men who were less symptomatic.

General comments on the use and effectiveness of various coping behaviors when dealing with individuals who have HIV infection should be evaluated in consideration of other variables. Individuals diagnosed with HIV infection are derived from a very diverse population in terms of means of HIV infection, ethnic/racial status, and sexual orientation; consequently, these individual variables require consideration when assessing the efficacy of specific coping behaviors in mitigating stress. This current research project assesses these variables in order to determine if the aforementioned
findings regarding coping behaviors can be appropriately generalized to other groups.

Perceived Health Locus of Control

Another area of interest related to the HIV phenomenon is how persons infected with HIV perceive their locus of control regarding health, and how health locus of control may impact upon psychological well-being. Health locus of control is defined as the belief one has regarding the factors that affect one's health and whether these factors are primarily of a self-generated or external nature (Kristiansen, 1985). In general, research consistently indicates that self-generated feelings of control appear to positively influence how an individual ultimately responds to a chronic or terminal illness (Affleck, Tennen, Pfeiffer, & Fifield, 1987; Michela, 1986; Taylor, Lichtman, & Wood, 1984). For example, in a study of 78 patients with breast cancer, Taylor and her colleagues found that increased feelings of perceived internal control over the course of the illness were significantly correlated with overall better psychosocial adjustment.

An often cited measure used in the research of perceived health locus of control is the Multidimensional Health Locus of Control (MHLC) and its predecessor, the Health Locus of Control (HLC). The MHLC is an updated version of the original Health Locus of Control inventory created by Wallston, Wallston, Kaplan, & Maides (1976). The HLC was designed to
measure the concept of health locus of control as if it were a unidimensional construct; however, the test developers altered their belief regarding the dimensionality of this construct based on other research (e.g., Levenson, 1974) that questioned and cogently contested the unidimensionality of general locus of control. Through their own research, Wallston and his colleagues (1978) discovered that health locus of control is more appropriately conceived of as a multidimensional trait, and they subsequently altered their theory and measure to reflect the multidimensional nature of the construct. The three forms of perceived health locus of control as described by Wallston, et al. are internal health locus of control (IHLC), powerful other health locus of control (PHLC), and chance health locus of control (CHLC). The concepts of PHLC and CHLC were previously subsumed under the rubric of External Health Locus of Control (EHLC).

Taylor, Helgeson, Reed, and Shakan (1991) conducted a longitudinal study to assess the causal relationship among the variables of self-generated control (i.e., IHLC), vicarious control (i.e., EHLC), negative affect, and psychosocial adjustment for individuals with severe coronary heart disease (CHD). Vicarious control, as it relates to health status, is an instance where an individual perceives others or chance factors as being largely in control of the course of their illness. Conceptually, it is similar to Wallston's (1992) concept of external health locus of control as derived from
Rotter's (1966) social learning theory of perceived locus of control. Using a structural equation model to assess the relationship between feelings of control and distress for a sample of 47 individuals with CHD, Taylor and her colleagues found that self-generated feelings of control (i.e., adopting an internal health locus of control) appear to reduce levels of depression and anxiety, and not the reverse.

Taylor, et al. (1991) also investigated the effects of having a high degree of perceived vicarious control on psychological well-being among 25 PWAs and 55 persons with varying forms of cancer. The investigators analyzed the data by assessing the aforementioned variables as a function of health status (prognosis) and gender. Their findings indicated an interaction among the variables of perceived health locus of control, prognosis, and gender as they related to feelings of psychological well-being. More specifically, it appears that increases in perceptions of vicarious control and a poor medical prognosis were significantly correlated with increased levels of psychological distress. Ultimately, when combining the findings for male and female subjects collapsed across diagnostic groups, it seems that an individual who primarily perceives control of their illness outside of him/herself (e.g., within medical professionals) and has a poor medical prognosis, he/she will experience more psychological stress.

When specifically analyzing the effects of gender, Taylor
and her colleagues found that the only instance in which vicarious control or externalized control was positively correlated with elevations in psychological well-being was for female patients who had relatively good prognoses. Such an effect however, was not apparent for male patients. This was especially noticeable in their study of 25 gay, male PWAs who clearly showed a direct relationship between psychological well-being and prognosis when having an internalized health locus of control.

In the aforementioned article, these authors speculated about the social aspects of having AIDS and how this may ultimately affect psychological well-being as a function of having a vicarious health locus of control. That is, because PWAs are "sometimes the victims of prejudice, discrimination, ignorance, and lack of medical attention from the medical community," (p. 103) there is likely to develop in a PWA an element of affective discordance when perceiving control over one's health as coming from a mistrusted source. Because all 25 PWAs in the Taylor, et al. study were gay or bisexual males this element of mistrust may have influenced the varying effects of vicarious health locus of control on psychological well-being as a function of gender and sexual orientation. Additional literature regarding the relationship among HIV, sexual orientation, and coping is provided later in the narrative.

Returning to the concept of coping, on a more general
level, Folkman (1984) states that perceptions of control play a critical role in influencing responses to stressful challenges (e.g., terminal illness) during the appraisal process of coping. That is, issues of control appear to emerge during a time when an individual assesses the nature of the challenge with which he/she is presented. It is during this period of self-assessment that an individual threatened by a chronic or terminal illness likely begins to question where he/she perceives the locus of control to be in coping with this threat. The manner in which an individual answers this question can greatly influence affect, cognition and behavioral responses in relation to the illness.

**Health Value**

Wallston (1992) offers a more complex portrayal of the role of perceived health locus of control on behaviors that are conducive to health. In his modified version of social learning theory, Wallston introduces another influential factor other than perceived locus of control that further impacts upon the behaviors and cognition that affect well-being. In particular, as represented in Wallston's conceptualization of the multidimensional nature of psychological variables that influence health, an internalized health locus of control and a high degree of health value (HV) influence health-conducive behaviors. Health value, as indicated by Wallston, refers to the degree of importance one
ascribes personal health and well-being. Elevations in health value and an internalized health locus of control are more highly correlated with individuals engaging in health-conducive behaviors than would be expected by assessing only one of the formerly mentioned variables in isolation of the other. These health-conducive behaviors include eating properly, exercising, avoiding self-damaging habits (e.g., smoking), and seeking medical attention when necessary.

In combination, Wallston believes that HV and IHLC influence an individual's propensity to respond to illness in a health conducive fashion which he termed wellness-behavior. For example, he cites a study by Vickers, Conway and Hervig (1990) which indicated that wellness-behavior is significantly correlated with IHLC and elevations in HV. These investigators assessed over 300 navy personnel with the MHLC. In combination with a measure of health value, the researchers analyzed the data using a multiple linear regression design. They discovered that having a high degree of HV was the predominant influencing factor associated with engaging in health conducive or wellness-behaviors. Additionally, elevations in IHLC were a significant predictor of wellness-behavior, but minor when compared to the influence of HV. In summary, the combination of elevations in HV and IHLC were more indicative of wellness behaviors and psychological well-being than assessing either variable alone, and that HV was more significantly associated with wellness-behavior than
Wallston postulates that an individual with elevations in HV and IHLC is more likely to engage in health conducive behaviors and have increased feelings of psychological well-being. A study by Affleck, Tennen, Pfeiffer, and Fifield (1987) supports this notion. The basic findings of this study of chronically ill individuals was that if individuals perceive themselves in control of their health and place a greater value on their health, they tend to experience greater levels of psychological well-being.

As delineated by Smith and Wallston (1992), assessing an individual's priorities of health among other values is a difficult task. These authors review the common methods and limitations inherent to studying the concept of health value. In their review of the available methods of measuring health value, they found that the most common procedures are Likert-type ratings and rank ordering procedures. They cite a number of difficulties in using either method. These include influences of social desirability, the complexity of ranking tasks that may require higher verbal skills, attempts to measure beliefs by measuring behaviors, and what exactly is "health" and the subsequent variations in definitions across studies.

One of the most common methods of measuring health value by rank order is using a modified version of the Rokeach Value Survey (RVS). Rokeach defined a value as "an enduring belief
that a specific mode of conduct or end-state of existence is preferable over any other specific mode of conduct or end-state of existence" (Rokeach, 1973). In its entirety, the RVS is comprised of two lists that each contain 18 value terms. One list contains 18 concepts reflecting instrumental values or preferable modes of behavior (e.g., Ambitious, Independent). The other list contains 18 terms conveying terminal values or preferable end-states of existence (e.g., Equality, A world at peace). Rokeach did not, however, include the concept of "Health" as a value in the original scale. As Rokeach explained, he specifically left out "Health" because it is generally assumed to be highly valued by most everyone; therefore, it would present with little variability between individuals when measured.

Yet, numerous studies that attempt to measure health as a terminal value frequently use the RVS or a variation thereof, and often place the term "Health" among the other listed value terms (e.g., Kristiansen, 1985; Wurtele, Gritcher, & Salsawsky, 1985). These researchers have been able to detect differences among the relative health values of respondents. Smith and Wallston (1992) encourage that their variation of the RVS or some other means of measuring health be used when measuring the concept of health locus of control in order to more fully understand the likelihood of individuals engaging in health-conducive behaviors.

Wallston, Maides, and Wallston (1976) created a variation
of the RVS by randomly selecting nine terminal values from among the 18 originally listed and placing health within this list; consequently, the modified version of the RVS that Smith and Wallston generated is a list of 10 terminal values in which subjects are to rank order the listed values one through ten with the highest rated value receiving a score of one. The nine terminal values extracted from the RVS were randomly selected for inclusion in Smith and Wallston's modified health measurement (Kristiansen, 1985).

**Sexual Orientation, Social Supports, and Stigmatization**

Other variables that may lead to the adoption of specific coping behaviors associated with HIV infection are ethnic/racial status, sexual orientation, and method of contracting HIV. The primary area of interest for Ceballos-Capitaine, Szapocznik, Blaney, Morgan, Millon, and Eisdorfer (1990) was on the effects of psychosocial variables, resulting stress, and coping behaviors for HIV infected, gay, Latino males as compared to HIV infected, gay, Caucasian males. The results indicated that Latino males experienced higher levels of stress on a daily basis than their Caucasian counterparts. The authors attributed this finding to the increased prevalence of homophobic tendencies in Latino cultures and the increased burden of concealing sexual orientation for fear of stigmatization, social isolation and familial rejection; however, coping strategies between the two groups were
essentially comparable. No existing literature comparatively assesses the perceptions of stress and coping strategies among African-Americans, Latinos, and Caucasians infected with HIV. Ceballos-Capitaine and her colleagues also discovered that avoidance and distancing coping styles were the primary methods of coping among the individuals in their study who were homosexual males diagnosed with HIV as compared to HIV+, heterosexual males. These researchers speculated that this is likely related to the additional stressors of social stigma, rejection, and alienation associated with being homosexual in a predominantly heterosexual society that generally does not condone homosexuality.

Additionally, Ceballos-Capitaine and her colleagues point out that social stressors may be elicited due to the pressures of disclosing a previously unrevealed sexual orientation to family and friends at the same time of disclosing one's HIV status; consequently, individuals with a history of homosexual relationships/activities and a diagnosis of HIV infection who have not shared their sexual orientation with their social supports are likely to engage in more avoidance and distancing coping behaviors as a means of avoiding social rejection and alienation. As a result, they are likely to feel greater levels of psychological distress when withdrawing from principle sources of support. Unfortunately, the primary use of avoidance coping methods may additionally serve to keep individuals away from clinic appointments or to engage in
other deleterious behaviors in order to avoid or deny the fact that they are HIV infected.

In a study of help-seeking behaviors related to AIDS-concerns for gay men, Hays, Catania, McKusick, and Coates (1990) discovered that sources of support for men in the gay community tend to be geared towards peers, regardless of HIV status. Their findings corroborate the speculations of Ceballos-Capitaine and her colleagues that homosexual males primarily turn to other males within the gay community rather than to family members, health professionals, or religious institutions when confronted with concerns about AIDS/HIV.

In particular, Hays and his colleagues discovered that of the 530 gay men they surveyed, men who were diagnosed with AIDS, HIV positive, HIV negative (tested), or untested perceived their peers as more supportive and helpful in dealing with their HIV concerns. Two additional significant findings can be gleaned from this study. First, the gay men with AIDS that were surveyed indicated an equal likelihood ofturning to peers, family members, and professionals for support, but found peers to be most supportive. This is in contrast to the gay men surveyed that were HIV positive (non-AIDS), HIV negative (tested), and untested who more frequently turned to peers for support, and turned to family members with significantly less frequency. Second, ratings of the degree of helpfulness of peers were negatively correlated with feelings of depression and anxiety; thus, higher degrees of
perceived helpfulness from friends was associated with lower levels of depression and anxiety. No significant correlation was detected among ratings of the perceived helpfulness of family members and professionals and levels of psychological distress. These findings emphasize the importance of the social support network of peers for men in the gay community when dealing with concerns regarding HIV as well as the need to work on increasing the level of emotional and social support among family members and health care professionals.

Wolf, Drall, Morse, Simon, Balson, Gaumer, and Williams (1991) achieved similar results in their investigation of social supports and psychological well-being. They found that regardless of HIV status (i.e., AIDS, HIV+symptomatic, HIV+asymptomatic), individuals who perceived greater levels of social and emotional support were assessed as having lower levels of psychological distress.

Given such findings, the significance of social and emotional supports becomes apparent in association to psychological well-being; however, many individuals who are HIV positive or have AIDS lack such support due to the social isolation resulting from the stigma associated with HIV/AIDS. Herek and Glunt (1988) succinctly elaborated on the nature of stigmatization as it relates to the HIV/AIDS crisis. These authors defined a stigma as "a mark of shame or discredit" (p. 886), and believe that AIDS is dually stigmatizing because it is a disease that is infectious and fatal, and is usually
associated with pre-existing stigmatized groups in American society. Such groups include gays, intravenous (IV) drug users, and ethnic/racial minorities; consequently, the stigma attributed to individuals who are HIV positive or have AIDS is compounded by the underlying layer of stigma afforded by its association with pre-existing marginal groups in society.

It also appears that within the groups that are normally associated with AIDS, there are various degrees of stigma. For example, in a survey of self-perceptions of social stigma as a function of believed means of contracting HIV, Crandell (1991) discovered that individuals who believed that they were infected by sexual means felt more stigmatized than those who believed they contracted HIV through non-sexual behavior such as IV drug use or blood transfusions.

In review of the existing literature, it is apparent that most AIDS related research that focuses on IV drug use limits itself to evaluating incidence rates, demographic information and methods of prevention. Unlike research on males in the gay community, there is relatively little research on the psychosocial stressors and means of coping with the HIV crisis among IV drug users. This relative neglect, in part, is explained by Stall and Ostrow (1989) as the result of two factors. First, IV drug users are less informed in general about HIV and methods of avoiding infection and treatment than are other members of society. Hence, they are less likely to seek out treatment from health
care professionals if medical needs arise. Second, the gay community and IV drug use community are relatively independent of one another; thus, given that the preponderance of outreach attempts is geared towards members of the gay community, relevant information regarding HIV does not readily reach members of the IV drug use community.

Rationale

In summary, the partial role of psychologists and other mental health workers in treating individuals with HIV is readily apparent when considering the prevalence of psychosocial stressors among infected individuals and the debilitating psychological effects and compromises in immunological functioning that it engenders. A research project focusing on the relationship among coping strategies, health locus of control, health value, and spirituality among HIV infected individuals would appear to be an important contribution in attempting to understand the relationship between psychological well-being and HIV. In addition, the results from such an analysis can further support or refute the practicality of psychotherapeutic interventions designed to decrease perceived psychological distress which may in turn impact upon immunological functioning and disease progression. Also, because such a relatively large proportion of HIV infected individuals are African-American or Latino and most research has been conducted with primarily Caucasian, middle-
class homosexual males, any research on this topic with members of minority populations can serve to address the potentially differing needs of these groups. Finally, in review of the literature, two facets of the HIV/AIDS experience that are frequently neglected are the psychological residuals of being infected via IV drug use and being HIV+ but not displaying or experiencing organic symptomatology. Any information regarding these populations of HIV infected individuals would be contributory in constructing a more extended perspective of HIV status and psychological well-being.
CHAPTER II
HYPOTHESES

In consideration of existing literature and the variables to be assessed in this study the following hypotheses were examined:

Hypothesis I: HIV infected individuals who possess elevations in health value and have a predominantly internal health locus of control will more likely utilize active-behavioral coping methods than will their HIV infected counterparts who place a lower value on health and possess a predominantly powerful other or chance factor health locus of control.

Hypothesis II: HIV infected individuals who place a higher degree of value on health, have a predominantly internalized health locus of control, and primarily utilize active-behavioral coping methods will be less psychologically distressed than their counterparts who place a lower value on health, have a predominantly powerful other or chance factor health locus of control, and primarily engage in avoidant coping methods.

Hypothesis III: HIV infected individuals who indicate a greater degree of spirituality will experience less psychological distress than their counterparts who possess lower levels of spirituality.
Hypothesis IV: HIV infected individuals who disclose less about their HIV positive status to primary sources of social and emotional support will more likely utilize avoidant coping methods as compared to their counterparts who more freely disclose information about their HIV positive status to primary sources of social and emotional support.

Hypothesis V: HIV infected individuals who disclose less about their HIV positive status to primary sources of social and emotional support will more likely experience higher levels of psychological distress as compared to their counterparts who more freely disclose information about their HIV positive status to primary sources of social and emotional support.

Hypothesis VI: HIV infected individuals who disclose less about their homosexuality to primary sources of social and emotional support will more likely utilize avoidant coping methods as compared to their counterparts who more freely disclose information about their homosexuality to primary sources of social and emotional support.

Hypothesis VII: HIV infected individuals who disclose less about their homosexuality to primary sources of social and emotional support will more likely experience higher levels of psychological distress as compared to their counterparts who more freely disclose information about their homosexuality to primary sources of social and emotional support.

Hypothesis VIII: HIV infected individuals who disclose less
about their IV drug use to primary sources of social and emotional support will more likely utilize avoidant coping methods as compared to their counterparts who more freely disclose information about their IV drug use to primary sources of social and emotional support.

**Hypothesis IX:** HIV infected individuals who disclose less about their IV drug use to primary sources of social and emotional support will be more likely to experience higher levels of psychological distress as compared to their counterparts who more freely disclose information about their IV drug use to primary sources of social and emotional support.

**Hypothesis X:** Individuals with AIDS will utilize active-cognitive coping strategies more often than their HIV+, non-AIDS counterparts.

**Hypothesis XI:** Individuals who are ethnic/racial minority members and report having contracted HIV via homosexual sexual activity will be more psychologically distressed than their Caucasian counterparts who report having contracted HIV via homosexual sexual activity.

**Hypothesis XII:** HIV infected individuals who place greater value on social supports in dealing with their HIV status and perceive such support as readily available will present with lower levels of psychological distress than will their counterparts who do not perceive sources of social support as being helpful or do not have social supports readily available.
when dealing with their HIV status.
Participants

A total of 100 males infected with HIV agreed to participate in this research project. All male volunteers were solicited from the six Human Retroviral Disease (HRD) clinics for adult males at Cook County Hospital, Chicago, Illinois. Cook County Hospital is a large public facility that is situated approximately one mile west of downtown Chicago. Patients who seek services from Cook County Hospital are typically from the inner-city and are generally economically challenged and without health insurance.

At Cook County Hospital there are a total of eight HRD clinics that function to treat the increasing number of individuals who test positive with HIV. Together these clinics serve both males and females of all ages. Of these eight clinics, there are six that serve adult males only (18 years and older). The other clinics serve women and children who are HIV positive. It is from the former six clinics that subjects for this investigation were recruited. Females were not included in this research project due to the disparate issues affecting females with HIV infection opposed to their male counterparts. To include females in this study would
have exceeded the scope of this project, and is worthy of investigation unto itself.

The investigator recruited volunteers by attending a number of HRD clinics and soliciting patients to participate. All adult male patients of the HRD clinics interested in participating in this study were included. Each participant received a five dollar incentive for volunteering to be in the study.

The most recent demographic information (January, 1992) for men attending these clinics indicates the following racial composition: 76% African-American, 15.8% Latino, 7.5% Caucasian, and .7% Other. The age range of patients in the male HRD clinics is young adulthood to senescence with a majority of patients ranging in age between their early-twenties and mid-thirties. By and large, these patients are economically challenged whether by income, lack of health insurance, or both. Males seen at the HRD clinics are provided a range of services including medical treatment, psychotherapy, health education, chemical dependency counseling, and case management services; consequently, the HRD clinics include various health professionals including psychologists, physicians, nurses, health educators, social workers, and chemical dependency counselors. Psychologists within the clinics essentially function to provide psychosocial assessments and emotional support for patients who are contending with the psychologically devastating
effects of HIV, and counsel patients in engaging in more
adaptive behaviors conducive to better health. In addition,
some patients attending the HRD clinics are provided
concomitant outpatient psychotherapy services from mental
health staff in the Outpatient Adult Psychiatry Clinic at Cook
County Hospital.

