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FACTORS ASSOCIATED WITH WELL-BEING
AMONG PERSONS LIVING WITH HIV: SENSE OF COHERENCE,
UNSUPPORTIVE SOCIAL INTERACTIONS, AND COPING

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By
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1995

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CHAPTER I
INTRODUCTION

During the past decade, the acquired immunodeficiency syndrome (AIDS) epidemic has emerged as a monumental social crisis. As of December 1994, more than 441,500 cases of AIDS in the United States had been reported to the Centers for Disease Control (CDC, 1994). Of those reported cases, at least 270,870 individuals already have died (CDC, 1994). It is estimated that as many as 1 million people in the United States currently are infected with human immunodeficiency virus (HIV), the virus that is thought to cause AIDS (CDC, 1993).

In the past several years, the number of empirical articles concerning the relationship between psychosocial factors and well-being in persons living with HIV infection has risen dramatically. However, perhaps driven in part by the urgency surrounding the AIDS epidemic, much of the empirical literature concerning the process of living with HIV appears to reflect a "shotgun" approach to identifying factors that correlate with various dimensions of outcome (see Sagy, Antonovsky, & Adler, 1990). Moreover, many studies of HIV-positive people are plagued by methodological problems, such as small sample size and inadequate instrumentation. Consequently, despite the exponential increase in the number of studies concerning the process of living with HIV, relatively little is known about why some HIV-positive individuals remain healthier, both physically and psychologically, for longer periods of time compared to other people who are infected with the virus.
Two major problems in researchers' selection of variables have contributed to
the fragmentation in this body of literature. First, although numerous studies of HIV-
positive individuals have examined psychological well-being, physical health status,
or immune function, few studies have included all three dimensions of outcome (e.g.,
Perry, Fishman, Jacobsberg, & Frances, 1992; Rabkin et al., 1991). As a result,
relationships among those aspects of function and adjustment remain poorly
understood. Second, research concerning the process of living with HIV has been
hampered by the failure of many investigators to specify a theoretical framework
(Kaplan, 1989).

The present study of stress, coping, and well-being in people living with HIV
was designed to address both of those methodological concerns regarding the
specification of variables. First, in order to gain a more comprehensive
understanding of the process of living with HIV, measures of psychological well-
being, physical health status, and immune function were included. Second, the study
was designed to examine the usefulness of two specific theoretical frameworks in
research concerning health and well-being in persons living with HIV.

Overview of the Sense of Coherence Model

The first theoretical framework examined in the present study was Antonovsky's
understanding the relationships among stress, coping, and health is based on a
"salutogenic" orientation, which focuses on the origins of health (Antonovsky, 1987).
The salutogenic orientation leads to the view that stressors are inevitable and that
adaptive coping is the crucial factor in health outcome (Antonovsky, 1987, 1993b).
This approach departs from the traditional pathogenic or disease-based orientation,
which focuses on stressors themselves and gives rise to research aimed at identifying factors which lead to health "breakdown" (Antonovsky, 1972, 1987). Given this view that stressors are numerous, complex, and omnipresent, Antonovsky has emphasized the need for identifying factors that contribute directly to health as opposed to looking simply for buffers of stress (Antonovsky, 1987, 1993b).

Antonovsky has defined the sense of coherence (SOC) as a global orientation that facilitates an individual's effective coping with the numerous stressors encountered in life (Antonovsky, 1987). The SOC is not a specific coping style; rather, it is a "pervasive, enduring though dynamic feeling" that one's world is comprehensible, manageable, and meaningful (Antonovsky, 1987, Sagy et al., 1990). According to Antonovsky, when a person with a strong SOC is confronted with a stressful life situation, he or she is able to choose what seems to be the most appropriate strategy or coping response from among the variety of available resources (Antonovsky, 1987). Those potential resources, which Antonovsky termed "generalized resistance resources," include a variety of internal and external factors such as social support, economic resources, ego strength, and cultural stability (Antonovsky, 1987).

As a possible model for examining the process of living with HIV, Antonovsky's theoretical framework has several distinct advantages. First, the model has the potential for unifying some of the existing empirical literature concerning factors related to well-being in persons living with HIV. For example, social support and specific coping strategies (e.g., active-behavioral coping) appear to contribute to enhanced psychological and physical health in people with HIV (e.g., Namir, Wolcott, & Fawzy, 1989; Namir, Wolcott, Fawzy, & Alumbaugh, 1987; Wolf, Balson, et al., 1991; Zich & Temoshok, 1987). Antonovsky's SOC construct
potentially can explain what those resources have in common and how they operate to promote well-being. Second, a substantial number of studies across a variety of cultures have provided evidence supporting the reliability and validity of the scale developed by Antonovsky to operationalize the SOC construct (Antonovsky, 1987, 1993b). Third, although no published studies were identified which applied Antonovsky's model and used his SOC scale in a sample of individuals living with HIV, the SOC has been found to predict well-being in persons with other potentially life-threatening illnesses or chronic physical conditions, such as cancer (Gritz, Wellisch, Siau, & Wang, 1990; Tishelman, Taube, & Sachs, 1991), coronary heart disease (Kravetz, Drory, & Florian, 1993), or mild hypertension (Anson, Paran, Neumann, & Chernichovsky, 1993), as well as people who are recovering from surgery (Chamberlain, Petrie, & Azariah, 1992) or experiencing chronic pain (Petrie & Azariah, 1990).