Table 1 contains relevant information regarding
demographic information, sexual orientation, sexual activity,
and disease status of the participants. Because 100
participants participated in this project, frequency values
are interchangeable with percentile ranks times 100. As shown
in Table 1, most of the participants were between 30 to 40
years of age. The mean age of the participants was 36.80
years (SD = 7.73), and participants ranged in age from 22 to
58 years. The sample was 69% African-American, 12% Latino and
15% Caucasian which approximately parallels the ethnic/racial
proportions of men who attend the HRD clinics at Cook County
Hospital.

There were no significant differences among African-
Americans, Latinos, and Caucasians across variables of age
[F(2,93) = 2.01, p = .14], educational level [F(2,91) = 1.04,
p = .36], length of time diagnosed with HIV (in months)
[F(2,61) = 1.08, p = .35], degree of perceived connectedness
with a religious organization [F(2,84) = 2.52, p = .09], and
current employment [X^2 (2, N = 96) = 1.31, p = .52]. A
summary of the means and standard deviation values from these
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comparisons are provided in Table 2 of Appendix A. From this selection of variables, only number of physical symptoms was significantly different as a function of ethnic/racial status, $[F(2,91) = 6.15, p < .003]$. A Scheffe Multiple Range test which incorporated the calculation for harmonic $N$ due to disparate group sizes was utilized to examine underlying group differences. This analysis revealed that Latino males had a significantly greater number of physical complaints ($M = 7.17$, $SD = 4.50$, $n = 12$) than African-American males ($M = 4.14$, $SD = 2.91$, $n = 67$), $p < .05$. These findings are presented in Figure 1.

Table 1 also contains information regarding religious affiliation and educational level. A majority of the participants were Baptist or affiliated with other Protestant sects (e.g., Lutheran, Methodist). Catholics represented 23% of the sample, and 11% of the volunteers indicated no religious affiliation. Only 3% of the sample reported having less than an eighth grade education. In order to determine whether or not these participants were capable of meeting the reading and comprehension requirements of the materials utilized in the study, they were interviewed and evaluated by the examiner at two separate times during the data collection process. After reading the consent form, these participants were asked to verbally state the main points of the written consent. All three participants were able to adequately read, comprehend, and recall the major points of the consent form.
FIGURE 1

COMPARISONS BETWEEN MEAN VALUES FOR NUMBER OF
PHYSICAL SYMPTOMS AS A FUNCTION OF ETHNICITY/RACE

Note: Group sizes are in parentheses. Significant differences were found between African-Americans and Latinos.
Second, after completing the testing packet these participants were asked to describe the testing materials in general and to recall some of the specific items contained in the packet. All participants were able to accurately relay what was contained in the testing battery and were able to recall how they responded to specific items randomly selected from the questionnaire packet by the examiner. Finally, the examiner reviewed the written materials to ensure that the participants followed the instructions for each questionnaire in the packet. One participant responded incorrectly to the Health Value Measure (HVM); however, after having the measure explained to him, the respondent was able to follow the measure's instructions; consequently, the data from this participant and the two previously mentioned participants were included in the final analyses.

Information regarding sexual history indicated there was almost identical representation between groups of men reporting a homosexual (41%) and heterosexual (40%) sexual orientation. Similarly, 30% of the respondents reported currently engaging in sexual activity with only males and 33% with only females. A significant percentage of respondents (30%) reported currently only engaging in solitary masturbation or abstaining from sex. This is in contrast to how these volunteers responded to an item regarding past sexual activity (which includes pre-HIV infection sexual history) in which all participants reported some form of
sexual activity with males and/or females.

In this sample of 100 men, 67% were medically diagnosed with AIDS. Most recent CD4 counts indicated that 59% of the participants had CD4 counts below the 200cmm mark and 12% had CD4 counts above 500cmm. Five percent of the volunteers had no available CD4 counts but were medically diagnosed with AIDS. The median CD4 value for the group was 95.00cmm along with a mean value of 218.27cmm ($SD = 218.27cmm$). On a checklist of 14 HIV/AIDS related symptoms, participants possessed a mean of 4.99 current symptoms ($SD = 3.49$). A significant percentage of the participants (45%) indicated that they believe they contracted HIV through homosexual sexual activity. In addition, 18% believe they contracted the virus through IV drug use and 15% through heterosexual sexual activity.

Measures

A total of six measures as well as a demographic cover sheet were used to address the hypotheses postulated in this project. The primary variables included coping behaviors, perceived health locus of control, health value, spirituality, psychological distress (e.g., overall psychological distress, depression, tension), and number of physical symptoms. The following text presents and evaluates the instruments that were used to assess the aforementioned variables.
Methods of coping inventory

The Methods of Coping Inventory (MCI; Namir, Wolcott, Fawzy, & Alumbaugh, 1987) was designed to evaluate how PWAs cope with a diagnosis of AIDS. In particular, the researchers were interested in observing the behavioral and cognitive coping styles PWAs use in dealing with their illness. The inventory consists of 47 items and takes approximately 15 minutes to complete. A respondent evaluates each item within the context of the following prefacing statement: "Which of these things have you used to help you deal with your illness?" Because not all individuals in the current study had AIDS, the leading question read differently, as follows: "Which of these things have you used to help you deal with your HIV illness?"

Namir and her colleagues referred to a number of sources in deriving the items and constructing the scales of their coping inventory. The measure draws its theoretical basis primarily from Lazarus and Folkman (1984), and Billing and Moos (1979). As cited by Namir et al. (1987), Lazarus and Folkman view coping not as a trait, but as a process that is subject to change as a function of the situational stressor. In the manual for the Ways of Coping Inventory, Research Edition (1984), Lazarus and Folkman define coping as "the cognitive and behavioral efforts (developed) to manage specific external and/or internal demands appraised as taxing or exceeding the resources of the individual" (p. 2).
Of the 47 items on the MCI, 25 were selected from Amerikan's (1985) Coping with Illness inventory. Amerikan's inventory is primarily based on Lazarus and Folkman's Ways of Coping Checklist (1984). An additional 22 items were developed by modifying some of the items on the Health and Daily Living Form (Moos, Cronkite, Billings, & Finney, 1984). The three classes of coping methods that the MCI measures are active-behavioral, active-cognitive, and avoidant. An individual responds to each item by assigning a value ranging from one (never) to five (always). The possible range of scores for each of the types of coping methods is as follows: Active-behavioral coping method--20 to 100 points; Active-cognitive coping method--16 to 80 points; and Avoidance coping method--11 to 55 points. In determining which coping style was a given respondent's primary coping method, mean score values for each type of coping method were computed. The scale with the highest mean value was deemed that individual's primary mode of coping. For example, a volunteer whose highest score among the three types of coping methods on the MCI was in the active-behavioral coping category was placed within the category of individuals who primarily utilize active-behavioral coping methods. Similar means of classification occurred for those individuals who tested with their highest MCI weighted score as primarily active-cognitive or avoidant in coping. The items from the MCI that correspond to each of these coping methods are presented in Appendix B.
After deriving the three supraordinate classes of coping methods (i.e., active-behavioral, active-cognitive, and avoidant), Namir and her colleagues analyzed the three coping methods and derived eight classes of coping strategies. The coping strategies are more narrow in definition and convey a more specific type of behavioral and/or cognitive element. Four of the eight coping strategies consist solely of items from only one type of general coping method; however, the remaining four coping strategies collapse across behavioral, cognitive, and/or avoidant coping methods. Their method of analyzing and factoring out these groups is not evident; however, they do provide item lists for each coping strategy and measures of internal consistency using Cronbach's alpha.

The eight subcategories of coping strategies along with their alpha values include 1) Active-positive involvement, .90; 2) Active-expressive/information seeking, .88; 3) Active-reliance on others, .86; 4) Cognitive-positive understanding/create meaning, .66; 5) Cognitive-passive/ruminative, .63; 6) Distraction, .66; 7) Passive resignation, .81; and 8) Avoidance-solitary/passive behavior, .80. A complete item listing for each coping strategy is provided in Appendix C.

The authors of the MCI do not provide detailed information regarding the psychometric properties of the measure; however, in addition to measures of internal consistency, Namir and her colleagues provided mean and standard deviation values for each coping strategy and coping
method. This normative data was based on a relatively small sample of 50 homosexual or bisexual males with a mean age of 36 years. In addition, the normative sample was predominantly Caucasian, and included 4% Latinos and 2% African-Americans. Because the normative sample is so dissimilar in racial composition relative to the current population being evaluated, the usefulness of information regarding distribution characteristics is dubious. Despite its questionable normative basis relative to the current study, the mean and variability estimates based on Namir et al.'s data is presented in Appendix D.

The lack of appropriate normative data is not necessarily a liability to this investigation. This is largely due to the design of the study in which comparative analyses will be conducted among the various subgroups tested (e.g., ethnic/racial status, health status) from the population sampled. Hence, the value of the measure as a specific means of evaluating coping styles among HIV infected males outweighs the lack of relevant normative information that other, general measures of coping may offer. Additionally, this research may serve to provide preliminary normative data for subsequent research that includes the MCI when testing inner-city males of ethnic/racial minority status. A copy of the MCI is provided in Appendix E.

**Multidimensional health locus of control**

The MHLC (Wallston, Wallston, & Devilllis, 1978) was used
to assess the manner in which an individual conceptualizes health locus of control. As was intended by the test developers, the MHLC exists in two forms (A & B). Each form of the MHLC consists of 18 personally worded items that, as a group, assess the three following dimensions for health locus of control beliefs: IHLC, PHLC, and CHLC. The test developers created two sets of items to facilitate research designs that use repeated measures to assess health locus of control beliefs. All test items are constructed on a six-point Likert-type scale with qualitative descriptors ranging from strongly disagree (scored as 1) to strongly agree (scored as 6); consequently, given that each factor or locus of control scale has a total of six items, an individual's score on any of the three scales will range from 6 to 36 points. Higher score values for a given type of health locus of control indicate a greater propensity for perceiving health locus of control in that manner. The administration of the MHLC results in three different score totals assessing the aforementioned areas. The scale with the highest score value was deemed that individual's predominant type of health locus of control. The MHLC takes approximately five minutes to administer and is developed for individuals possessing at least an eighth-grade reading level.

The MHLC was normed on a sample of 115 adults in which 49% were males, 90% were Caucasian, 74% had some college education, and the group had a mean age of 42 years. Because
Form A was used in this research project, its psychometric properties will be the subject of focus. The mean and standard deviation values based on the normed data for the three scales of Form A are as follows: IHLC ($M = 25.104, sd = 4.891$); PHLC ($M = 19.991, sd = 5.221$); and CHLC ($M = 15.574, sd = 5.751$); consequently, a higher score on any of the three scales suggests that the individual has a propensity towards attributing health locus of control to the factor being evaluated.

Correlation values of internal consistency (i.e., alpha reliability values) for Form A are adequate, ranging in value from .67 to .77 (Wallston, et al., 1978). When increasing the sample size by combining the items from comparable scales of Forms A and B, alpha reliability values considerably increased, and ranged in value from .83 to .86; consequently, the MHLC presents with an adequate degree of internal consistency which was not as well represented in its predecessor, the HLC.

The MHLC also presents favorably in the areas of inter-scale correlation, convergent validity, and predictive validity. Further corroborating the notion that health locus of control is a multidimensional construct, Wallston and his colleagues (1978) achieved intercorrelation values among the subscales indicating that IHLC and PHLC are independent of one another ($r = .15$, nonsignificant), that IHLC and CHLC are inversely related ($r = -.34, p < .001$), and that PHLC and CHLC
are statistically independent ($r = .06$, nonsignificant); therefore, their attempts to factor out beliefs of chance as a source of health control separate from the effects of powerful others and self-derived control appears significant.

When compared to Levinson's (1974) measure of general locus of control, the MHLC tests with significant correlations that are moderate in strength. The intercorrelation values addressing convergent validity between general locus of control as measured by Levinson and health locus of control as measured by the MHLC are $r = .57$, ($p < .001$) for feelings of internal locus of control; $r = .28$, ($p < .01$) for external feelings of control involving powerful others; and $r = .80$ ($p < .001$) for beliefs that chance factors are influential in affecting the course of events. These values suggest that both tests are tapping into similar concepts but that they do not essentially repeat themselves and are generally unique.

In an attempt to test for predictive validity, Wallston and his colleagues correlated scale scores on the MHLC with the combined values of two separate items assessing perceived physical well-being of individuals in the normative group. These correlations indicated that IHLC scores correlated positively with elevations in perceived health status ($r = .40$, $p < .001$), whereas CHLC scores negatively correlated with perceived health status scores ($r = -.28$, $p < .01$). There was no significant correlation between PHLC scores and perceived health status ($r = -.06$). Overall, the implications are that
individuals who perceive themselves as effective agents in controlling their health are likely to feel healthier than their counterparts who attribute their health to fate or chance factors. The investigators did not include any measure of objective health status so this greatly limits the degree to which one can speculate about these findings. The MHLC (Form A) is presented in Appendix F.

Health value measure

Overall, the MHLC appears to be a valid and reliable measure of the three dimensions of health locus of control it contains. Yet, Wallston (1991) has recently criticized his own measure because of its exclusion of items that assess an individual's value of health. With respect to Wallston's more recent comments on the flaws of the MHLC, a separate measure to assess health value was utilized in this project.

For purposes of this study, in order to measure respondents' ranking of health, an approach similar to that of Smith and Wallston (1992) was undertaken. Although, generally for respondents, rank ordering is more demanding a task than responding to Likert-type items, the rank ordering system of health value was used in this study. This is deemed more appropriate for a number of reasons. First, the ranking system seems more amenable to detecting any variance among respondents on the issue of health values than would be detected by a Likert type response scale. Second, a ceiling effect when measuring health value using a Likert type scale
is likely, which further decreases the chances of highlighting variability in health values among respondents. Finally, the number of items to be ranked was reduced from 18, as is originally contained in the RVS, to 10 as is recommended by Smith and Wallston. Reducing the number of values to rank order likely decreased the complexity of the task.

The Health Value Measure (HVM), which is a modified version of the RVS, was used in this project to assess health value. The HVM was created specifically for this research project by randomly selecting 9 terminal values from the list of 18 in the RVS terminal value list. The addition of "Health" as a value was included in the list of 9 terminal values, resulting in a total of 10 terminal values that participants were asked to rank order. The prefacing instructions to this measurement were as follows: "Below is a list of 10 values. Please rank them in order of importance for you. For example, place a '1' beside the value that is most important to you, a '2' beside the next important value, and so on, until you have ranked all the values from highest (1) to lowest (10)." The HVM takes approximately 5 minutes to complete. In scoring the respondent's answers to this measurement, an individual's score was the rank order assigned to the value "Health." For purposes of this project, respondents' health value scores were categorized as high or low. Classification of HVM scores were derived by a median split technique in which individuals who scored above the
median for HVM scores were deemed as placing a high value on health and individuals who scored below the median were considered as placing a low value on health. Because the health value measure to be used is a modified version of the RVS, no information regarding its psychometric values is available. A copy of the Health Value Measure (HVM) is presented in Appendix G.

**Spiritual well-being scale**

The SWBS (Ellison, 1983; Paloutzian & Ellison, 1982) was utilized to assess the quality of respondents' spiritual well-being. As mentioned previously, the SWBS attempts to measure two different facets of spirituality—religious well-being (RWB) and existential well-being (EWB). As conceptualized by Ellison and Paloutzian, RWB addresses the vertical dimension of spirituality (i.e., one's relationship with God), whereas EWB addresses the horizontal dimension of spirituality (i.e., how well an individual relates to his surroundings including community and self).

The measure is composed of 20 Likert-type formatted items. Both subscales of the SWBS are comprised of 10 items. For each response choice a respondent selects his/her choice by circling a value 1 (strongly disagree) to 6 (strongly agree). An individual can score from 10 to 60 points on either subscale. Additionally, the scores from the RWB and EWB subscales may be combined to derive an overall index of spiritual well-being (SWB). This score may range from 20 to
120 points. The SWBS takes approximately 5 minutes to complete. Bufford, Paloutzian and Ellison (1991) have generated a number of normative samples for comparative purposes.

A number of investigations have assessed the psychometric properties of the SWBS. Estimates of test-retest reliability and internal consistency are adequate. For example, testing and retesting a group of 53 individuals over a six week period, Brikman (1989) achieved correlation values of .88 for the RWB subscale, .73 for the EWB subscale, and .82 for the SWB composite scale. Other investigations of the measure's test-retest reliability have achieved even higher correlation values (e.g., Upshaw, 1985).

According to Ledbeter, Smith, Fischer, Vosler-Hunter, and Chew (1991) over 166 studies have attempted to study the validity of the SWBS. Findings are varied depending upon the type of validity being assessed and sample used (i.e., variations in religiousness). Factor analytic research investigating the construct validity of the SWBS have indicated that the items of the SWBS tend to cluster into the categories of religious and existential well-being, but it lacks a higher degree of goodness of fit. In a factor analytic study by Ledbeter, Smith, Fischer, Vosler-Hunter and Chew (1991), all the RWB items loaded on the first factor; however, not all of the EWB items loaded on the second factor. The items that did not factor into the EWB scale did cluster
together but did not reach an eigenvalue greater than 1.0.

Measures of convergent validity for the SWBS are adequate. For example, Ruffing-Rahal (1991) correlated the scores of 182 older adults on the SWBS, the Revised Philadelphia Geriatric Center Morale Scale (PGCMS), and the Integration Inventory (II). The II is a measure of overall well-being as experienced by older adults. Pearson correlation values between the II and SWBS were .52 ($p < .0001$). Additionally, an $r$ of .31 ($p < .0001$) was achieved when correlating RWB scores to II scores, and an $r$ of .73 ($p < .0001$) between SWB scores and II scores was found. Other variables that Bufford and his colleagues (1991) cite as significantly correlated with SWB scores include general well-being, positive self-concept, finding meaning and purpose in life, good physical health, and good emotional adjustment. SWB scores are negatively correlated with ill health, emotional maladjustment, and dissatisfaction with life.

One particular problem that has been detected regarding the structure of the SWBS is that with religious respondents there is a tendency for scores to be negatively skewed; therefore, it appears that there is a ceiling effect at the higher range of score values for individuals associated with religious organizations and this needs to be considered when dealing with religious individuals (Ledbeter, et al., 1991); however, because the sample under investigation in this study was not "religious" per se, this is not likely to present
itself as a problem. A copy of the SWBS is presented in Appendix H.

Profile of mood states

The Profile of Mood States (POMS; McNair, Lorr, & Droppleman, 1971) was utilized to assess overall psychological distress as well as individual components of affective well-being. The POMS is a 65-item adjective rating scale that asks an individual to indicate "how you have been feeling during the past week including today." Following each adjective on the list, the individual indicates how his/her mood resonates with the adjective by selecting one of the following ratings: 0--Not at all, 1--A little, 2--Moderately, 3--Quite a bit, or 4--Extremely.

The POMS is self-administered and takes approximately three to five minutes to complete. It is intended for individuals with at least a 7th grade reading level. As indicated by the developers of the measure, the POMS is intended for assessing mood states in psychiatric outpatients or in research involving nonpsychiatric adults (i.e., normals).

The POMS is composed of six factors tapping into various aspects of mood states. The factors assessed by the POMS include Tension-Anxiety (T), Depression-Dejection (D), Anger-Hostility (A), Vigor-Activity (V), Fatigue-Inertia (F), and Confusion-Bewilderment (C). For each factor, one can derive a specific score indicating the degree of mood on that given
factor by summing up the total scores for each factor's group of adjective ratings.

The derivation of six orthogonal scales more accurately captures the character or quality of a given individual's mood than does a global measure of mood. In the POMS manual, McNair and his colleagues describe the specific qualities of each factor which contribute to mood. The T scale attempts to assess somatic tension, and diffuse anxious feelings. The D scale appears to measure sad mood, feelings of personal inadequacy, futility, worthlessness, isolation, and guilt. Feelings of anger, antipathy, and sullenness are captured in the A Scale. On the V Scale, feelings of vigor, ebullience and high energy are conveyed; consequently, the items of the V scale and the V scale itself are inversely related to the other factors of the POMS. The F Scale is defined by inertia, weariness, and low energy level. Finally, the C Scale is characterized by feelings of bewilderment.

The possible range of factor scores is as follows: T scale--0 to 36 points, D scale--0 to 60 points, A scale--0 to 48 points, V--scale 0 to 32 points, F scale--0 to 28 points, and C scale--0 to 28 points. As the manual indicates, all items for the aforementioned factors, excluding the V scale, are keyed in the same direction with the exception of two adjective terms: "Relaxed" in the T Scale, and "Efficient" in the C Scale which are negatively weighted in summing their respective factor scores. In addition to the factor scores,
it is possible to calculate a Total Mood Disturbance score (TMD). The TMD score is derived by summing up the six factor scores. Because the Vigor-activity scale is inversely related to negative mood, the score for this factor is weighted negatively when deriving the TMD. The range of TMD scores is 0 to 260 points. Although having normative data for factor scores, there is no normative information for TMD scores.

Overall, psychometric data suggest that the POMS is likely a valid measure of mood and is variable in regards to being a reliable measure depending on the type of reliability being assessed. Measures of test-retest reliability are not at the level that would indicate the POMS is measuring a personality trait which is consistent over time. On a sample of 100 psychiatric outpatients, it was found that correlation values for matched samples ranged from .66 on the F scale to .74 on the D scale. These patients were tested at intake and retested within a range of 3 to 100 days later at the time therapy began. Although not suggestive of tapping into a personality trait, these correlation values suggest a moderate degree of relationship, and hence some consistency of mood over time that is being assessed by the POMS. The developers of the test state that the POMS is not intended to measure stable personality traits because the concept they intend to measure (i.e., mood) by definition is subject to fluctuations over time; however, there does seem to be some consistency regarding the range of mood swings which is captured by
moderate correlation values of test-retest reliability estimates.

On a sample of 1000 individuals, measures of internal consistency for the six factors are adequate. Alpha reliability values assessing internal consistency range from .84 for the C scale to .95 for the D scale. These values indicate that individual items primarily measure their respective factors.

A number of studies cited by the test developers in the POMS manual provide evidence for the concurrent, predictive and construct validity of the measure. For example, in a comparison of the Hopkins Symptom Distress Scales (HSDS) to the POMS with a sample of 1000 individuals, Parloff, Kelman, and Frank (1954) achieved moderate to high levels of correlation among the scales. The scales of the HSDS that were compared to the scales of the POMS are Somatization, Anxiety, and Depression. The resulting correlation values that substantiate the concurrent validity of the POMS include an $r$ of .86 for the Depression scales of both measures, an $r$ of .77 for the Anxiety scales, and correlation values of .60 and .61 for the Somatization scale of HSDS and the T and F scales of POMS, respectively.

Measures of construct validity are equally as robust. In a study conducted by Lorr, McNair, Weinstein, Michaux, and Raskin (1961), it was found that the POMS factor scores were sensitive to the changes in mood associated with
psychotherapy. Changes in mood over an eight week period as a function of type of treatment provided were analyzed. The researchers discovered significant elevations in mood ($p < .001$) on the T, D, A, and F scales for the treatment groups (i.e., one group receiving only psychotherapy, and three groups receiving psychotherapy along with various types of psychotropic treatments, and a placebo group receiving psychotherapy and a placebo medication) as compared to a group of normals who were not receiving treatment. A copy of the POMS is included in Appendix I.

**Symptom checklist**

A checklist of the 14 most common physical symptoms indicative of HIV infection was used to assess current symptomatic status. This checklist is presented in Appendix J.

**Demographic questionnaire**

The Demographic Questionnaire (DQ), designed specifically for this project, includes questions regarding age, ethnicity/race, sexual orientation, education, employment, drug use, perceived method of HIV infection, past psychiatric illnesses, and various items assessing sources of social and emotional support. In addition, respondents were asked to evaluate the degree to which they are comfortable in disclosing information to primary sources of support regarding respondents' HIV status, homosexuality, and/or IV drug as they apply to given individuals. The DQ takes approximately 10 to
15 minutes to complete. A copy of the Demographic Questionnaire is presented in Appendix K.

Medical information

Information gleaned from participants' medical records was used to determine the health status of respondents for purposes of assigning them to one of three possible health status groups. The three classes include patients with AIDS, patients who are HIV+symptomatic--non-AIDS, and patients who are HIV+asymptomatic--non-AIDS. The health status of volunteers was determined by following the proposed guidelines for diagnosing AIDS as suggested by the Centers for Disease Control (CDC; Hultz, Chavez, Williams, & Thomas, 1992). As recently proposed by the CDC, an individual was diagnosed with AIDS when he had a CD4+ T-lymphocyte cell count (CD4 count) of less than 200 per cubic millimeter of blood. An average CD4 count for adult males is 800 to 1200 cmms. In addition to the proposed CDC guidelines, the former criteria of diagnosing AIDS was retained. That is, AIDS was diagnosed, regardless of CD4 count, if an individual tested as HIV positive and had any of the 23 diagnostically significant diseases including Pneumocystis carinii pneumonia, candidiasis, mycobacterial infections, wasting syndrome, CMV retinitis, cryptosporidiosis, toxoplasmosis, and Kaposi's sarcoma and other cancers. The proposed guidelines have amended this list of diseases to include Pulmonary Tuberculosis, Recurrent Pneumonia, and Invasive Cervical Cancer. Information
regarding volunteers' current medical diagnoses and CD4 counts were obtained from medical records; consequently, an individual who had a CD4 count of below 200 and/or had one of the above stated diseases indicative of AIDS was classified for this project in the group of respondents with AIDS.

An individual was classified as HIV+symptomatic if he is not diagnosed with AIDS, but was positive for HIV and presented with one or more HIV related symptoms (e.g., night sweats, swollen glands). The final group consisted of HIV+asymptomatic individuals; that is, individuals who were HIV infected but did not have any HIV related symptoms. This information was also obtained by reviewing the volunteers' medical records.

Procedure

Volunteers for this study were recruited from the aforementioned HRD clinics at Cook County Hospital while they were waiting in the clinic for an appointment with HRD staff. Subjects were recruited using two separate techniques. First, a number of flyers and posters were placed within the HRD clinics informing individuals of the research investigation and the manner in which to contact the examiner if the individual was interested in participating in the project. A copy of the flyer is presented in Appendix L. In addition, the examiner made verbal announcements regarding the research and the researchers need for volunteers to individuals waiting
in the lobby of the HRD clinics. The announcements were similar to the information presented in the flyer. Flyers in Spanish were also posted in the clinics.

In return for their participation, volunteers were paid five dollars. In addition, participants were informed that their participation in the project or their refusal to complete the questionnaire packet would in no way affect their services from the HRD clinic. Volunteers were informed that they were free to withdraw from participating in the study at any time for any reason without negative consequences. Individuals agreeing to participate in the study were requested to sign a combined written consent and release of information form. Written consent indicated a volunteer's understanding of and willingness to participate in the study. A release of information was also requested in order to give the researcher permission to review medical records and to use information such as t-cell counts and medical diagnoses. A copy of the consent/release of information form is presented in Appendix M.

Participants were informed that measures would be taken to assure the confidentiality of personal information gained and used in this project. Subjects were assigned numbers for identifying labels on testing data and measures; consequently, no names were associated with the research data. Subjects names only appeared on the consent/release of information form, and the mailing list for individuals interested in
receiving summaries of the results. These measures served to assure anonymity regarding the use of personal information in the research project and may also have limited a participant's tendency to respond in a socially favorable manner. The consent/release of information forms and mailing list were maintained separately from collected data.

After acquiring written consent and release of information approval, each participant received a packet of research measures. In order not to interfere with participants receiving health services at the HRD clinic, they were asked to complete the testing packets in the waiting area so patients could hear their names called when it was time for them to meet HRD staff; as a result, testing was conducted in the waiting room of the HRD clinic. While participants were responding to the research measures, the examiner or his assistant was available if any questions or problems arose. The examiner was also vigilant of any participant who may have had an adverse affective response to the testing material that may have required immediate intervention; consequently, the assessment of volunteers was only conducted when a mental health worker was on duty at the HRD clinic in case of unforeseen adverse psychological reactions related to the topics being assessed. Overall, only four men reported that responding to the questionnaire made them depressed when the interviewer asked how the testing process went. The examiner spent five to ten minutes with each of these volunteers in
order to screen for excessive psychological reactions to the data gathering process and to provide support. None were deemed as in crisis and each was recommended to speak with their psychologist or case worker later that day. In each instance, the mental health staff were notified of the volunteers' negative reaction to the testing process.

Questionnaire packets consisted of the DQ, MCI, MHLC, HVM, SWBS, POMS, and symptom checklist. Each testing packet was prepared with the HVM occurring first in order of presentation. This step was taken to assure that volunteers were more likely to rate health value without gaining insight into the study which they may have acquired by responding to other questionnaires first. In addition, every testing packet was prepared with the symptom checklist and DQ occurring last in order of presentation; however, the remaining instruments were arranged in various orders to counteract the possibility of ordering effects. Given that there were four other instruments to vary in order of presentation, they were arranged by the permutation of four measures taken four at a time, resulting in 24 possible ordering arrangements of testing material. In addition, a testing packet and consent form in Spanish were available for Spanish speaking participants. However, no volunteers asked to complete the Spanish version testing packet. Total test taking time ranged from 20 minutes to one and a half hours.

After completing the testing packet, participants were
paid their remuneration fee and thanked for their participation. The researcher was available to answer any questions the volunteers had regarding the study and to gather names and addresses of the volunteers who requested information regarding the findings of the research project.
CHAPTER IV
RESULTS

The following contents of the results section are presented along the general constructs investigated by the project; consequently, the detailed hypotheses and accompanying analyses are discussed as they relate to these constructs.

Psychological Distress

A majority of the stated hypotheses focus on the degree of reported overall psychological distress (TMD scores from the POMS) among participants and how depression and tension, as subcomponents of overall psychological distress, are associated with coping methods, health value, perceived health locus of control, and spiritual well-being. What follows is a description of the analyses that were conducted to investigate the nature of these relationships.

Hypothesis II stated that HIV infected individuals who place a higher degree of value on health, have a predominantly internal health locus of control, and primarily utilize active-behavioral coping methods would experience lower levels of psychological distress than their counterparts who place a lower value on health, have a predominantly powerful other or
chance factor health locus of control, and primarily utilize avoidant coping methods. A series of 2 X 3 X 3 analyses of variance (ANOVAs) were used to analyze Hypothesis II. A three-way ANOVA was conducted for each different measure of psychological distress including total mood disturbance (TMD), depression, and tension. Measures of depression and tension are subscales of the POMS and contribute to the overall TMD score. These various measures of mood disturbance were evaluated between groups as a function of health value (high or low), predominant type of health locus of control, and predominant method of coping with HIV illness.

The two levels of health value were created by using a median-split technique. In using this technique with this sample of 100 participants, 46 were deemed as placing a high value on health. That is, all 46 men reported that health was their first priority. Another 41 male volunteers were deemed as placing a low value on health relative to the members in the high health value group because the former reported that health was less than their first priority on the list of 10 terminal values. The median score for health value rankings was 2.00 and the mean was 2.25 (SD = 1.83).

Health locus of control contained three levels of orientation (i.e., IHLC, PHLC, and CHLC) with 63 participants indicating a predominantly IHLC, 16 reporting a predominantly CHLC, and 9% reporting a predominantly PHLC. The remaining 12 were not included in the above classification because no
predominant health locus of control emerged.

Within this three-way ANOVA, 3 of the 18 cells did not have any members; consequently, the analyses of potential three-way and two-way interactions for Hypothesis II were not possible. As a result, no definitive comments can be offered at this time regarding the expected differences between mood disturbance as a function of the combined effects of health value, coping methods, and health locus of control. Cell sizes and mean and standard deviation values are presented in Table 3 of Appendix A.

In order to test for possible main effects associated with mood disturbance as a function of health value, coping methods, and health locus of control, a series of one-way ANOVAs were conducted. These results indicated that TMD $[F(2,92) = 3.88, p < .05]$ and Depression $[F(2,93) = 3.76, p < .05]$ scores varied as a function of coping method. However, no statistically significant differences were detected among Tension scores as a function of primary type of coping method, $F(2,93) = 2.25, p = .12$. Mean and standard deviation values and sample group sizes from these analyses are presented in Table 4. Overall, it emerged that TMD and Depression subscale scores differed dependent upon what was assessed as the participant's predominant method of coping with HIV/AIDS. In order to more accurately analyze these results, Scheffe Multiple Range Tests using a harmonic N to account for
**TABLE 4**

PROFILE OF MOOD STATES TOTAL MOOD DISTURBANCE, DEPRESSION, AND TENSION SCORES AS A FUNCTION OF TYPE OF COPING METHOD

<table>
<thead>
<tr>
<th>PRIMARY METHOD OF COPING</th>
<th>Cognitive</th>
<th>Behavioral</th>
<th>Avoidant</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MEASURES OF MOOD DISTURB</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TMD</td>
<td>M = 79.95 SD = 41.66 (81)</td>
<td>M = 99.25 SD = 42.14 (8)</td>
<td>M = 125.17 SD = 36.62 (6)</td>
</tr>
<tr>
<td>Depress</td>
<td>M = 1.17 SD = .88 (82)</td>
<td>M = 1.57 SD = 1.13 (8)</td>
<td>M = 2.14 SD = .84 (6)</td>
</tr>
<tr>
<td>Tension</td>
<td>M = 1.55 SD = .93 (82)</td>
<td>M = 1.79 SD = .90 (8)</td>
<td>M = 2.35 SD = .72 (6)</td>
</tr>
</tbody>
</table>

Note: Group sizes are presented in parentheses.
disparate group sizes were conducted on the data and revealed that individuals who primarily utilized cognitive coping methods tended to have lower TMD and Depression scores as compared to participants who primarily utilized avoidant coping methods, p < .05.

A number of subsequent ANOVA and Chi-Square analyses were conducted to determine whether or not any underlying differences regarding demographic information differentiated volunteers as a function of primary type of coping method. No significant findings resulted for differences in age [F(2, 94) = .35, p = .71], perceived religious affiliation [F(2, 85) = .68, p = .51], time diagnosed with HIV [F(2, 62) = 1.16, p = .32], time diagnosed with AIDS [F(2, 33) = .28, p = .76], available social support [F(2, 94) = .76, p = .47], number of physical symptoms [F(2, 94) = 2.53, p = .09], educational level [F(2, 93) = .48, p = .62], sexual orientation [X(2, N = 96) = 1.67, p = .43], health status [X(4, N = 97) = 6.36, p = .17], and ethnicity [X^2(4, N = 93) = 5.57, p = .23] as a function of primary coping method. A summary of these mean and standard deviation values from the ANOVAs is presented in Table 5 of Appendix A. In addition, a summary of the percentile ranks from the Chi-square analyses are presented in Table 6 of Appendix A.

Another series of one-way ANOVAs were conducted to examine possible differences in mood disturbance as a function of primary type of health locus of control. No statistically
significant differences were found when comparing TMD [$F(2, 83) = 1.32, \ p = .26$], Depression [$F(2, 84) = 1.55, \ p = .22$], and Tension [$F(2, 84) = .98, \ p = .38$] scores as a function of primary type of health locus of control. Mean and standard deviation values and sample sizes are presented in Table 7 in Appendix A.

Finally, in order to test for associations between various measures of mood disturbance and health value, a number of Pearson Correlation analyses were conducted. Originally, a three-way ANOVA was proposed to analyze the data related to Hypothesis II. Within that analysis, health value ratings were classified into categories of high and low based on a medium split technique. In order to conduct the Pearson Correlation Analyses for the relationship between health value and measures of mood disturbance, health value scores were left in their original rank ordering form. No statistically significant correlations at the .05 level were found for health value rankings and TMD [$r(95) = .18$], Depression [$r(95) = .19$], and Tension [$r(95) = .19$] scores.

In Hypothesis XI it was stated that due to elements of social isolation related to being associated with marginal groups in society, psychological distress would be higher in ethnic/racial minority males who contracted HIV through homosexual sexual activity as compared to their Caucasian male counterparts who reported contracting HIV through homosexual sexual activity. To evaluate this hypothesis a series of t-
tests were conducted. No significant group differences were found regarding TMD, \( t(44) = -.65, p = .52 \); Depression, \( t(44) = -.97, p = .34 \); or Tension, \( t(44) = .16, p = .94 \) scores between ethnic/racial minority participants who contracted HIV through homosexual sexual activity and their Caucasian counterparts. Mean and standard deviation values are presented in Table 8 of Appendix A.

An additional series of ANOVAs were conducted to determine if levels of mood disturbance varied across specific ethnic/racial groups (i.e., African-Americans, Latinos, and Caucasians) for those individuals who indicated they contracted HIV through homosexual sexual activity. The results of these analyses were statistically significant for TMD \([F(2,40) = 4.96, p < .01]\) and Depression \([F(2.40) = 3.37, p < .05]\) scores, but not statistically significant for Tension scores, \( F(2,40) = 2.86, p = .07 \). Using a Scheffe Multiple Range test with a harmonic N to account for disparate group sizes, it was discovered that Latino male participants scored significantly higher (\( M = 124.40, SD = 41.27, n = 5 \)) on overall psychological distress as compared to African-American males (\( M = 70.32, SD = 32.00, n = 34 \), \( p < .05 \). A summary of these findings are presented in Table 9.

Although Caucasian male participants on average appeared to score lower (\( M = 64.00, SD = 66.69, n = 4 \)) on TMD scores than Latino and African-American male participants, the rate of standard deviation was inordinately high, and hence no
TABLE 9

MEAN AND STANDARD DEVIATION VALUES FOR MEASURES OF MOOD DISTURBANCE AS A FUNCTION OF ETHNIC/RACIAL STATUS FOR MEN WHO CONTRACTED HIV THROUGH HOMOSEXUAL SEXUAL ACTIVITY

<table>
<thead>
<tr>
<th>MEASURES OF MOOD DISTURB</th>
<th>ETHNIC/RACIAL STATUS</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>African-Amer</td>
<td>Latino</td>
<td>Caucasian</td>
<td></td>
</tr>
<tr>
<td>TMD</td>
<td>M = 70.32</td>
<td>M = 124.00</td>
<td>M = 64.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SD = 32.02</td>
<td>SD = 41.27</td>
<td>SD = 66.69</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(34)</td>
<td>(5)</td>
<td>(4)</td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>M = 1.11</td>
<td>M = 2.01</td>
<td>M = .78</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SD = .75</td>
<td>SD = .89</td>
<td>SD = 1.12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(34)</td>
<td>(5)</td>
<td>(4)</td>
<td></td>
</tr>
<tr>
<td>Tension</td>
<td>M = 1.33</td>
<td>M = 2.38</td>
<td>M = 1.56</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SD = .77</td>
<td>SD = 1.94</td>
<td>SD = 1.94</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(34)</td>
<td>(5)</td>
<td>(4)</td>
<td></td>
</tr>
</tbody>
</table>

Note: Group sizes are in parentheses.
significant findings were attainable when comparing TMD scores between Caucasians and African-Americans and Latinos who reported contracting HIV through homosexual sexual activity. Given the elevated level of standard deviation for measures of overall psychological distress and the relatively small sample size of Caucasian participants who indicated contracting HIV through homosexual sexual activity, interpretations related to Caucasians within the context of this particular analysis cannot be offered with confidence.

As reported, the one-way ANOVA also indicated a significant difference among Depression subscale score as a function of ethnic/racial status; however, a Scheffe Multiple Range test including a harmonic N did not indicate any significant group differences at the .05 level.

To further explicate the nature of the relationship between ethnic/racial status and psychological distress among homosexual and bisexual participants, a series of ANOVAs were conducted. These analyses differed from the aforementioned one by substituting homosexual or bisexual sexual orientation for contracting HIV through homosexual sexual activity. The results indicated significant differences in TMD \( F(2,50) = 4.74, p < .01 \), Depression \( F(2,51) = 3.64, p < .05 \) and Tension \( F(2,51) = 3.51, p < .05 \) scores as a function of ethnic/racial status for homosexual and bisexual respondents. Using a Scheffe Multiple Range test with a Harmonic N to detect group differences, it appears that homosexual and
bisexual Latino respondents reported greater levels of overall psychological distress ($M = 124.00$, $SD = 41.27$, $n = 5$) as compared to their African-American ($M = 70.32$, $SD = 32.00$, $n = 43$) and Caucasian ($M = 64.00$, $SD = 66.69$, $n = 5$) counterparts, $p < .05$. No significant differences in TMD scores were found between African-American and Caucasian homosexual/bisexual males. These findings are presented in Figure 2.

Additionally, in using the Scheffe Multiple Range test with a harmonic $N$, it appears that homosexual and bisexual Latino participants reported greater levels of depression ($M = 2.01$, $SD = .89$, $n = 5$) as compared to their Caucasian counterparts ($M = .56$, $SD = .89$, $n = 5$). These findings are presented in Figure 3.

The Scheffe Multiple Range test with a harmonic $N$ was unable to detect differences in Tension scores as a function of ethnic/racial status for homosexual and bisexual males. Mean and standard deviation values from this analysis are presented in Table 10 of Appendix A.

To further clarify the relationship between psychological distress and membership in marginalized groups, additional post hoc analyses were conducted. A series of $t$-tests were performed to determine if affective well-being varied across ethnic/racial groups status (i.e., ethnic/racial minority versus Caucasian), when means of contracting HIV and sexual orientation were controlled. No significant differences were
FIGURE 2

AVERAGE TOTAL MOOD DISTURBANCE SCORES AMONG THE THREE GROUPS COMPROMISING RACIAL/ETHNIC STATUS FOR THOSE MALES INDICATING A HOMOSEXUAL OR BISEXUAL ORIENTATION
FIGURE 3

AVERAGE POMS DEPRESSION SUBSCALE SCORES among the three groups compromising ETHNIC/RACIAL STATUS for those males indicating a Homosexual or Bisexual orientation.
found across the two primary ethnic/racial groups when method
of contracting HIV and sexual orientation were controlled:
TMD, \( t(96) = .69, p = .49 \); Depression, \( t(97) = .04, p = .97 \);
Tension, \( t(97) = 1.14, p = .27 \). Mean and standard
deviation values are presented in Table 11 of Appendix A.

Finally, one last post hoc analysis regarding Hypothesis
XI was conducted to determine if there were any significant
differences among levels of psychological distress (i.e., TMD,
depression, tension) as a function of sexual orientation,
independent of ethnic/racial status and means of contracting
HIV infection. These analyses revealed statistically
significant results for TMD \( t(96) = -2.46, p < .02 \); and
Tension \( t(96) = -2.58, p < .01 \) scores, and a statistical
trend for Depression scores \( t(96) = -1.88, p = .06 \).
Heterosexual males possessed higher levels of overall
psychological disturbance \( (M = 98.20, SD = 43.48, n = 40) \) as
compared to their homosexual/bisexual counterparts \( (M = 76.71,
SD = 41.05, n = 56) \). Furthermore, heterosexual males reported
higher levels of anxiety \( (M = 1.93, SD = .91) \) as compared to
their homosexual/bisexual counterparts \( (M = 1.44, SD = .92) \).
A summary of these results are presented in Table 12. In
addition, an overall summary of the results related to
Hypothesis XI are presented in Table 13.

Considering that a number of variables were found to be
significantly associated with measures of psychological
distress, a step-wise multiple regression analysis was
### TABLE 12

AVERAGE SCORES ON THREE MEASURES OF PSYCHOLOGICAL DISTRESS AS A FUNCTION OF SEXUAL ORIENTATION REGARDLESS OF ETHNIC/RACIAL STATUS AND MEANS OF CONTRACTING HIV INFECTION

<table>
<thead>
<tr>
<th></th>
<th>Homo/Bisexual n = 56</th>
<th>Heterosexual n = 40</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SEXUAL ORIENTATION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TMD</td>
<td>76.71 (41.05)</td>
<td>98.20 (43.48)</td>
</tr>
<tr>
<td><strong>PSYCHOLOGICAL DISTRESS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>1.15 (0.89)</td>
<td>1.51 (0.99)</td>
</tr>
<tr>
<td><strong>AVERAGE SCORES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tension</td>
<td>1.44 (0.92)</td>
<td>1.93 (0.91)</td>
</tr>
</tbody>
</table>

Note: Standard Deviation values are reported in parentheses.
TABLE 13

MEAN AND STANDARD DEVIATION VALUES FOR MEASURES OF PSYCHOLOGICAL DISTRESS AMONG VARIOUS COMBINATIONS OF ETHNIC STATUS AND/OR SEXUAL ORIENTATION

Measures of Psychological Distress

<table>
<thead>
<tr>
<th>Measures of Psychological Distress</th>
<th>TMD</th>
<th>Depression Item Mean</th>
<th>Tension Item Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Males-Contract HIV By Homosex Sex Act (n=4)</td>
<td>64.00</td>
<td>0.79</td>
<td>1.56</td>
</tr>
<tr>
<td></td>
<td>66.99</td>
<td>1.12</td>
<td>1.94</td>
</tr>
<tr>
<td>Ethnic Males-Contract HIV By Homosex Sex Act (n=40)</td>
<td>77.73</td>
<td>1.21</td>
<td>1.47</td>
</tr>
<tr>
<td></td>
<td>37.12</td>
<td>0.87</td>
<td>0.84</td>
</tr>
<tr>
<td>White Males (n=15)</td>
<td>92.40</td>
<td>1.30</td>
<td>1.98</td>
</tr>
<tr>
<td></td>
<td>57.00</td>
<td>1.16</td>
<td>1.35</td>
</tr>
<tr>
<td>Ethnic Minority Males (n=82)</td>
<td>83.94</td>
<td>1.29</td>
<td>1.57</td>
</tr>
<tr>
<td></td>
<td>40.50</td>
<td>0.91</td>
<td>0.84</td>
</tr>
<tr>
<td>White Homosexual Males (n=5)</td>
<td>62.00</td>
<td>0.70</td>
<td>1.25</td>
</tr>
<tr>
<td></td>
<td>63.16</td>
<td>0.96</td>
<td>1.46</td>
</tr>
<tr>
<td>Ethnic Minority Homosexual Males (n=36)</td>
<td>77.97</td>
<td>1.15</td>
<td>1.44</td>
</tr>
<tr>
<td></td>
<td>41.29</td>
<td>0.87</td>
<td>0.93</td>
</tr>
<tr>
<td>Homosexual Males (n=56)</td>
<td>76.71</td>
<td>1.15</td>
<td>1.44</td>
</tr>
<tr>
<td></td>
<td>41.05</td>
<td>0.89</td>
<td>0.92</td>
</tr>
<tr>
<td>Heterosexual Males (n=40)</td>
<td>98.20</td>
<td>1.51</td>
<td>1.93</td>
</tr>
<tr>
<td></td>
<td>43.47</td>
<td>0.99</td>
<td>0.91</td>
</tr>
<tr>
<td>African-American Homosexual Males (n=43)</td>
<td>73.34</td>
<td>1.13</td>
<td>1.36</td>
</tr>
<tr>
<td></td>
<td>36.55</td>
<td>0.86</td>
<td>0.84</td>
</tr>
<tr>
<td>Latino Homosexual Males (n=5)</td>
<td>124.40</td>
<td>2.01</td>
<td>2.38</td>
</tr>
<tr>
<td></td>
<td>41.27</td>
<td>0.86</td>
<td>0.83</td>
</tr>
<tr>
<td>White Homosexual Males (n=5)</td>
<td>54.00</td>
<td>0.56</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>57.55</td>
<td>0.89</td>
<td>1.38</td>
</tr>
</tbody>
</table>

Note: Standard deviation values are presented in boldface.
conducted to determine relative degrees of influence these variables possessed in predicting psychological distress. In this analysis, total mood disturbance was the criterion variable and the predictor variables selected for analysis included spiritual well-being, avoidant coping method, active-behavioral coping method, active-cognitive coping method, health value ranking, perceived helpfulness of supports, number of physical symptoms reported at time of testing, connectedness to religious group, sexual orientation, and ethnicity/race. The results indicate that spiritual well-being and number of physical symptoms were significant predictors of psychological distress. Spiritual well-being was found to be the primary predictor of TMD scores. In combination, spiritual well-being and number of symptoms accounted for 29% of the variance in TMD scores \[ r(80) = .54, \quad p < .001 \]. The results of this analysis are presented in Table 14.

Subsequently, a series of multiple regression analyses were conducted on the various subscales of psychological distress to determine the relative association of spiritual well-being and number of physical symptoms on the various POMS subscale scores. Both spiritual well-being and number of physical symptoms were found to be significantly related to five of the six subscale measures of psychological distress. On the Confusion, Anger, Depression, and Tension subscales, measures of spiritual well-being and number of physical
**TABLE 14**

SINGLE AND MULTIPLE CORRELATION VALUES FOR MULTIPLE REGRESSION ANALYSES INVOLVING SPIRITUAL WELL-BEING, NUMBER OF PHYSICAL SYMPTOMS AND THEIR COMBINED EFFECT

<table>
<thead>
<tr>
<th>CRITERION VARIABLE</th>
<th>PREDICTOR VARIABLE</th>
<th>BETA</th>
<th>DF</th>
<th>r</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMD</td>
<td>SWBS*</td>
<td>-.42</td>
<td>1,80</td>
<td>-.46</td>
<td>19.14</td>
<td>&lt;.001</td>
</tr>
<tr>
<td></td>
<td>Symptoms</td>
<td>.29</td>
<td>1,80</td>
<td>.33</td>
<td>9.31</td>
<td>&lt;.003</td>
</tr>
<tr>
<td></td>
<td>Combined</td>
<td>NA</td>
<td>2,79</td>
<td>.54</td>
<td>16.35</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>FATIGUE</td>
<td>SWBS</td>
<td>-.17</td>
<td>1,80</td>
<td>-.18</td>
<td>2.60</td>
<td>NS</td>
</tr>
<tr>
<td></td>
<td>Symptoms</td>
<td>.33</td>
<td>1,80</td>
<td>.33</td>
<td>9.54</td>
<td>&lt;.003</td>
</tr>
<tr>
<td></td>
<td>Combined</td>
<td>(NOT APPLICABLE)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONfusion</td>
<td>SWBS</td>
<td>-.48</td>
<td>1,80</td>
<td>-.49</td>
<td>24.96</td>
<td>&lt;.001</td>
</tr>
<tr>
<td></td>
<td>Symptoms</td>
<td>.21</td>
<td>1,80</td>
<td>.24</td>
<td>4.93</td>
<td>&lt;.02</td>
</tr>
<tr>
<td></td>
<td>Combined</td>
<td>NA</td>
<td>3,78</td>
<td>.56</td>
<td>12.22</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>ANGER</td>
<td>SWBS</td>
<td>-.33</td>
<td>1,80</td>
<td>-.33</td>
<td>9.93</td>
<td>&lt;.002</td>
</tr>
<tr>
<td></td>
<td>Symptoms</td>
<td>.27</td>
<td>1,80</td>
<td>.28</td>
<td>6.86</td>
<td>&lt;.02</td>
</tr>
<tr>
<td></td>
<td>Combined</td>
<td>NA</td>
<td>2,79</td>
<td>.43</td>
<td>8.76</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>DEPRESSION</td>
<td>SWBS</td>
<td>-.43</td>
<td>1,80</td>
<td>-.43</td>
<td>17.73</td>
<td>&lt;.001</td>
</tr>
<tr>
<td></td>
<td>Symptoms</td>
<td>.25</td>
<td>1,80</td>
<td>.28</td>
<td>6.53</td>
<td>&lt;.02</td>
</tr>
<tr>
<td></td>
<td>Combined</td>
<td>NA</td>
<td>2,79</td>
<td>.49</td>
<td>12.75</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>TENSION</td>
<td>SWBS</td>
<td>-.46</td>
<td>1,80</td>
<td>-.46</td>
<td>21.87</td>
<td>&lt;.001</td>
</tr>
<tr>
<td></td>
<td>Symptoms</td>
<td>.28</td>
<td>1,80</td>
<td>.31</td>
<td>8.25</td>
<td>&lt;.006</td>
</tr>
<tr>
<td></td>
<td>Combined</td>
<td>NA</td>
<td>2,79</td>
<td>.54</td>
<td>16.05</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

*Note: SWBS represents overall spiritual well-being. Information regarding the multiple regression values for Vigor subscale scores were excluded because SWBS and Symptom scores were not significant for this subscale.
symptoms emerged as significant predictors: Confusion, $r(3, 78) = .57, p < .001$; Anger, $r(2, 79) = .43, p < .001$; Depression, $r(2, 79) = .49, p < .001$; Tension, $r(2, 79) = .54, p < .001$. Spiritual well-being and number of physical symptoms accounted for 32% of the variance in Confusion scores, 18% of the variance in Anger scores, 24% of the variance in Depression scores, and 29% of the variance in Tension scores. As in the overall analysis of total mood disturbance, spiritual well-being and number of physical symptoms were relatively similar in weighted power of prediction with the greatest predictor of the four subscale scores being spiritual well-being. On the Fatigue subscale, only number of physical symptoms significantly predicted fatigue scores, $r(1, 80) = .33, p < .01$. None of the predictor variables included in the multiple regression analysis significantly predicted outcomes on scores for the Vigor subscale of the POMS. Details of these analyses are also presented in Table 14.

**Social/Emotional Supports and Psychological Distress**

A series of analyses were also conducted to assess the relationship among psychological distress and various aspects of social and emotional support. In Hypothesis XII it was hypothesized that men who believed supports were more readily available and helpful would experience lower levels of psychological distress as compared to their counterparts who indicated a belief that support was not readily available
and/or not helpful. In order to test this hypothesis, a series of Two-way ANOVAs were conducted. In computing the ANOVAs for these data, both variables of perceived availability and helpfulness of support were altered from a 5-point rating scale to high/low median split classifications; consequently, each participant who responded to these items was classified as either high or low. While based on the 5-point rating scale, with 5 indicating the highest level of perceived availability or helpfulness of supports, the following means and standard deviation values were determined: Perceived availability of social supports, \( M = 3.49, SD = 1.30, n = 95 \); and perceived helpfulness of social supports, \( M = 3.54, SD = 1.26, n = 95 \). No statistically significant two-way interactions were found for this hypothesis: TMD, \( F(1,91) = .11, p = .74 \); Depression, \( F(1,91) = .11, p = .74 \); Tension, \( F(1,91) = -.07, p = .80 \). Mean and standard deviation values are presented in Table 15 of Appendix A.

Although no significant two-way interactions were found, a main effect emerged which indicated that level of depression was directly associated with perceived helpfulness of social supports regardless of their availability, \( F(1,91) = 4.75, p < .03 \). It appears that levels of depression were lower for men who reported feelings that social supports were helpful (\( M = 1.55, SD = .86, n = 53 \)) as compared to their counterparts who perceived supports as not being as helpful (\( M = 1.13, SD = .79, n = 42 \)). A summary of these results are presented in
Figure 4.

An additional set of analyses involving Pearson Product Moment Correlations was conducted examining scores from the Demographic Questionnaire that assessed perceived helpfulness and availability of social supports. The findings indicate that perceived helpfulness of social supports was inversely correlated with measures of psychological distress: TMD, $r(95) = -.24$, $p < .05$; Depression, $r(96) = -.21$, $p < .05$; Tension $r(96) = -.26$, $p < .05$. However, no significant correlations were detected when correlating perceived availability of supports with measures of psychological distress: TMD, $r(96) = -.11$, ns; Depression, $r(97) = -.10$, ns; Tension, $r(97) = -.13$, ns. These results appear to indicate that individuals who perceived decreases in the efficacy of their support systems tended to experience greater overall psychological distress, depression, and tension. A summary of these results are in Table 16.

Hypotheses V, VII, and IX speculated about the relationship between measures of psychological distress and the degree of disclosure regarding personal HIV+ status, personal homosexuality when applicable, and personal IV drug use when applicable, to members of their support networks. A number of significant findings emerged. In Hypothesis V, it was posited that HIV infected individuals who disclose less about their HIV+ status to primary sources of social support would experience higher levels of psychological distress as
AVERAGE ITEM SCORE ON DEPRESSION SUBSCALE OF POMS

M = 1.55
SD = .86
(42)

M = 1.13
SD = .79
(53)

LEVEL OF PERCEIVED HELPFULNESS

FIGURE 4

POMS DEPRESSION SUBSCALE AVERAGE SCORES AS A FUNCTION OF PERCEIVED HELPFULNESS OF SOCIAL SUPPORTS IN DEALING WITH HIV ILLNESS

Note: Group sizes are presented within parentheses.
TABLE 16
PEARSON CORRELATION VALUES BETWEEN MEASURES OF PSYCHOLOGICAL DISTRESS AND PERCEPTIONS OF AVAILABILITY AND HELPFULNESS OF SOCIAL SUPPORTS

<table>
<thead>
<tr>
<th>PSYCHOLOGICAL DISTRESS</th>
<th>SOCIAL/EMOTIONAL SUPPORT</th>
<th>Availability</th>
<th>Helpfulness</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMD</td>
<td>-0.11</td>
<td>-0.24*</td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>-0.10</td>
<td>-0.21*</td>
<td></td>
</tr>
<tr>
<td>Tension</td>
<td>-0.13</td>
<td>-0.26*</td>
<td></td>
</tr>
</tbody>
</table>

Note: "*" indicates significance at to .05 level.
compared to their counterparts who more freely disclose their HIV+ status. To analyze this hypothesis a Pearson Product Moment Correlation was conducted. No significant findings for this correlation emerged, $r(96) = .01$. This finding remained consistent even when correlating comfort in revealing information regarding personal HIV status with other indicators of psychological distress: Depression [$r(97) = -.03$], Tension [$r(97) = -.06$], Confusion [$r(97) = -.03$], Fatigue [$r(97) = .05$], and Anger [$r(97) = .14$]. Yet, there emerged a significant finding involving feelings of physical energy (vigor) and ease in disclosing information regarding HIV illness, $r(97) = .32$. Collectively, for this group of men there was no indication that negative mood or psychological disturbance was significantly associated with withholding information regarding their HIV illness to sources of support. Conversely, it seems that feelings of energy and ebullience were associated with one's comfort in disclosing information regarding their HIV illness to primary sources of support. A summary of these findings are presented in Table 17.

Hypothesis VII posited that levels of overall psychological distress would inversely correlate with comfort in disclosing information regarding personal homosexual or bisexual status to members of social support. Men who reported either a homosexual or bisexual orientation were categorized into one group (i.e., homosexual) for purposes of this analysis. In analyzing Hypothesis VII no statistically
<table>
<thead>
<tr>
<th>Area of Disclosure</th>
<th>HIV Status</th>
<th>Homosexual Orientation</th>
<th>IV Drug Use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoidant Method</td>
<td>-.0516</td>
<td>-.0169</td>
<td>-.3482*</td>
</tr>
<tr>
<td>Passive Resignation</td>
<td>-.1411</td>
<td>-.0042</td>
<td>-.2234</td>
</tr>
<tr>
<td>Avoidant Solitary</td>
<td>-.0803</td>
<td>-.0962</td>
<td>-.2041</td>
</tr>
<tr>
<td>TMD</td>
<td>.0149</td>
<td>-.1676</td>
<td>.0058</td>
</tr>
<tr>
<td>Depression</td>
<td>-.0261</td>
<td>-.2060</td>
<td>.1170</td>
</tr>
<tr>
<td>Tension</td>
<td>-.0557</td>
<td>-.2093</td>
<td>.0698</td>
</tr>
<tr>
<td>Anger</td>
<td>.1383</td>
<td>-.0883</td>
<td>.1605</td>
</tr>
<tr>
<td>Confusion</td>
<td>-.0335</td>
<td>-.2756*</td>
<td>.1089</td>
</tr>
<tr>
<td>Fatigue</td>
<td>.0451</td>
<td>-.0761</td>
<td>-.0835</td>
</tr>
<tr>
<td>Vigor</td>
<td>.1783*</td>
<td>.3228**</td>
<td>-.0341</td>
</tr>
</tbody>
</table>

Note: "*" indicate significant at the .05 level. "**" indicates significant at least the .01 level.
significant findings emerged when correlating overall psychological distress and ease in disclosing information regarding personal homosexuality, $r(60) = -.17$. However, two subscale scores on the POMS, Confusion and Vigor, significantly correlated with ease in discussing homosexuality (Confusion, $r(60) = -.28$, $p < .05$; and Vigor, $r(60) = .32$, $p < .01$). However, correlations among the other subscales of the POMS and level of comfort in disclosing information regarding homosexuality were not significant: Fatigue, $r(60) = -.07$; Anger, $r(60) = -.09$; Depression, $r(60) = -.21$; and Tension, $r(60) = -.21$. Consequently, an elevation in overall psychological disturbance did not correlate with ease in revealing homosexuality; however, measures of confusion and vigor resulted in significant correlations. These results indicate that a lower level of energy and a greater degree of bewilderment were associated with higher levels of discomfort in discussing personal homosexuality when dealing with primary sources of social/emotional support. A summary of these findings are presented in Table 17.

Hypothesis IX posited that measures of psychological distress would inversely correlate with comfort in disclosing information regarding IV drug use. A series of Pearson Product Moment Correlations were used to test this hypothesis. In analyzing Hypothesis IX it was found that level of overall psychological distress did not significantly correlate with comfort in disclosing information regarding IV drug use, $r(29)$
In addition, there were no significant findings when correlating the subscale scores of affect on the POMS with ease in disclosing information regarding IV drug use: Confusion, $r(29) = .10$; Fatigue, $r(29) = -.08$; Vigor, $r(29) = -.03$; Anger, $r(29) = .16$; Depression, $r(29) = .12$; Tension, $r(29) = .07$. A summary of these correlation values are presented in Table 17.

### Social/Emotional Supports and Avoidant Coping Methods

Three hypotheses were presented that anticipated certain relationships between levels of avoidant coping methods and various aspects of disclosing personal information (i.e., HIV+ status, homosexuality, IV drug use) to primary sources of social support. Among these analyses only one resulted in a significant correlation. Hypothesis VIII posited that avoidant coping methods would inversely correlate with comfort in disclosing information regarding IV drug use. In analyzing Hypothesis VIII it was found that use of avoidant coping methods inversely correlated with ease in disclosing information about personal IV drug use to individuals comprising one's primary source of social support, $r(29) = -.35$, $p < .05$. In effect, higher levels of discomfort in discussing personal IV drug use were associated with an increased use of avoidant coping methods. A summary of these correlational analyses are presented in Table 17.

Hypothesis IV stated that HIV infected individuals who
disclose less about their HIV+ status to primary sources of social/emotional support will more likely utilize avoidant coping methods as compared to their counterparts who more freely disclose information regarding their HIV+ status. A Pearson Product Moment Correlation analysis was conducted to assess the degree of relationship between comfort in disclosing information about one's HIV status to primary sources of support and utilization of avoidant coping methods. No significant correlations between these variables were found, $r(97) = -.05$.

Even when correlating indicators of support with the various coping strategies derivative of an avoidant coping method, no significant findings emerged: Passive-resignation, $r(97) = -.14$; Avoidant-solitary, $r(97) = -.08$. These results suggest that for these participants disclosing information about HIV status to primary sources of social and emotional support was not associated with an increased utilization of avoidant coping methods or strategies. A summary of these results are presented in Table 17.

In Hypothesis VI it was posited that level of utilization of avoidant coping methods or strategies would directly correlate with level of discomfort in disclosing information about personal homosexuality to primary sources of social and emotional support. A Pearson Product Moment Correlation was used to analyze this hypothesis. No significant result emerged for this analysis, $r(60) = -.02$. In addition, no
significant associations were found between disclosing information regarding one's homosexuality and the use of avoidant coping strategies: passive-resignation, $r(60) = .00$; avoidant-solitary, $r(60) = -.10$. A summary of these analyses are presented in Table 17.

Coping Methods Among Males with HIV

It was postulated in Hypothesis X that PWAs would utilize active-cognitive coping methods more frequently than would their counterparts without AIDS who were either HIV+ symptomatic or HIV+ asymptomatic. To assess this hypothesis an ANOVA was conducted. No significant differences were detected, $F(2,94) = .42$, $p = .66$. The mean and standard deviation values from these analyses are presented in Table 18.

To further explicate this hypothesis, additional analyses assessing coping strategies that are predominantly cognitive in nature were conducted. The levels of utilizing cognitive strategies, which are largely derivative of active-cognitive coping methods, were separately compared among PWAs and individuals without AIDS who are either HIV+ symptomatic or HIV+ asymptomatic. Statistically significant results were not found for these analyses: Cognitive-Positive, $F(2,94) = .46$, $p = .63$; Cognitive-Passive, $F(2,94) = 1.05$, $p = .36$; and Distraction, $F(2,94) = 2.56$, $p = .08$. A trend emerged which suggested that men with AIDS were less likely to use
### TABLE 18

**MEAN AND STANDARD DEVIATION VALUES FOR THE ASSOCIATION BETWEEN HEALTH STATUS AND COGNITIVE COPING METHODS AND STRATEGIES**

<table>
<thead>
<tr>
<th>HEALTH STATUS</th>
<th>COPING BEHAVIOR</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV+asymptomatic</td>
<td>3.76 (0.67)</td>
<td>4.03 (0.77)</td>
<td>3.82 (0.82)</td>
<td>3.41 (0.50)</td>
</tr>
<tr>
<td>n = 11</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIV+symptomatic</td>
<td>3.71 (0.55)</td>
<td>3.88 (0.60)</td>
<td>3.60 (0.96)</td>
<td>3.16 (0.73)</td>
</tr>
<tr>
<td>n = 20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIDS</td>
<td>3.62 (0.53)</td>
<td>3.81 (0.77)</td>
<td>3.41 (0.94)</td>
<td>2.98 (0.60)</td>
</tr>
<tr>
<td>n = 67</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Standard deviation scores are contained within the parentheses.
distractive coping strategies than their non-AIDS, HIV+ symptomatic and HIV+ asymptomatic counterparts: AIDS, M = 2.98, SD = .60, n =66; HIV+ symptomatic, M = 3.16, SD = .73, n =20; HIV+ asymptomatic, M = 3.41, SD = .50, n =11.

Hypothesis I stated that males infected with HIV who indicate a high level of health value and possess a primarily internal health locus of control would more likely utilize active-behavioral coping methods than would their HIV infected counterparts who report a lower value on health and indicate a primarily powerful other or chance factor health locus of control. To analyze Hypothesis I, a 2 X 3 Anova was used to assess the impact of health value and health locus of control on the utilization of active-behavioral coping methods. Overall, this analysis did not bare any significant findings regarding the level of utilization of active-behavioral coping method as a function of reported health value and health locus of control, $F(2, 81) = .69, p = .51$. Furthermore, neither grouping variable, when controlling for the other seemed to affect participants' tendency to endorse active-behavioral coping methods. The means and standard deviation values from these analyses are presented in Table 19 of Appendix A.

In order to determine whether or not the low number of volunteers in the PHLC and CHLC subgroups negatively affected the statistical outcome, these two subgroups were combined to form one level (N = 24). Yet, even when the number of men in the IHLC level and combined PHLC/CHLC group were made less
disparate, significant differences were not detected, \( F(1,83) = 1.42, p = .24 \). Three additional two-way ANOVAs were conducted using this revised method of grouping MHLC scores along with the three coping strategies that are subsumed under the active-behavioral coping method (i.e., active-positive, active-expressive, and active-reliant) as the dependent variables. Once again, no significant differences were found: Active-positive \( F(1,83) = .65, p = .42 \); Active-expressive, \( F(1,83) = .68, p = .41 \); and Active-reliant, \( F(1,83) = .03, p = .87 \). The mean and standard deviation values of these analyses are presented in Table 19 of Appendix A.

**Spiritual Well-Being**

In Hypothesis III it was postulated that overall psychological distress would inversely correlate with overall spiritual well-being. To assess this hypotheses, a series of Pearson Product Moment Correlations were conducted between spiritual well-being (i.e., religious, existential, and overall spiritual well-being) and overall and subscale measures of psychological distress. The results indicated that each correlation between the different components of spiritual well-being and psychological distress were significant. In each instance the direction of the correlation was inverse with the exception of the significant correlation between Vigor subscale scores and the three measures of spiritual well-being. Table 20 contains these
results.

Additional post-hoc analyses assessing the relationship between spiritual well-being and coping methods were also conducted. Although not directly hypothesized, it is worthy to note that spiritual well-being directly correlated with active-cognitive coping methods ($r(95) = .30, p < .01$) and active-behavioral coping methods ($r(95) = .24, p < .01$), and inversely correlated with avoidant coping methods ($r(95) = -.23, p < .05$). These findings are presented in Table 21. Collectively, it can be speculated that elevations in spiritual well-being are generally associated with elevations in the use of active-cognitive and active-behavioral coping methods, and that elevations in spiritual well-being are generally associated with decreases in the use of avoidant coping methods.
TABLE 20

PEARSON CORRELATION VALUES AMONG MEASURES OF PSYCHOLOGICAL DISTRESS AND SPIRITUAL WELL-BEING

<table>
<thead>
<tr>
<th>POMS Scores</th>
<th>SWBS Scores</th>
<th>Religious</th>
<th>Existential</th>
<th>Spiritual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>-.3285**</td>
<td>-.4889**</td>
<td>-.4526**</td>
<td></td>
</tr>
<tr>
<td>Tension</td>
<td>-.4300**</td>
<td>-.4633**</td>
<td>-.5000**</td>
<td></td>
</tr>
<tr>
<td>Confusion</td>
<td>-.3963**</td>
<td>-.5119**</td>
<td>-.5056**</td>
<td></td>
</tr>
<tr>
<td>Fatigue</td>
<td>-.2810**</td>
<td>-.2662**</td>
<td>-.3068**</td>
<td></td>
</tr>
<tr>
<td>Anger</td>
<td>-.2863**</td>
<td>-.3068**</td>
<td>-.3316**</td>
<td></td>
</tr>
<tr>
<td>Vigor</td>
<td>.1822*</td>
<td>.3960**</td>
<td>.3095**</td>
<td></td>
</tr>
<tr>
<td>Total Mood</td>
<td>-.3778**</td>
<td>-.4665**</td>
<td>-.4699**</td>
<td></td>
</tr>
<tr>
<td>Disturb</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: "*" denotes significance at the .05 level
"**" denotes significance at least the .01 level

Degrees of freedom for above correlation analyses were 95.
TABLE 21
PEARSON CORRELATION VALUES FOR COPING METHODS AND MEASURES OF SPIRITUAL WELL-BEING

<table>
<thead>
<tr>
<th>SPIRITUAL WELL-BEING</th>
<th>METHODS OF COPING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Active-Cognitive</td>
</tr>
<tr>
<td></td>
<td>n = 83</td>
</tr>
<tr>
<td>Religious</td>
<td>.32**</td>
</tr>
<tr>
<td>Existential</td>
<td>.20*</td>
</tr>
<tr>
<td>Overall</td>
<td>.30**</td>
</tr>
</tbody>
</table>

Note: "*" indicates significance at the .05 level. "**" indicates significance at the .01 level.
CHAPTER V
DISCUSSION

The intent of this study was to assess a number of psychosocial variables that may play an important role in the quality of life of African-American and Latino males infected with HIV. The primary variables assessed included psychological distress (mood disturbance), coping methods, perceived health locus of control, health value, and spiritual well-being. A total of 100 HIV infected males participated in this study. The results of this research were variable and the following section attempts to put the findings into perspective with the current literature relevant to the psychological and social sequelae of HIV infection. As with all research, this study encountered several limitations. These will also be discussed along with suggestions for future research.

Psychological Distress as a Function of Health Value, Perceived Health Locus of Control, and Coping Method

In this study it was hypothesized that men infected with HIV who indicate a relatively high ranking of health value, possess a predominantly internal health locus of control, and primarily engage in active-behavioral coping methods would
experience less overall psychological distress than their counterparts who present with a relatively lower ranking of health value, possess a predominantly powerful other or chance factor health locus of control, and primarily engage in active-cognitive or avoidant coping methods.

As previously reported the statistical analysis of this hypothesis was not possible because 3 of the 18 cells in the 2 X 3 X 3 ANOVA were without members. Consequently, this study was unable to adequately address this expected outcome. However, a number of analyses were conducted to assess for possible associations between measures of mood disturbance and health value, predominant coping method, and predominant health locus of control. The findings indicate that men who primarily engage in avoidant coping behaviors tend to have higher levels of overall psychological distress as well as increased levels of depressed mood as compared to men who primarily utilize active-cognitive coping methods. These findings are similar to those of Namir et al (1987). In their research, they discovered that men who primarily utilized avoidant coping methods reported increased mood disturbance. Additionally, Namir and her colleagues also found that men who primarily utilized active-cognitive coping methods had increased self-esteem, and displayed a trend towards increased mood. The results of this current study indicate that there is a strong relationship between increased positive mood for men who primarily utilize active-cognitive coping methods as
compared to men who primarily utilize avoidant coping methods.

The current findings may be explained by assessing the different patterns of behaviors and cognitive styles that are germane to either coping group. For instance, men who indicate a primarily active-cognitive coping style are more likely to reflect upon the positive changes in life since the onset of their illness (e.g., increased closeness in relationships), are more positive in outlook regarding their illness and life (e.g., hope and meaning), and make plans for the future. They also are more likely to reflect upon the meaning of their illness as well as life in general. In effect, it seems that males who primarily engage in active-cognitive coping methods are more likely to integrate their illness into their life experience and create a balanced perspective of the negative and positive aspects that their illness allows; consequently, their level of overall mood disturbance is likely to be relatively low when compared to individuals who tend to primarily avoid confronting their HIV illness.

Avoidant copers are more likely to suppress and repress thoughts and feelings related to HIV illness (Namir, et al, 1987) which can function to increase the level of overall mood disturbance in a number of ways. First, avoidant coping methods require a great deal of psychological energy to keep unpleasant thoughts and feelings out of conscious awareness. Second, avoidance often leads to a distancing from significant
sources of social/emotional and medical supports which can further translate into feelings of isolation, helplessness, hopelessness, and despair. Third, avoidance may lead to an increase of substance use which engenders a number of psychological and social problems in and of itself.

Clearly, avoidant copers are not prone to introspect and reflect upon the effects that HIV infection has on their lives. In addition, they will likely not attempt to identify the positive elements that HIV illness may afford life's meaning, or to integrate the illness into their identity. Kubler-Ross (1969) pointed out that incorporating one's illness into overall identity is one of the processes of accepting the terminal illness and death. Integration of HIV illness into one's overall identity would indicate a greater willingness to acknowledge, possibly accept, and actively deal with its presence. The findings for this study were quite clear in indicating that the level of overall mood disturbance is greater for men who primarily engage in avoidant coping methods as compared to men who primarily utilize active-cognitive coping methods.

The findings of this current study indicate that age, race, religious affiliation, educational level, length of time diagnosed with HIV infection or AIDS, availability of social/emotional supports, sexual orientation, and health status do not differentiate between type of primary coping method. However, the results indicate that level of spiritual
well-being strongly differentiates between men who primarily utilize active-cognitive as compared to avoidant coping methods. Men who reported higher levels of religious well-being and existential well-being were more likely to utilize active-cognitive coping methods and less likely to utilize avoidant coping methods. This suggests that males infected with HIV who are primarily active-cognitive copers are also likely to experience higher levels of overall spiritual well-being. As Carson et al (1990) have pointed out, increased spirituality allows an individual to examine life's meaning and mortality with more positive regard and hope for some form of continued existence. Hence, spirituality may alleviate disturbances in affect by providing hope and meaning for an individual contemplating personal mortality. When spirituality is low, the task of self-observation in the face of impending death can be affectively devastating and thus lead to avoidance as a means to stave off negative affect.

Given that elevations in affective functioning are strongly associated with increased spiritual-well being and active-cognitive coping behaviors, males infected with HIV may benefit from modes of psychotherapy or spiritual counseling that address religious and existential needs. In addition, therapy may also benefit males infected with HIV by attempting to alter cognitive structures and behavioral patterns that are avoidant in nature to those more active-cognitive.

The above findings are also significant when considering
the role that psychological distress has on medical compliance and immunological functioning (Antoni, 1989; O'Leary, 1990; Levy, & Heiden, 1991). As the results of this study indicate, increased spirituality as well as increased utilization of active-cognitive coping methods are associated with increased levels of positive mood. If spirituality and active-cognitive coping positively influence mood and stress levels, they may also increase immunological functioning (Schlesinger, et al., 1989). Hence, decreasing stress by increasing spirituality and active-cognitive coping can positively influence symptom onset and/or symptom exacerbation, especially during the later stages of AIDS (Kiecolt-Glaser, et al., 1988).

Another facet of the current analyses related to Hypothesis II is the inordinately high number of respondents who indicated an internal health locus of control. In the current study, a large majority of the sample indicated having an internal health locus of control (63%) as compared to powerful other health locus of control (16%) and chance factor health locus of control (9%). The large disparity in occurrence among the groups based on health locus of control may have hindered the analyses due to creating small sample sizes for the latter two groups of health locus of control; however, the large representation of men primarily adopting an internal health locus of control is likely not coincidental and may be reflective of an underlying group characteristic that leads most members of the sample to possess a locus of
control that is predominantly internal. The inordinately high representation of internal controllers is further interesting given that a vast amount of previous research focusing on orientations of control among African-Americans and Latinos have shown that general loci of control tend to be external (e.g., Sue, 1981; Sugarek, Deoy, & Holmes, 1988).

There are three possible reasons for why this sample included a large number of men indicating an internal health locus of control. First, as Carlisle-Frank (1991) discovered in her work on locus of control, orientation of control can vary for a given individual as a function of the domain or circumstances of life being evaluated. In her domain-specific approach to understanding intrapersonal variations in orientations of control she describes four areas across which a given individual can exhibit different forms of locus of control. These domains include control over institutional factors, control over personal achievement, control over interpersonal relationships, and control over health habits. Her results indicate that locus of control is likely to vary from internal to external for a given individual depending upon the domain in question. These findings can assist in explaining the contradiction of the current findings and past research that indicates ethnic/racial minority members typically have external loci of control. Future research may attempt to assess Carlisle-Frank's classification of locus of control for HIV infected African-American and Latinos in order...
to more adequately address the disparity between the current findings which depict ethnic/minority males as internal controllers and other research indicating that they are primarily external controllers.

There are a number of treatment implications based upon knowing an individual's health locus of control orientation. For example, numerous studies have shown that internal controllers tend to more frequently engage in health conducive behaviors (e.g., seeking medical attention) than do external controllers (Kirscht, 1972; Strickland, 1978). Therefore, for external controllers, the focus of treatment may be on increasing medical compliance and levels of assertion in self-care. Also, internal controllers are more likely to seek out information and advice on how to better care for themselves (Strickland, 1978). It therefore seems natural that internal controllers would more likely represent patients seeking medical advice and care than would external controllers. It may seem contradictory that external controllers would be less prone to seek out medical care given that their orientation is outer directed; however, the current results do not differentiate the source of external control (e.g., medical staff, God, family) which may not always be projected onto medical providers. In effect, the high frequency of men indicating elevated levels of internal health locus of control may simply be related to the fact that they are more likely to seek out medical care (and be included in this study) than
would other men with powerful other or chance factor orientations.

A third explanation of why internal controllers are significantly more represented in this study is related to the relationship between substance abuse and locus of control. Berzins and Ross (1973) in their work on substance abusers and orientations of control discovered that substance abusers are more likely to be internal controllers than are non-substance abusing cohorts. Given that 51% of the current sample reported significant past or present use of substances (e.g., heroine, alcohol, cocaine, marijuana), it is likely that internal controllers will be over-represented.

As previously stated, the findings of the current study regarding the association between health locus of control and mood disturbance may be affected by the inordinately high number of men indicating a primarily internal health locus of control. Taylor and her colleagues (1984 and 1991) found that increased feelings of internal health locus of control were associated with overall better psychological and social adjustment. The sample groups from Taylor and her colleagues' studies were females with breast cancer and individuals with coronary heart disease. Both samples included females and were largely conducted on middle-class Caucasians. This is in stark contrast to the population under investigation in this current study. Consequently, comparisons between these findings and those of Taylor et al are not possible.
Psychological Distress as a Function of Ethnic/Racial Status, Sexual Orientation, and Method of HIV Contraction

Because most psychological research on HIV illness has been conducted on primarily homosexual, Caucasian males, it was the intention of this study to examine how HIV illness may affect the psychological well-being of African-Americans and Latinos. A general question addressed by this investigation was in what way does HIV illness differently impact upon levels of psychological distress among ethnic/racial minority men as compared to their Caucasian counterparts. In one instance, it was posited that for all men who reported having contracted HIV through homosexual sexual activity, the degree of psychological distress would be greater among African-Americans and Latinos as compared to Caucasians due to the greater levels of homophobic attitudes in the African-American (Icard, 1986; Loicano, 1989) and Latino communities (Ceballos-Capitaine, et al., 1990). It was hypothesized that because of the increased likelihood of experiencing rejection and alienation, homosexual/bisexual African-American and Latino males would encounter greater psychological distress.

The results indicated that when selecting out all men who reported having contracted HIV through homosexual sexual activity among the three ethnic/racial groups—African-Americans, Latinos, and Caucasians—significant differences were found. Latinos who contracted HIV through homosexual sexual activity reported more intense feelings of overall
negative mood (e.g., sadness, anxiety, anergy) than did their African-American counterparts.

There are a few reasons why Latinos who contract HIV through homosexual sexual activity may experience higher levels of psychological distress relative to African-Americans. First, within this sample, Latino men in general presented with a significantly greater number of physical symptoms than did African-American men. An increase in number of physical symptoms indicates increased debilitation and a further progression of the HIV infection which leads to decreases in emotional well-being (Tross, et al., 1986). As symptoms become more numerous and evident, it becomes more difficult to deny the impact of HIV illness as well as to deny the onset of deteriorating health that ultimately leads to death.

The impact of number of physical symptoms on levels of overall psychological distress as well as depression were further supported by other analyses in this study. In order to determine the combined impact of various factors upon psychological distress, a step-wise multiple regression analysis was conducted. The findings indicated that for overall psychological distress, spiritual well-being was the strongest predictor of psychological distress followed by the number of physical symptoms a participant possessed. Number of physical symptoms was directly correlated with feelings of vigor and inversely correlated with levels of overall mood
disturbance, depression, tension, fatigue, confusion, and anger.

There are a number of reasons that can be postulated as to how increases in physical symptoms can increase level of affective disturbance (Namir, et al., 1986; Tross, et al., 1988). An increase in the number of symptoms usually associated with HIV/AIDS can lead to decreased activity and increased social isolation. For example, chronic fever and diarrhea (i.e., common symptoms of HIV infection) can definitely impede an individual's ability to maintain an active social life as well as decrease overall energy level. This can also translate into decreased productivity accompanied by a secondary loss in self-esteem, self-worth, and economic independence. In addition, an increase in physical symptoms or an excessive number of symptoms actualizes the existence of the disease and may greatly alter an individual's defensive structure which previously may have been organized around the denial, repression, and suppression of the HIV illness (Namir, et al., 1986). Physical symptoms can shatter attempts to avoid dealing with HIV illness and also hinder active-behavioral coping methods which generally require energy. The onset or increase of physical symptoms may impede a given individuals ability to sleep, eat, or exercise properly, all of which serve to build energy, and indirectly bolster mood. Additionally, many of the symptoms of AIDS are disfiguring (e.g., Kaposi Sarcoma) and often
negatively impact upon the body-image and self-esteem of PWAs which often lead to depression and sadness.

Aside from the number of physical symptoms, it may be helpful to also consider the impact of cultural norms and religious values on the disparity of mood disturbance scores between HIV infected Latinos and African-Americans. Latino culture stresses the importance of male machismo which is defined by Diaz-Guerror (1975) as a socio-culturally determined need for males to behave in very masculine ways. Within that cultural context, homosexuality may be deemed the antithesis of machismo, and is therefore rejected and less tolerated as compared to other cultures that do not contain strongly dictated and generally pervasive characterizations of stereotypical masculine behaviors (Friedman, et al., 1987). Engaging in behaviors that fall outside the range of what is generally accepted of males in terms of masculinity could lead to realistic fears of social isolation, familial rejection, and subsequently, stress. In a comparison of levels of "gay hassles" between HIV infected Latinos and Caucasians, Ceballos-Capitaine and her colleagues (1990) found that Latinos as compared to Caucasians experienced a significantly greater level of harassment from community members as a result of their homosexuality.

Second, the influence of the Catholic church, which has typically been very clear in its renunciation of homosexuality (Nelson, 1982), is a very influential agent of socialization
within Latino cultures, and Mexican culture in particular (Cervantes & Ramirez, 1992). Consequently, the Catholic church has a great deal of influence on shaping the mores and norms of Latino culture, and therefore functions in a parallel fashion to machismo in fostering the rejection of homosexuality.

This is not to say the African-Americans and Caucasians are immune to the homophobic attitudes of mainstream American culture and religious institutions. On the contrary, Nelson (1982) points out that the homophobic attitudes of the Catholic church are similarly represented in Protestant and Jewish faiths. Consequently, given that Protestant sects are very influential in the African-American community, it is likely that African-American men infected with HIV via homosexual sexual activity experience pressures from their respective religious institutions as do Latinos. However, it can be hypothesized that culturally indoctrinated machismo and the vociferous homophobic attitudes of the Catholic church are more intense than similar pressures experienced by homosexual African-American and Caucasian males by their respective cultural and religious influences.

A number of potentially influential factors unaccounted for in this study may also contribute to the relative disparity of levels of depression between Latino and African-American males infected with HIV via homosexual sexual activity. For instance, other factors that may vary between
members of differing cultures, such as desire for familial acceptance, church acceptance, and societal acceptance, and availability of culturally similar support networks for gays may variably impact upon levels of depression.

In order to further substantiate that homosexual behavior was influential in contributing to the disparity between levels of overall psychological distress among Latinos and African-Americans infected with HIV, a similar analysis was conducted comparing levels of psychological distress as a function of ethnic/racial status for all males who indicated that they were homosexual or bisexual. The findings were very similar to the aforementioned results with the exception that in this analysis, Caucasians as well as African-Americans experienced significantly lower levels of overall psychological distress when contrasted to Latinos. These findings support the results of Ceballos-Capitaine and her colleagues (1990).

To further highlight the impact that homosexuality and contracting HIV through homosexual acts has on emotional well-being, levels of psychological distress were compared among the three ethnic/racial groups collapsed across sexual orientation and method of contracting HIV infection. The result of this analysis was statistically insignificant which implies that there are no differences in psychological distress among the various ethnic/racial groups when method of contracting HIV and sexual orientation were controlled. These
findings support the notion that Latinos incur higher levels of emotional distress as a result of the stigmatization associated with HIV and homosexuality.

Another interesting finding related to level of psychological distress and sexual orientation was the increased level of distress among heterosexuals as compared to homosexual/bisexuals. That is, when controlling for method of contracting HIV infection and ethnic/racial status, heterosexuals in general tested with more intense levels of emotional distress as compared to homosexual/bisexuals. In an extensive review of the relevant literature, no comparable findings have been reported. The disparity between levels of emotional distress of heterosexuals and gay/bisexuals may be attributed to heterosexual males in the sample finding themselves associated with a disease that society has largely deemed as related to homosexuals and IV drug users (King, 1989). Not having the experience of dealing with the intense stigmatization attributed to a disease that is largely associated with marginalized groups in American society may prove overwhelming and psychologically stressful for some heterosexual men.

In addition, homosexual/bisexual individuals have developed an extensive network of peer support in helping members of their community in dealing with HIV illness and AIDS (Christ, Weiner, & Moynihan, 1986). To date, literature addressing social supports, HIV, and sexual orientation do not
adequately address the availability of community based support groups for heterosexuals. It may be that community based avenues for social and emotional support are more numerous for HIV infected men who are homosexual as compared to men who are heterosexual. In an attempt to further understand the dynamics of the relationship between mood and sexual orientation for men infected with HIV, future research needs to further assess factors such as available social support and perceptions of stigmatization and shame that may differentially affect heterosexuals, homosexuals, or bisexuals.

Variations in Coping Methods for HIV Infected Males when Dealing with HIV/AIDS

In analyzing the relationship between level of active-cognitive coping behaviors as a function of health status, no significant findings emerged. The underlying hypothesis was that among men who are HIV infected, at the later stages of the HIV illness, men would resort more frequently to utilizing active-cognitive coping strategies as compared to men who are not as progressed in their HIV illness. Given that most of the men who frequently visit the HRD clinics at Cook County Hospital are in the middle or later stages of their illness, and that 91% of the sample was HIV+symptomatic or diagnosed with AIDS, this hypothesis could not be adequately addressed; however, a number of post hoc analyses were conducted to assess the relationship between health status and level of
utilization of coping strategies that are largely derivative of active-cognitive coping methods. In these analyses, a trend emerged suggesting that as disease status progressed from HIV+asymptomatic to HIV+symptomatic (non-AIDS) to AIDS there occurred a slight decrease in the use of distraction coping strategies. These findings seem to contradict the findings of Wolf, et al (1991) in which they discovered that cognitive-coping methods increased as HIV illness progressed. However, their analyses did not include comparisons between coping "strategies" (as described by Namir, et al., 1987), as a function of health status. Consequently, the current findings may elucidate the relationship between health status and a particular facet of cognitive coping (i.e., distraction) which was not tested in the Wolf, et al study.

In order to interpret these findings it is necessary to state that although distraction as a coping strategy is largely derivative of behaviors typically found among active-cognitive copers, it also has an equal representation of avoidant coping features; as a result, distraction can be interpreted as an amalgamation of cognitive and avoidant coping behaviors. The relationship between poor health status and decreased distraction may be attributable to the difficulties of avoiding dealing with HIV illness as symptoms increase in frequency and intensity. This would seem especially true when confronted with the tribulations of dealing with the array of debilitating symptoms (e.g.,
diarrhea, loss of vision, weight loss, loss of memory, lack of energy) related to HIV infection and AIDS. Because the distraction coping strategy scale does not differentiate between avoidant copers and cognitive copers, it cannot adequately categorize a given individual's responses as either avoidant or cognitive in nature. Consequently, the results of this analysis are not able to adequately assess the hypothesis.

One final hypothesis addressed the relationship among health value, perceived health locus of control, and coping methods. In particular, it was hypothesized that men who reported a high level of health value, and a primarily internal health locus of control would have elevated levels of active-behavioral coping methods as compared to men who reported low health value and a primarily powerful other or chance factor health locus of control. The results indicated that for this sample of 100 men, there was no detectable association between the use of active-behavioral coping methods or derivative behavioral coping strategies as a function of possessing a predominantly internal locus of control and/or indicating a high value on health. Even when combining powerful other and chance factor loci of control into one grouping level, significant differences were not found.

These findings are quite different to those of Namir and her colleagues (1987). In their work, they examined 50
homosexual and bisexual males on the relationship between coping methods and psychological distress. Their findings were that active-behavioral coping methods were positively correlated with self-esteem and inversely correlated with total mood disturbance. What is important to note is that the volunteers for their study included 94% Caucasians. The racial composition of their study is starkly different from the present study and coupled with the current findings suggests that Namir and her colleagues' results regarding the psychologically healthy implications of active-behavioral coping methods may not generalize to ethnic/racial minority members.

It can be postulated that increased levels of active-behavioral coping methods are difficult for men in this study for two reasons. First, given that most of the participants of this study were in the later stages of HIV illness, it would seem more difficult for HIV infected males to avoid the finality that HIV/AIDS engenders as well as the subsequent futility associated with attempts to effectively combat dealing with failing health; consequently, increased symptomatology and concomitant depression may lessen the likelihood that an individual will participate in active-behavioral coping methods.

Second, it is also necessary to consider that all men in this study are members of marginalized groups in American society (e.g., ethnic/racial minority members, homosexuals, IV
drug users, PWAs). As members of socially marginalized group, members typically experience certain degrees of political, economic, and social disenfranchisement from mainstream institutional settings and society. Given their decreased feelings of empowerment, mistrust of institutionalized authorities, and feelings of futility associated with HIV/AIDS disease, behavioral methods of coping do not seem feasible or likely for the men in this study.

In addition to not having plausible avenues of recourse for enacting behavioral coping methods, it can also be hypothesized that increases in active-behavioral coping require physical energy. As was previously discussed in this chapter, levels of active-behavioral coping were positively correlated with feelings of vigor and ebullience; consequently, it may require energy to engage in active-behavioral coping behaviors. If so, given that almost all the men in this study were symptomatic or diagnosed with AIDS, overall energy levels may be low. This in turn would not allow for a given individual to feel motivated or have the energy to engage in behavioral methods of coping. In effect, energy level may be more influential in predicting active-behavioral coping methods than does health locus of control and ratings of health value.

Further research is required to address the disparity between the current findings and those of Namir, et al (1987) regarding the association between behavioral coping methods
and mood disturbance or psychological distress. Until the relative value of behavioral coping methods in relation to the psychological well-being of ethnic/racial minority members infected with HIV is further clarified, no recommendations for increasing the behavioral coping methods can be made when other factors such as active-cognitive coping strategies and spiritual well-being were clearly associated with feelings of positive affect for the men in this study.

Psychological Distress and Spiritual Well-Being

Another variable that emerged as significantly related to psychological distress was spiritual well-being. It was hypothesized that men who reported higher levels of spiritual well-being would report less intense feelings of psychological distress. Using a step-wise multiple regression, it was determined that spiritual well-being (as well as its component scales: religious well-being and existential well-being) was a significant predictor of mood disturbance. As was predicted, level of spiritual well-being was inversely correlated with overall psychological distress as well as the five constituent moods that contribute to overall psychological distress (i.e., depression, tension, anger, confusion, and fatigue). In addition, spiritual well-being was positively correlated with feelings of vigor.

Due to the cross-sectional design of this study, and the correlational analysis used to assess this hypothesis, it
cannot be firmly stated that increases in spiritual well-being lead to increases in positive affect; however, previous research seems to indicate that this association exists. Carson et al (1990) conducted a study on AIDS patients and found that increases in addressing existential issues and spirituality in general led to increases in positive affect. Similarly, this study found that men who judge themselves as being very spiritual experienced less psychological distress than their counterparts who reported little or no spiritual beliefs. In addition, men who presented with higher levels of spiritual well-being also indicated a greater degree of vigor and physical energy as measured by the Vigor subscale of the POMS.

In summary, spirituality is a moderate indicator of psychological distress and physical energy. As already presented earlier in this chapter, increased levels of spirituality may positively influence mood in a number of ways. For instance, spirituality may allow an individual to find meaning in life and consequently affirm the value of life in general (Carson, et al., 1990). In addition, spiritual beliefs indicate an increased sense of hope which has been shown to positively influence mood state (Kendall, et al., 1989).

The implications of the current findings support the recommendations made by Kendall and her colleagues to address the spiritual and existential issues within the treatment
setting. A psychotherapist may function to facilitate the individual infected with HIV in exploring hopes and arriving at answers to questions regarding personal meaning of life and what role HIV illness may play. Spiritual well-being, and religious well-being in particular, are especially important in treating African-American and Latino males infected with HIV due to the relative significance that spirituality, church, and religion play within their respective communities (Cervantes, & Ramirez, 1992; Nelson, 1982). Church-based support groups would likely serve as a positive source of support for ethnic/racial minority men infected with HIV, but are unlikely given the stigmatization of homosexuality and HIV illness within many church communities (Crawford, Allison, Robinson, & Hughes, 1992).

As well as displaying significant findings between spiritual well-being and all measures of psychological distress and feelings of vigor, subscale measures of spiritual well-being, (i.e., religious well-being and existential well-being) were similarly significant in correlating with measures of mood disturbance and vigor. That is, increased perceptions of religiousness and existential well-being were inversely correlated with overall mood disturbance, depression, anger, tension, confusion, and fatigue, and positively correlated with increases in vigor; consequently, the analysis of how spiritual well-being may impact upon affective state is made more precise by addressing its underlying components—
religious well-being and existential well-being.

Individuals who present with elevated levels of religious well-being are more likely to be affiliated with a formal religious organization, to believe in God, and to be active participants in practicing the tenets of their religious faith. Religious well-being stresses vertical spirituality which focuses on an individual's relationship with God and the religious organization of membership. It is probable that elevations in religious well-being translate into a belief in God and an afterlife (Ledbetter, et al., 1991). Such beliefs can foster meaning in life as well as provide hope for a future existence. It is also possible that some religious organizations provide emotional, social and financial support to members of its congregation that have HIV infection. Together, these factors may allow an individual infected with HIV to more easily contend with the existential crises as well as the day to day difficulties that having HIV engenders. Hence, considering the support that follows from a belief in God and/or the support offered by some religious organizations or members, psychological distress would not be as intense. Given the importance of church life, especially within the African-American and Latino communities, church organizations and/or faith in God likely play a significant role in helping these males contend with HIV illness.

This information may be deemed somewhat contradictory to previous speculation on how the anti-homosexual doctrine of
the Catholic and Protestant churches can precipitate psychological distress among members of the Latino and African-American communities who are HIV positive; however, religious well-being incorporates one's relationship with God as well as to formal church groups (Bufford, Paloutzian, & Ellison, 1991). It is likely that the measure of religious well-being used in this study (i.e., Spiritual Well-Being Scale) did not adequately assess the distinction between religious well-being as related to church affiliation and religious well-being as related to one's relationship with God. It may be that these men fear the rejection and alienation from their respective church organizations, but do not lose their faith in God or God's compassion. It may also be that some parishioners find the personal compassion to assist their HIV infected peers despite the general homonegative stance of the church groups.

Existential well-being also significantly correlated with all measures of psychological distress and feelings of vigor. That is, increased feelings of existential well-being were correlated with decreases in various measures of mood disturbance. Carson and her colleagues (1990), found that increased existential well-being led to increased positive affect and a desire to live life to its fullest. Elevations in existential well-being indicate that an individual has found meaning in life and indicates an elevation of life satisfaction. As Kubler-Ross (1969) stated, addressing
questions of an existential nature allows one to find answers regarding the meaning of personal life and death and dying. In turn, arriving at answers to questions regarding the purpose in life leads to increased acceptance about dying and increases in life-satisfaction. This study and past research (Carson, et al, 1990; Namir, et al., 1987) indicate that Kubler-Ross' findings regarding the relationship between questioning life's meaning (as well as death) and psychological well-being may be generalized for ethnic/racial minority members infected with HIV. This relationship of variables is very similar to the previously stated argument of why active-cognitive copers as compared to avoidant copers experience less psychological distress. Two commonalities between spirituality and active-cognitive coping methods are exploring the worth of one's existence and retaining a sense of hope. In fact, results from this current study indicated that increased levels of active-cognitive coping correlated with increased levels of spiritual well-being. In addition, it was found that elevations in spiritual well-being were negatively correlated with avoidant coping behaviors. As discussed earlier in this chapter, it is unlikely for an individual who is avoiding dealing with their HIV illness to struggle with finding meaning in life.

Social/Emotional Supports for Men With HIV Infection

Results of this study revealed that social/emotional
support was also shown to be significantly related to the overall affective well-being of the participants. The findings indicated that participants who reported a greater belief in the helpfulness of supports in dealing with their HIV illness reported less intense feelings of depression regardless of perceived availability of social/emotional supports as compared to their counterparts who expressed a belief that such supports were not very helpful in dealing with their HIV illness. In addition, a series of correlational analyses indicated that increased perceptions of helpfulness of supports were significantly correlated with decreased mood disturbance, depression, and tension; whereas perceived availability of support was not.

Together, these findings corroborate the work of Wolf, et al. (1991) and Hays, Turner, and Coates (1992) who also found that increases in the perception of the helpfulness or satisfaction with social/emotional support were associated with lower levels of psychological distress and depression.

Increased perceptions of helpfulness of supports may beneficially influence affect in a number of ways. For instance, social inclusion and beneficial relationships allow an individual to remain connected with significant others who may serve to provide companionship, as well as assist an individual infected with HIV in discussing thoughts, fears and feelings about HIV, AIDS, life, and death (Wolf, et al., 1991). In effect, helpful social supports may foster greater
meaning in life, increase feelings of self-worth, and decrease existential pain. It is also possible that helpful supports assist individuals infected with HIV in meeting daily physical needs (Bor, et al., 1987) that are increasingly difficult to meet (e.g., shopping, dressing, grooming, transportation, cooking) as symptoms increase and opportunistic infections emerge; therefore, perceived increases in the helpfulness of social supports would indicate the gratification of important social, emotional, and practical needs.

One of the limitations of this study was its lack of breadth in measuring perceptions of social support. For example the questions addressing the availability and helpfulness of social/emotional supports were vague. As a result, the lack of specificity in examining social/emotional supports inhibits detailed interpretations of the related findings. The information regarding supports was limited in that it did not inquire into the functional aspects of support that the participants may find most helpful in dealing with HIV illness. Research on the usefulness of various types of support (e.g., emotional, social, practical) for HIV infected African-Americans and Latinos needs to be examined in a more detailed fashion when evaluating the association between psychological well-being and supports. The assessment of supports should take into account the different forms of support (e.g., informational, practical, emotional--Hays, et al., 1992), functions of support, and sources of support.
In reference to psychotherapeutic treatment, the findings suggest that therapeutic support groups may increase feelings of perceived helpfulness and subsequently may positively influence affect. Providing reliable and consistent peer support for men who are HIV infected may increase the likelihood of supports being perceived as helpful.

It was surprising that perceived availability of supports was not significantly associated with level of psychological distress. It was hypothesized that as perceived availability of supports increased so would the level of psychological distress. Yet, the findings suggest that perceived availability of social supports was not significantly related to level of psychological distress.

One possible explanation of this finding is that men who are HIV infected do not expect to receive social/emotional support because of the stigmatization that HIV engenders as a contagious disease largely associated with homosexuals and IV drug users, especially as health status worsens and symptoms impede social interactions (Wolcott, Namir, Fawzy, Gottlieg, & Mitsuyasu, 1986). This is likely to be especially pronounced in Latino and African-American communities where homophobia is prominent; consequently, availability of social/emotional support from within their own cultural community may not be expected under these circumstances.

In addition, although not perceiving social supports as available in dealing specifically with HIV, it may be that
social networks are maintained across a number of other areas, with the implicit or explicit understanding that HIV will not be discussed or openly addressed. For example sources of support may include the gay community, family, friends, or health care providers. Openness in dealing with HIV/AIDS may vary as a function of type of support network and disease progression. For example, not discussing one's HIV infection is easily managed within any social network in the beginning stages of HIV illness when symptoms are not yet present. In such instances, social avoidance may be directed at encounters where HIV infection is a topic of focus; yet other venues of social engagement remain largely intact. Unfortunately, due to the lack of specificity in items addressing social supports in this study, these issues cannot be adequately addressed. In subsequent research, it would be interesting to note how availability of social supports relates to decreases in health status or increases in symptomatology when denial of the presence of HIV becomes more difficult.

This study was also interested in examining to what degree withholding information about HIV+ status, homosexuality, and IV drug use had upon overall psychological well-being and tendency to engage in avoidant coping behaviors. It was postulated that HIV infected men who were uncomfortable in revealing or did not reveal information to primary sources of support about their HIV infection, homosexuality, and IV drug use would experience higher levels
of overall psychological distress. The findings of these analyses were variable. No significant differences emerged when comparing overall psychological distress, depression, tension, anger and fatigue with comfort in revealing information regarding HIV+ status, homosexuality, and IV drug use.

These findings suggest that for some males infected with HIV, negative affect is not influenced by disclosing personal information regarding HIV+ status, homosexuality, and IV drug use. One possible explanation is that negative affect and level of discomfort in disclosing personal information to supports may be associated with a tendency to repress, suppress, or deny the presence of HIV illness. In effect, psychological defenses and coping mechanisms that function to keep HIV from awareness may lead some men to eschew disclosure of information to significant supports as well as distance themselves from the experience of negative affect related to being HIV+; consequently, there would not emerge a significant inverse correlation between levels of disclosure and mood disturbance.

This also suggests that a tendency to avoid disclosure of personal HIV status or other information related to HIV related illness may be adaptive in some ways. It may be that by distancing their thoughts and feelings from the critical nature of their illness, these men are able to maintain hope, affective well-being, and an ability to continue with day to
day living (Hays, et al., 1992). Kubler-Ross (1969) additionally comments on the need of periodic denial or partial denial which may be useful in allowing the individual with a terminal illness "to pursue life" (p. 35). It would seem that the underlying factor to consider would be the level of avoidance and whether or not it translated into pathological denial that impeded with reality testing and the ability to remain compliant with medical care. Given that all the men tested for this study were drawn from clinical settings, it is reasonable to believe that the men were at some level medically compliant and aware of consciously aware of their HIV status.

Two additional interpretations can be posited in an attempt to explain why levels of psychological distress were not associated with ease in sharing information with supports about IV drug use. First, it may be that revealing IV drug use to significant members of support is a moot point because of the difficulty in concealing the social, psychological and physical effects of chronic IV drug use. In addition, it may be that IV drug use, although stigmatizing, is not as shameful as homosexuality or HIV illness. Future research should address the comparative perceptions of stigmatization of homosexuals, individuals affected with HIV, and IV drug users.

In assessing the degree of association among the subscale scores of the POMS with ease in disclosing information regarding HIV+ status, homosexuality, and IV drug use,
feelings of vigor were significantly associated with ease in disclosing information about HIV+ status and homosexuality to sources of primary support. It may be hypothesized that increased feelings of energy provide an individual with the strength necessary to deal with the stressful task of openly dealing with personal HIV status or homosexuality when interacting with significant members of their social support network. This is especially true for those individuals who are not only revealing their HIV+ status, but are also simultaneously revealing a history of homosexual behavior. Such an endeavor can be affectively overwhelming and require a great deal of energy to confront.

The obverse explanation may be that disclosing HIV related information to supports may be helpful in some manner, leading to increased feelings of connectedness and empathy in openly dealing with something that was previously eschewed. However, if this were to be substantiated it would be predicted that indicators of psychological distress would inversely correlate with level of disclosure. As this study indicates this is not presently apparent. Consequently, the second interpretation of the relationship between disclosure and vigor is not as tenable as the first.

Another subscale measure of the POMS that significantly correlated with ease in disclosure of personal homosexuality was confusion. That is, individuals who reported feeling more at ease in revealing information regarding their homosexuality
had a lower level of bewilderment. It may be that revealing information regarding personal homosexuality lessens levels of confusion by decreasing ambivalent thoughts about coming out to family and friends as well as possible concomitant ruminative processes. In effect, revealing homosexuality may decrease the ideational turmoil and ambiguity associated with revealing one's identity as a homosexual in a society that is not very accepting of such a sexual orientation (Ceballos-Capitaine, 1990).

Another series of relationships involving ease of disclosing information related to HIV status, homosexuality, and IV drug use were hypothesized in relation to level of use of avoidant coping methods. In particular, it was hypothesized that increased levels of avoidant coping behaviors would negatively correlate with ease in disclosing information regarding relevant HIV+ status, homosexuality, or IV drug use to members of primary support group. Only one of these three correlations proved significant. It was discovered that an increased ease in revealing information regarding IV drug use was significantly associated with a decrease in avoidant coping behaviors. In effect, men who indicated a greater difficulty in revealing information regarding their IV drug use also indicated higher levels of avoidant coping behaviors.

In part, this significant correlation may be a by-product of the items contained in the avoidant method of coping scale
which contains a number of questions about different types of substance use. Naturally, individuals with any drug use would respond positively to some of these items and would consequently score higher on the avoidant scale. Yet, this would not adequately explain why IV drug users would present with increased use of avoidant coping methods and a decreased ease in revealing information regarding IV drug use. It may only address why substance users in general score higher on avoidant coping.

Substance abusers, in general, are more likely to have difficulty in modulating affect and regulating drives and impulses (Khantzian, 1982). In order to avoid the anxiety associated with revealing potentially stigmatizing information, the IV substance abuser may become avoidant in order to decrease internal conflict. Avoidant coping behaviors may include a continued use of mind altering substances that serve to modulate affect.

Another possible interpretation involves assessing the type of social groups (e.g., family, friends, health professionals) that IV drug users reported as being primary. Typically, it is assumed that IV drug users belong to a subculture of peer substance abusers who lead similar lifestyles. Yet, most of the participants in this study did not indicate peers or friends as primary sources of social/emotional support. Of the 32 participants who indicated past or present IV drug use only 16% considered non-
family peers as primary sources of support. Instead, a majority (59%) of these men indicated that their families were their primary sources of social support. Of the 10 men who reported current IV drug use, 80% indicated that their families were their primary sources of social/emotional support. Although it is with peers that IV drug users may socialize, it is predominantly family members that provide the most valuable support; therefore, in order to avoid familial rejection and loss or support from this meaningful group, IV drug users likely avoid disclosing their substance abuse habits.

As was previously mentioned there was no significant correlation between ease in revealing information about HIV status and increase in avoidant behaviors. This finding may be the result of the inordinately high number of men in the sample (98%) who are progressed in their disease status and have AIDS (67%) or are HIV+symptomatic (31%). Given the mere presence of largely observable symptoms associated with HIV/AIDS, it may be exceedingly difficult to conceal or avoid confronting HIV illness with significant others. Other studies may attempt to include larger samples of individuals who are HIV+asymptomatic in order to more accurately assess the overall relationship between ease in disclosing information regarding HIV and avoidant tendencies.
Conclusion

HIV infection is disproportionately more common among ethnic/racial minority members as compared to Caucasians. Yet, the vast majority of research on the psychosocial effects of having HIV/AIDS has primarily focused on middle-class, Caucasian gay males. This study was an attempt to evaluate the psychosocial correlates among African-American and Latino males infected with HIV.

A total of 100 males infected with HIV participated in this study. All volunteers were drawn from the six Human Retroviral Disease clinics at Cook County Hospital in Chicago, IL, which primarily serves the economically underserved population of Cook county, IL. The sample consisted of 69 African-American, 15 Caucasian, and 12 Latino males infected with HIV. The mean age of participants was 36.80 years (SD = 7.73). A large proportion of participants reported having contracted HIV via homosexual sexual activity (45%); whereas, 18% reported contracting HIV via IV drug use and 15% reported contracting HIV via heterosexual sexual activity.

A number of hypotheses assessing the relationship between various aspects of mood disturbance, coping methods, health locus of control, health value, spiritual well-being, and social/emotional support were analyzed. The results were variable. A number of analyses indicated that greater levels of spiritual well-being were correlated with increased positive mood and feelings of energy. In addition,
individuals who primarily engaged in active-cognitive coping methods possessed higher levels of positive affect as compared to individuals who primarily engaged in avoidant coping methods. Gay, Latino males presented as having higher levels of psychological distress (i.e., overall mood disturbance, depression) as compared to their African-American and Caucasian counterparts. This finding was largely attributed to gay Latino males having a greater number of physical symptoms and encountering homonegative attitudes associated with Latino cultural norms and religious beliefs. Implications for psychotherapeutic treatment include assisting HIV infected ethnic/racial minority members in confronting questions of an existential nature in order to find meaning in life and to place HIV illness within an overall perspective that identifies the positive and negative aspects of the illness. Similarly, religious well-being seems to be as equally important for these men as compared to existential well-being. Attempts may be made in psychotherapy to accompany the individual in his struggle to integrate religious beliefs with HIV illness. Mental health workers can also encourage the development of HIV/AIDS support groups within religious organizations. In addition, psychotherapy can also assist such individuals by working to increase active-cognitive coping methods and decrease avoidant coping methods.
APPENDIX A

MEAN AND STANDARD DEVIATION VALUES FOR STATISTICALLY NON-SIGNIFICANT FINDINGS
### TABLE 2

**MEAN AND STANDARD DEVIATION VALUES FOR DEMOGRAPHIC VARIABLES AS A FUNCTION OF RACE**

<table>
<thead>
<tr>
<th>DEMOGRAPHIC VARIABLES</th>
<th>ETHNICITY/RACE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>African-Amer n = 69</td>
</tr>
<tr>
<td>Age</td>
<td>35.87 (7.57)</td>
</tr>
<tr>
<td>Religious Affiliation</td>
<td>3.04 (1.35)</td>
</tr>
<tr>
<td>When HIV Diag (In Months)</td>
<td>36.64 (29.38)</td>
</tr>
<tr>
<td>Educational Level</td>
<td>4.34 (1.20)</td>
</tr>
<tr>
<td>*Current Employment</td>
<td>.19</td>
</tr>
</tbody>
</table>

Note: * Decimal values are percentages of men currently employed. Standard deviation values are in parentheses. No mean values or cell frequencies (for current employment) were significantly different as a function of ethnicity/race.
TABLE 3

AVERAGE TOTAL MOOD DISTURBANCE SCORES FROM THE PROFILE OF MOOD STATES AS A FUNCTION OF HEALTH VALUE, METHOD OF COPING, AND PERCEIVED HEALTH LOCUS OF CONTROL

<table>
<thead>
<tr>
<th>Perceived Health of Control</th>
<th>Active-Cog Health Val</th>
<th>Active-Behav Health Val</th>
<th>Avoidant Health Val</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal</td>
<td>75.27</td>
<td>99.50</td>
<td>159.0</td>
</tr>
<tr>
<td>Powerful Other</td>
<td>64.38</td>
<td>95.00</td>
<td>163.0</td>
</tr>
<tr>
<td>Chance</td>
<td>106.3</td>
<td>166.00</td>
<td>98.00</td>
</tr>
</tbody>
</table>
TABLE 5
MEAN AND STANDARD DEVIATION VALUES FOR DEMOGRAPHIC VARIABLES AS A FUNCTION OF PRIMARY METHOD OF COPING

<table>
<thead>
<tr>
<th>DEMOGRAPHIC VARIABLES</th>
<th>PRIMARY COPING METHOD</th>
<th>Cognitive</th>
<th>Behavioral</th>
<th>Avoidant</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>37.01</td>
<td>37.75</td>
<td>34.50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(7.45)</td>
<td>(7.63)</td>
<td>(10.87)</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td>3.01</td>
<td>2.50</td>
<td>2.50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.38)</td>
<td>(1.60)</td>
<td>(1.73)</td>
</tr>
<tr>
<td>Religious Affiliation</td>
<td></td>
<td>38.54</td>
<td>57.60</td>
<td>51.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(28.46)</td>
<td>(37.53)</td>
<td>(45.75)</td>
</tr>
<tr>
<td>When HIV Diag (In Months)</td>
<td></td>
<td>12.12</td>
<td>12.00</td>
<td>5.50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(12.24)</td>
<td>(0.00)</td>
<td>(6.36)</td>
</tr>
<tr>
<td>When AIDS Diag (In Months)</td>
<td></td>
<td>3.47</td>
<td>3.88</td>
<td>3.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.36)</td>
<td>(0.83)</td>
<td>(1.10)</td>
</tr>
<tr>
<td>Availability Of Support</td>
<td></td>
<td>4.72</td>
<td>6.75</td>
<td>7.17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(3.40)</td>
<td>(4.13)</td>
<td>(2.40)</td>
</tr>
<tr>
<td>Physical Symptoms</td>
<td></td>
<td>4.37</td>
<td>4.62</td>
<td>4.83</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.31)</td>
<td>(1.06)</td>
<td>(1.17)</td>
</tr>
</tbody>
</table>

Note: Standard deviation values are in parentheses. No mean values were significantly different as a function of primary method of coping.
TABLE 6
PERCENTILE VALUES FOR DEMOGRAPHIC VARIABLES AS A FUNCTION OF PRIMARY METHOD OF COPING WITH HIV

<table>
<thead>
<tr>
<th>DEMOGRAPHIC VARIABLE</th>
<th>PRIMARY METHOD OF COPING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cognitive</td>
</tr>
<tr>
<td>Sexual Orientatn</td>
<td></td>
</tr>
<tr>
<td>Gay/Bisex</td>
<td>.88</td>
</tr>
<tr>
<td>Heterosexual</td>
<td>.83</td>
</tr>
<tr>
<td>Health Status</td>
<td></td>
</tr>
<tr>
<td>HIV+Asymptom</td>
<td>.82</td>
</tr>
<tr>
<td>HIV+Symptom</td>
<td>.85</td>
</tr>
<tr>
<td>AIDS</td>
<td>.86</td>
</tr>
<tr>
<td>Ethnic/Racial Status</td>
<td></td>
</tr>
<tr>
<td>Afric-Amer</td>
<td>.91</td>
</tr>
<tr>
<td>Latino</td>
<td>.75</td>
</tr>
<tr>
<td>Caucasian</td>
<td>.87</td>
</tr>
</tbody>
</table>

Note: No statistically significant results were found.
TABLE 7

MEAN AND STANDARD DEVIATION VALUES FOR TMD, DEPRESSION, AND TENSION SCORES AS A FUNCTION OF PRIMARY TYPE OF HEALTH LOCUS OF CONTROL

<table>
<thead>
<tr>
<th>PERCEIVED HEALTH LOCUS OF CONTROL</th>
<th>TMD</th>
<th>Depression</th>
<th>Tension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal</td>
<td>M = 81.60, SD = 41.59 (62)</td>
<td>M = 1.20, SD = 0.88 (62)</td>
<td>M = 1.60, SD = 0.86 (62)</td>
</tr>
<tr>
<td>Powerful Other</td>
<td>M = 84.20, SD = 40.78 (15)</td>
<td>M = 1.25, SD = 0.98 (16)</td>
<td>M = 1.51, SD = 0.91 (16)</td>
</tr>
<tr>
<td>Chance Factor</td>
<td>M = 107.22, SD = 57.25 (9)</td>
<td>M = 1.79, SD = 1.25 (9)</td>
<td>M = 2.03, SD = 1.46 (9)</td>
</tr>
</tbody>
</table>

Note: Group sizes are presented in parentheses.
TABLE 8

AVERAGE SCORES ON THREE MEASURES OF PSYCHOLOGICAL DISTRESS AS A FUNCTION OF TWO LEVELS OF ETHNIC/RACIAL STATUS FOR THOSE PARTICIPANTS WHO REPORTED HAVING CONTRACTED HIV THROUGH HOMOSEXUAL ACTIVITY

<table>
<thead>
<tr>
<th>ETHNICITY/RACE</th>
<th>Minority</th>
<th>Caucasian</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMD</td>
<td>77.73 (37.11)</td>
<td>64.00 (66.69)</td>
</tr>
<tr>
<td>Depression</td>
<td>1.21 (0.81)</td>
<td>0.78 (1.12)</td>
</tr>
<tr>
<td>Tension</td>
<td>1.47 (0.84)</td>
<td>1.56 (1.94)</td>
</tr>
</tbody>
</table>

Note: Standard Deviation values are reported in parentheses.
TABLE 10

MEAN AND STANDARD DEVIATION VALUES FOR POMS TENSION SUBSCALE AVERAGE SCORES AS A FUNCTION OF ETHNIC/RACIAL STATUS FOR MEN REPORTING A HOMOSEXUAL OR BISEXUAL SEXUAL ORIENTATION

<table>
<thead>
<tr>
<th>ETHNIC/RACIAL STATUS</th>
<th>African-American</th>
<th>Latino</th>
<th>Caucasian</th>
</tr>
</thead>
<tbody>
<tr>
<td>TENSION SUBSCALE AVERAGE SCORES</td>
<td>M = 1.36</td>
<td>M = 2.38</td>
<td>M = 1.00</td>
</tr>
<tr>
<td>SD = .84</td>
<td>SD = .83</td>
<td>SD = 1.38</td>
<td></td>
</tr>
<tr>
<td>n = 44</td>
<td>n = 5</td>
<td>n = 5</td>
<td></td>
</tr>
</tbody>
</table>
TABLE 11

AVERAGE SCORES ON THREE MEASURES OF PSYCHOLOGICAL DISTRESS AS A FUNCTION OF TWO LEVELS OF ETHNIC/RACIAL STATUS REGARDLESS OF SEXUAL ORIENTATION OR MEANS OF CONTRACTING HIV INFECTION

<table>
<thead>
<tr>
<th>ETHNICITY/RACE</th>
<th>Minority</th>
<th>Caucasian</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMD</td>
<td>83.94</td>
<td>92.40</td>
</tr>
<tr>
<td>(40.50)</td>
<td>(57.00)</td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>1.29</td>
<td>1.30</td>
</tr>
<tr>
<td>(0.91)</td>
<td>(1.16)</td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>1.57</td>
<td>1.98</td>
</tr>
<tr>
<td>Tension</td>
<td>(0.84)</td>
<td>(1.35)</td>
</tr>
</tbody>
</table>

Note: Standard Deviation values are reported in parentheses.
TABLE 15

MEAN VALUES FOR TOTAL MOOD DISTURBANCE, DEPRESSION, AND TENSION SCORES AS A FUNCTION OF PERCEIVED AVAILABILITY AND HELPFULNESS OF SOCIAL/EMOTIONAL SUPPORTS

<table>
<thead>
<tr>
<th>MEASURES OF PSYCHOLOGICAL DISTRESS</th>
<th>AVAILABILITY OF SUPPORTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HIGH</td>
</tr>
<tr>
<td></td>
<td>Helpfulness</td>
</tr>
<tr>
<td></td>
<td>High</td>
</tr>
<tr>
<td>TMD</td>
<td>80.66</td>
</tr>
<tr>
<td>Depression</td>
<td>1.17</td>
</tr>
<tr>
<td>Tension</td>
<td>1.58</td>
</tr>
</tbody>
</table>
TABLE 19

DEGREE OF ACTIVE-BEHAVIORAL COPING METHODS AND DERIVATIVE BEHAVIORAL COPING STRATEGIES AS A FUNCTION OF HEALTH VALUE AND PERCEIVED HEALTH LOCUS OF CONTROL

<table>
<thead>
<tr>
<th>COPING PATTERN</th>
<th>HEALTH VALUE</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HIGH</td>
<td>LOW</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health L of C</td>
<td>Health L of C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active-Behavioral Coping Method</td>
<td>Internal</td>
<td>3.09</td>
<td>3.03</td>
<td>3.01</td>
<td>3.30</td>
</tr>
<tr>
<td>Active-Positive Coping Strategy</td>
<td>External</td>
<td>3.24</td>
<td>3.10</td>
<td>3.13</td>
<td>3.26</td>
</tr>
<tr>
<td>Active-Expressive Coping Strategy</td>
<td>Internal</td>
<td>3.27</td>
<td>3.15</td>
<td>3.20</td>
<td>3.45</td>
</tr>
<tr>
<td>Active-Reliant Coping Strategy</td>
<td>External</td>
<td>2.91</td>
<td>3.22</td>
<td>2.94</td>
<td>3.36</td>
</tr>
</tbody>
</table>
Appendix B

ITEM LIST FOR COPING METHODS ON MCI
ITEM LIST FOR "COPING METHODS" ON MCI

Active-Cognitive Coping Method:

Tried to keep it from bothering or upsetting me
Prayed hard for a good ending to the situation
Thought about it one day at a time
Accepted the situation since nothing could be done
Thought about the positive changes in me since the illness
Formed a plan of action in my mind
Thought more about the meaning of life
Trusted my belief in God
Prepared for the worst
Tried to understand what brought on my illness
Tried to understand how other people in the same situation were thinking and feeling
Believed that time would make a difference and that the best thing to do was wait
Went over the situation again and again in my mind
Thought about how I could have done things differently
Thought a lot more about what is really important in my life
Trusted my doctors to know the best treatments for me

Active-Behavioral Coping Method:

Went out more socially
Talked to people just to be able to talk about it
Went to a friend or a professional for advice on how to change things in the situation
Tried to get someone, like a doctor, to do something about it
Tried to understand what brought on my illness
Tried to understand how other people in the same situation were thinking and feeling
Believed that time would make a difference and that the best thing to do was wait
Went over the situation again and again in my mind
Thought about how I could have done things differently
Thought a lot more about what is really important in my life
Trusted my doctors to know the best treatments for me
Avoidance Coping Method:

Tried to keep others from knowing how I was feeling
Avoided being with people
Refused to think about it
Tried to reduce tension by:
  drinking more than usual
  eating more than usual
  smoking more than usual
  taking drugs more than usual
  sleeping more than usual
Increased my sexual activity alone
Joked about, refused to get too serious about it
Daydreamed about better times

Appendix C

ITEM LIST FOR COPING STRATEGIES ON MCI
ITEM LIST FOR "COPING STRATEGIES" ON MCI

**Active-positive involvement:**

Took more vitamins and ate healthy food  
Formed a plan of action in my mind  
Enjoyed everyday things more than I used to  
Developed myself as a person  
Used meditation, self-hypnosis, or imagery  
Got involved in political activities related to my illness  
Stood firm and fought for what I wanted

**Active-expressive/information seeking:**

Talked to people, just to be able to talk about it  
Talked with others in the same situation  
Tried to find out more about my illness

**Active-reliance on others:**

Went to a friend or professional for advice on how to change things in this situation  
Tried to get someone, like a doctor, to do something about it  
Went to a friend or professional to help me feel better

**Cognitive-positive understanding/create meaning:**

Prayed hard for a good ending to the situation  
Thought about it one day at a time  
Thought about the positive changes in me since the illness  
Trusted my belief in God  
Tried to understand how other people in the same situation were thinking and feeling  
Thought a lot more about what is really important in my life

**Cognitive-passive/ruminative:**

Believed that time would make a difference and that the best thing to do was wait  
Thought about how I could have done things differently  
Daydreamed about better times

**Distraction:**

Tried to keep it from bothering or upsetting me  
Went out more socially
Refused to think about it
Worked on trying to solve problems that my illness brought on
Joked about it, refused to get too serious about it
Bought or did something special for myself

**Passive resignation:**
Tried to keep others from knowing how I was feeling
Prepared for the worst
Trusted my doctors to know the best treatment for me

**Avoidance-solitary/passive behaviors:**
Avoided being with people
Smoked more than usual
Took drugs more than usual

Appendix D

NORMATIVE INFORMATION ON MCI SCALES
<table>
<thead>
<tr>
<th>Coping Method:</th>
<th>Item Means</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active-cognitive</td>
<td>3.40</td>
<td>.08</td>
<td>2.77-4.04</td>
</tr>
<tr>
<td>Active-behavioral</td>
<td>2.97</td>
<td>1.01</td>
<td>1.18-4.22</td>
</tr>
<tr>
<td>Avoidance</td>
<td>2.48</td>
<td>1.09</td>
<td>1.41-3.48</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Coping Strategy:</th>
<th>Item Means</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive-positive</td>
<td>3.97</td>
<td>.99</td>
<td>3.40-4.80</td>
</tr>
<tr>
<td>Active-expressive</td>
<td>3.53</td>
<td>1.27</td>
<td>2.80-4.40</td>
</tr>
<tr>
<td>Active-reliance</td>
<td>3.47</td>
<td>1.18</td>
<td>3.20-3.80</td>
</tr>
<tr>
<td>Active-positive</td>
<td>3.23</td>
<td>1.33</td>
<td>2.00-4.40</td>
</tr>
<tr>
<td>Distraction</td>
<td>3.17</td>
<td>.87</td>
<td>2.40-3.80</td>
</tr>
<tr>
<td>Cognitive-passive</td>
<td>3.13</td>
<td>1.24</td>
<td>2.80-3.80</td>
</tr>
<tr>
<td>Passive/resignation</td>
<td>3.07</td>
<td>1.02</td>
<td>2.20-3.80</td>
</tr>
<tr>
<td>Avoidance</td>
<td>1.86</td>
<td>1.57</td>
<td>1.80-2.20</td>
</tr>
</tbody>
</table>

Appendix E

METHOD OF COPING INVENTORY (MCI)
DEALING WITH HIV INFECTION

WHICH OF THESE THINGS HAVE YOU USED TO HELP YOU DEAL WITH YOUR HIV STATUS?

1 = NEVER 2 = RARELY 3 = SOMETIMES 4 = OFTEN 5 = ALWAYS

1. Tried to keep it from bothering or upsetting me
2. Went out more socially
3. Prayed hard for a good ending to the situation
4. Talked to people just to be able to talk about it
5. Tried to keep others from knowing how I was feeling
6. Thought about it one day at a time
7. Went to a friend or a professional for advice on how to change things in the situation
8. Avoided being with people
9. Accepted the situation since nothing could be done
10. Tried to get someone, like a doctor, to do something about it
11. Refused to think about it
12. Thought about the positive changes in me since the illness
13. Took more vitamins and ate healthy food
14. Tried to reduce tension by drinking more than usual
15. Formed a plan of action in my mind
16. Went to a friend or a professional to help me feel better
17. Thought more about the meaning of life
18. Talked with others in the same situation
19. Tried to reduce tension by eating more than usual
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>NEVER</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>OFTEN</td>
</tr>
<tr>
<td>20. Trusted my belief in God</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. Turned to work or other things to keep my mind off things</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. Tried to reduce tension by smoking more than usual</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. Prepared for the worst</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. Enjoyed everyday things, events, and experiences more than I used to</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. Developed myself as a person</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. Tried to understand what brought on my illness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27. Exercised more</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28. Tried to reduce tension by taking drugs more than usual</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29. Worked on trying to solve some of my problems that my illness brought on</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30. Tried to understand how other people in the same situation were thinking and feeling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31. Depended on others to cheer me up and make me feel better</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32. Tried to reduce tension by sleeping more than usual</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33. Used meditation, self-hypnosis, or imagery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34. Believed that time would make a difference and that the best thing to do was wait</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35. Got involved in political activities related to my illness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36. Went over the situation again and again in my mind</td>
<td></td>
<td></td>
</tr>
<tr>
<td>37. Stood firm and fought for what I wanted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>38. Thought about how I could have done things differently</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>1 = NEVER</td>
<td>2 = RARELY</td>
<td>3 = SOMETIMES</td>
</tr>
<tr>
<td>39.</td>
<td>Cried, yelled, or laughed more to express my feelings</td>
<td></td>
</tr>
<tr>
<td>40.</td>
<td>Increased my sexual activity alone</td>
<td></td>
</tr>
<tr>
<td>41.</td>
<td>Tried to find out more about my illness</td>
<td></td>
</tr>
<tr>
<td>42.</td>
<td>Thought a lot more about what is really important in my life</td>
<td></td>
</tr>
<tr>
<td>43.</td>
<td>Worked on reaching a bargain or compromise to change things</td>
<td></td>
</tr>
<tr>
<td>44.</td>
<td>Joked about it, refused to get too serious about it</td>
<td></td>
</tr>
<tr>
<td>45.</td>
<td>Trusted my doctors to know the best treatments for me</td>
<td></td>
</tr>
<tr>
<td>46.</td>
<td>Bought something or did something special for myself</td>
<td></td>
</tr>
<tr>
<td>47.</td>
<td>Daydreamed about better times</td>
<td></td>
</tr>
</tbody>
</table>
Appendix F

MULTIDIMENSIONAL HEALTH LOCUS OF CONTROL (MHLC)
Each statement listed below is a belief statement about health and illness with which you may agree or disagree. Beside each statement is a scale which ranges from Strongly Agree (1) to Strongly Disagree (6). For each item you are to circle the number that shows how much you agree or disagree with the statement. Please circle only one number for each item. This a measure of your personal beliefs or feelings; as such there are no right or wrong answers.

1. If I get sick, it is my own behavior which determines how soon I get well again. 1 2 3 4 5 6
2. No matter what I do, if I am going to get sick, I will get sick. 1 2 3 4 5 6
3. Having regular contact with my physician is the best way for me to avoid illness. 1 2 3 4 5 6
4. Most things that affect my health happen to me by accident. 1 2 3 4 5 6
5. Whenever I don't feel well, I should consult a medically trained professional. 1 2 3 4 5 6
6. I am in control of my health. 1 2 3 4 5 6
7. My family has a lot to do with my becoming sick or staying healthy. 1 2 3 4 5 6
8. When I get sick I am to blame. 1 2 3 4 5 6
1--STRONGLY AGREE
2--MODERATELY AGREE
3--SLIGHTLY AGREE
4--SLIGHTLY DISAGREE
5--MODERATELY DISAGREE
6--STRONGLY DISAGREE

9. Luck plays a big part in determining how soon I will recover from an illness. 1 2 3 4 5 6

10. Health professionals control my health. 1 2 3 4 5 6

11. My good health is largely a matter of good fortune. 1 2 3 4 5 6

12. The main thing that affects my health is what I myself do. 1 2 3 4 5 6

13. If I take care of myself, I can avoid illness. 1 2 3 4 5 6

14. When I recover from an illness, it's usually because other people (for example: doctors, nurses, family, friends) have been taking good care of me. 1 2 3 4 5 6

15. No matter what I do, I'm likely to get sick. 1 2 3 4 5 6

16. If it's meant to be, I will stay healthy. 1 2 3 4 5 6

17. If I take the right actions, I can stay healthy. 1 2 3 4 5 6

18. Regarding my health, I can only do what my doctor tells me to do. 1 2 3 4 5 6
Appendix G

HEALTH VALUE MEASURE (HVM)
"Below is a list of 10 values. Please rank them in order of importance for you. For example, place a "1" beside the value that is most important to you, a "2" beside the next important value, and so on, until you have ranked all the values from highest (1) to lowest (10)."

_____ A COMFORTABLE LIFE
_____ AN EXCITING LIFE
_____ A WORLD AT PEACE
_____ A WORLD OF BEAUTY
_____ EQUALITY
_____ HEALTH
_____ MATURE LOVE
_____ NATIONAL SECURITY
_____ SALVATION
_____ TRUE FRIENDSHIP
Appendix H

SPIRITUAL WELL-BEING SCALE (SWBS)
FOR EACH OF THE FOLLOWING STATEMENTS INDICATE THE CHOICE THAT
BEST INDICATES THE EXTENT OF YOUR AGREEMENT OR DISAGREEMENT
AS IT DESCRIBES YOUR PERSONAL EXPERIENCE.

1. STRONGLY DISAGREE  4. SLIGHTLY AGREE
2. MODERATELY DISAGREE  5. MODERATELY AGREE
3. SLIGHTLY DISAGREE  6. STRONGLY AGREE

1.____ I don't find much satisfaction in private prayer with
   God.
2.____ I don't know who I am, where I came from, or where I
   am going.
3.____ I believe that God loves me and cares about me.
4.____ I feel that life is a positive experience.
5.____ I believe that God is impersonal and not interested in
   my daily situation.
6.____ I feel unsettled about my future.
7.____ I have a personally meaningful relationship with God.
8.____ I feel very fulfilled and satisfied with life.
9.____ I don't get much personal strength from my God.
10.____ I feel a sense of well-being about the direction my
     life is headed in.
11.____ I believe that God is concerned about my problems.
12.____ I don't enjoy much about life.
13.____ I don't have a satisfying relationship with God.
14.____ I feel good about my future.
15.____ My relationship with God helps me not to feel lonely.
16.____ I feel that life is full of conflict and unhappiness.
17.____ I'm most fulfilled when I'm in close communion with
     God.
18.____ Life doesn't have much meaning.
19.____ My relation with God contributes to my well-being.
20.____ I believe there is some real purpose for my life.
Appendix I

PROFILE OF MOOD STATES (POMS)
Below is a list of words that describe feelings people have. Please read each one carefully. Then circle the number to the right which best describes how you have been feeling during the past week, including today.

0 = Not At All 1 = A Little 2 = Moderately 3 = Quite A Bit 4 = Extremely

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APPENDIX J

SYMPTOM CHECKLIST
SYMPTOM CHECKLIST

PLEASE PLACE A CHECK NEXT TO ANY OF THE FOLLOWING SYMPTOMS THAT MAY CURRENTLY BE A PROBLEM FOR YOU.

______FEVER
______FATIGUE
______DIARRHEA
______SKIN RASHES
______NIGHT SWEATS
______LOSS OF APPETITE
______MEMORY DIFFICULTIES
______SWOLLEN LYMPH GLANDS
______SIGNIFICANT WEIGHT LOSS
______DIFFICULTIES IN MOVEMENT
______FURRY WHITE SPOTS IN MOUTH
______LACK OF RESISTANCE TO INFECTIONS
______DRY COUGH OR SHORTNESS OF BREATH
______RED OR PURPLISH SPOTS ON THE BODY
Appendix K

DEMOGRAPHIC QUESTIONNAIRE
The following questionnaire is a part of a research project focusing on how men deal with the HIV illness. Please DO NOT place your name anywhere on this questionnaire; this is to further assure your anonymity. Your participation is greatly appreciated.

Date of Birth: ___/___/____  1. Age:________________

2. What is your race/ethnicity?
   ___ African-American
   ___ Latino/Hispanic
   ___ American Indian
   ___ Asian-American
   ___ Caucasian/white
   ___ Other: Please indicate________________________

3. What is your highest level of education? (Please check only one)
   ___ Below eighth grade
   ___ Eighth grade
   ___ Some high school: What was last grade completed__
   ___ Graduated High school
   ___ Some College: How much_______________________
   ___ Graduated from undergraduate program
   ___ Some graduate school
   ___ Masters level or beyond: Please specify__________

4a. Are you currently employed?  ___Yes  ___No

4b. If yes, what is your occupation?__________________________________

5. With what religious group are you affiliated? Please check only one of the following.
   ___ Baptist
   ___ Jewish
   ___ Catholic
   ___ Lutheran
   ___ Other, please specify ________________________________
   ___ None

6. How connected do you feel you are with the religious organization that you indicated above?
   ___ Not at all
   ___ Slightly
   ___ Moderately
   ___ Very much
   ___ Extremely
What is your zip code?__________________________

7. When did you find out that you have the HIV infection? __________________________

8. Do you have AIDS? _____Yes _____No _____Not sure

9. If you have AIDS, when did you find this out?__________

10. How do you believe you contracted the HIV infection?
   ______Through sex with another man
   ______Through sex with a woman
   ______Through IV drug use (shooting up drugs)
   ______Through a blood/plasma transfusion
   ______Other: Please specify____________________________________
   ______I don't know

11. Which of the following activities do you currently participate in? Check as many as apply to you.
   ______IV drug use (shooting up drugs)
   ______Alcohol use
   ______Tobacco use
   ______Downers
   ______Uppers (speed)
   ______Hallucinogens
   ______Other type of drug use.
   Please specify______________________________________________

12. Did you have any of the following problems before being diagnosed with HIV infection? Indicate below what type of problems you were having: Check more than one of the following if they apply to you.
   ______Depression
   ______Anxiety
   ______Thought Disorder (e.g., schizophrenia, paranoia)
   ______Alcoholism
   ______Drug Abuse
   ______Other: Please specify____________________________________
   ______None
13. Check any of the following problems that you now have. Check as many of the following that apply to you:

- Depression
- Anxiety
- Thought Disorder (e.g., schizophrenia, paranoia)
- Alcoholism
- Drug Abuse
- Loss of Memory
- Other: Please specify

None

14. Which group do you consider to be your primary source of social and emotional support? Please check only one of the following.

- Family
- Friends
- Health professional(s)

15. How easy is it for you to get emotional and social support from the group you indicated as your primary source of support?

- Not at all
- Slightly
- Moderately
- Very Much
- Extremely

16. How helpful do you perceive the individuals who are your primary source of support to be helping you to deal with your HIV illness?

- Not at all
- Slightly
- Moderately
- Very Much
- Extremely

17. How comfortable are you in revealing your HIV illness to individuals who are your main source of social and emotional support?

- Not at all
- Very little
- Moderately
- Very much
- Extremely
18. If you have AIDS, how comfortable are you in revealing that you have AIDS with individuals who are your main source of social and emotional support?

____ Not at all  
____ Very little  
____ Moderately  
____ Very much  
____ Extremely

19. If you consider yourself homosexual or bisexual, how comfortable are you in revealing your sexual orientation to individuals who are your main source of social and emotional support?

____ Not at all  
____ Very little  
____ Moderately  
____ Very much  
____ Extremely

20. If you shoot up drugs or have shot up drugs in the past, how comfortable are you in revealing this drug use with individuals who are your main source of social and emotional support?

____ Not at all  
____ Very little  
____ Moderately  
____ Very much  
____ Extremely

21. Currently, who do you have sex with?

____ Men  
____ Women  
____ Both men and women

22. In your past, who have you had sex with?

____ Men  
____ Women  
____ Both men and women

23. What do you consider to be your sexual orientation? Please check only one of the following.

____ Homosexual (gay)  
____ Bisexual  
____ Heterosexual (straight)
Appendix L

VOLUNTEER FLYER
ATTENTION TO ALL INTERESTED MALES!

A research project is currently underway that is investigating the coping behaviors and moods of men who have HIV. All males, 18 and older, who receive treatment at Cook County's HRD clinics are eligible to participate in this study. The benefits for participating in this project are that you help to further the understanding of the psychological effects of being HIV positive, and **YOU WILL RECEIVE FIVE DOLLARS** for your participation. Your participation will involve the completion of six brief questionnaires that you can complete **IN JUST ONE HOUR**. If you are interested in participating in this project please contact the following:

Rocco Domanico, M.A.
Clinical Psychology Fellow
(312) 633-7878 or (312) 534-6312

If I am not available, please leave your name and phone number or address so that I may contact you.
Appendix M

CONSENT AND RELEASE OF INFORMATION FORM
CONSENT FOR PARTICIPATION IN RESEARCH AND
RELEASE OF INFORMATION FORM

You are being asked to participate in a research project that is being conducted by Rocco Domanico, M.A. Thank you for volunteering to participate. This study will attempt to assess coping skills and mood states for individuals who are infected with HIV.

Your consent to participate in this research project is on a voluntary basis. Please know that all of the information that is collected is confidential. This means that it will be seen only by the scientists conducting the project and will be used for research purposes only. Further, the information given is anonymous. Your name will not appear on any of the data or written text. Instead, the researcher will code all of the information by assigning numbers to each volunteer. Finally, should you decide at any point to discontinue your participation in this project, for whatever reason, please feel free to do so. Though we do not expect that this will happen, we want you to know that you are free to end your participation at any time without incurring any kind of penalty. Your participation in or withdrawing from the project will in no way affect your services at the HRD clinics. Additionally, this study is not involved in your routine treatment and is not intended to benefit your personal health. Volunteers who complete the test packet will receive five dollars. For this research project, we ask that you consent to filling out six brief questionnaires that should take approximately 1 to 1½ hours to complete. It is also requested that you allow the researcher access to your medical records at Cook County Hospital solely for information regarding t-cell counts and medical diagnoses. Once again the confidentiality of medical information within the data and written text will be of an anonymous nature.

This research is subject to prior review and approval by the Scientific Committee (Institutional Review Board) of the Hektoen Institute and Cook County Hospital, as required by policy of the Department of Health and Human Services. You have the right and opportunity to consult with this committee if you so desire. You may also contact the Scientific Committee at 633-7792 during regular business hours regarding you rights as a research participant or in case of research-related injury.

You will receive a copy of this consent form.

If you have any questions, please feel free to ask me. Additionally, anyone interested in a summary of the findings of this research project should inform me of this. If you are interested, I will mail to you a summary of the project once
it is completed.

Sincerely:

Rocco Domanico, M.A.
Doctoral Candidate in Clinical Psychology
Cook County Hospital

Mark Sherman, Ph.D.
Clinical Psychologist
Cook County Hospital

I have read the above and understand it, and what I may not have understood was adequately explained to me.

______________________________  ______________________
Signature of volunteer  Date

______________________________  ______________________
Signature of Investigator  Date

Witness to explanation--Not to be
______________________________  ______________________
Signature  Date
REFERENCES


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Hultz, B., Chavez, C., Williams, S., & Thomas, D. (Eds.).


Levy S. M., & Heiden, L. (1991). Depression, distress, and


life events on natural killer cells. Stress Medicine, 7, 53-60.


Surgeon General Report on AIDS.


VITA

The author, Rocco Domanico, was born April 24, 1962, in Chicago, Illinois.

In May, 1986, Mr. Domanico graduated from Loyola University of Chicago with a Bachelor of Science degree in psychology and received honors in the department of psychology. Mr. Domanico graduated Summa Cum Laude and received an award for outstanding scholarship.

In August, 1986, Mr. Domanico entered the Ph.D. program in Clinical Psychology at Loyola University of Chicago. He completed clinical externship training at Hines Veteran Administration Hospital, the Charles I. Doyle Center, and the Loyola Day School. In addition, he was awarded the Loyola University Teaching Fellowship and taught psychology classes to Loyola undergraduates.

In May, 1990, Mr. Domanico was conferred the degree of Masters of Art in Clinical Psychology from Loyola University of Chicago. He completed his pre-doctoral internship training at Cook County Hospital, August 1991 to August 1992. Since completing his internship, he has continued his clinical training in a two year placement as a psychology fellow working in Adolescent Psychiatry at Cook County Hospital.
The dissertation submitted by Rocco Domanico has been read and approved by the following committee:

Dr. Isiaah Crawford, Director
Associate Professor, Clinical Psychology
Loyola University, Chicago

Dr. Alan DeWolfe
Professor, Clinical Psychology
Loyola University, Chicago

Dr. Eaaron Henderson
Assistant Professor, Social Psychology
Loyola University, Chicago

Dr. Mark Sherman
Clinical Psychologist
Cook County Hospital, Chicago

The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the Committee with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Ph.D. in Clinical Psychology.

4/8/94

Date

Isiaah Crawford, Ph.D.
Director's Signature