Based on Antonovsky's theoretical framework, the present study of people living with HIV was designed to examine the SOC as well as indicators of stress, generalized resistance resources, and health and well-being.

The potential source of stress evaluated in the present study was multiple loss, which is the experience of having known more than one person whose death represents a significant loss. Several recent studies of AIDS-related bereavement have begun to draw attention to the nature and extent of multiple loss (e.g., Dean, Hall, & Martin, 1988). However, two characteristics of published studies concerning AIDS-related multiple loss have made it difficult to draw conclusions about how that experience of bereavement is related to health and well-being in persons living with HIV. First, a number of these studies have been descriptive in nature, and have failed to include outcome measures (e.g., Biller & Rice, 1990; Dean et al.; Sherr,
Hedge, Steinhart, Davey, & Petrack, 1992). Second, some studies have included only a small number of individuals who knew their own HIV antibody status, thus making it difficult to conduct separate data analyses on the HIV-positive portion of the sample (e.g., Martin, 1988). Consequently, additional research is needed to understand the effects of multiple bereavement on people living with HIV.

The generalized resistance resource of social support was assessed in the present study. Social support is a complex, multidimensional construct which may play an important role in coping with the stress associated with HIV infection (Namir, Wolcott, et al., 1989). In previous studies examining the qualitative dimensions of social support in persons living with HIV, satisfaction with support has been shown to correlate positively with psychological well-being, perceived physical health status, and adaptive coping strategies (Kurdek & Siesky, 1990; Leserman, Perkins, & Evans, 1992; Namir, Alumbaugh, Fawzy, & Wolcott, 1989). In the present study, measures were included for both perceived availability of support and satisfaction with support.

As mentioned previously, the present study of people living with HIV included measures of multiple dimensions of health and well-being. These outcome measures included indices of subjective well-being, self-reported physical health status, and immune function.

Overview of the Unsupportive Social Interactions Model

The second theoretical framework examined in the present study was one of four alternative models proposed by Rook (1990) to explain how social interactions that an individual experiences as unsupportive might have negative consequences for the person's well-being. In discussing the context for her work, Rook noted that enthusiasm for the concept of social support in the stress and well-being literature has
led to a tendency among researchers to equate social interaction with social support (Rook, 1984, 1992). However, as social exchange theorists (e.g., Thibaut and Kelley, 1959) have long emphasized, social ties have a dual nature, such that social relationships can be a source of stress as well as support (Rook, 1984, 1990).

In some cases, even well-intentioned attempts to provide support may be perceived by the recipient as unhelpful or negative (Kessler, Price, & Wortman, 1985; Martin, Davis, Baron, Suls, & Blanchard, 1994; Neidig & Dalgas-Pelish, 1991; Suls, 1982; Wortman & Lehman, 1985). In studies of a variety of populations, a significant inverse relationship has been found between negative interpersonal interactions and psychological well-being. Those populations have included older adults (Okun, Melichar, & Hill, 1990; Rook, 1984), college students (Ingram & Betz, 1995), rape survivors (Davis, Brickman, & Baker, 1991), family caregivers of people with Alzheimer's disease (Fiore, Becker, & Coppel, 1983; Kiecolt-Glaser, Dyer, & Shuttleworth, 1988; Pagel, Erdly, & Becker, 1987), geriatric stroke patients (Norris, Stephens, & Kinney, 1990; Stephens, Kinney, Norris, & Ritchie, 1987), and individuals who were recently bereaved (Finch, Okun, Barrera, Zautra, & Reich, 1989; Lovell, Hemmings, & Hill, 1993).

Findings suggest that negative and positive social interactions are separate predictors of psychological adjustment (e.g., Brenner, Norvell, & Limacher, 1989; Manne & Zautra, 1989, Rook, 1984). Thus, it appears that negative and positive social interactions are two different constructs, and are not simply opposite ends of a single continuum. Moreover, in several studies comparing positive and negative elements of social interactions, the elements perceived by the individual as negative were more consistently related to psychological well-being than were the perceived positive elements (e.g., Fiore et al., 1983; Kiecolt-Glaser et al., 1988; Rook, 1984).
Negative social interactions might be particularly salient in the interpersonal environments of people with HIV, given the stigma associated with the virus (Bennett, 1990; Crandall & Coleman, 1992; Limandri, 1989). However, researchers have directed surprisingly little attention to studying the effects of negative social interactions on well-being in people with HIV. The results of four published reports (Hays et al., 1993; Lackner, Joseph, Ostrow, & Eshelman, 1993; Lackner, Joseph, Ostrow, Kessler et al., 1993; O'Brien, Wortman, Kessler, & Joseph, 1993) concerning people with HIV suggest that the relationship between negative social interactions and well-being warrants further study in this population. However, it is difficult to draw further conclusions from those studies, given that the instrument used to assess negative social interactions was either a single-item scale (Hays et al., 1993) or an apparently modified 6-item measure with relatively unknown psychometric properties (Lackner, Joseph, Ostrow, & Eshelman; Lackner, Joseph, Ostrow, Kessler et al.; O'Brien et al.).

In the present study, stressor-specific unsupportive social interactions were examined using an instrument which is described in detail in the Method chapter. The construct of stressor-specific unsupportive social interactions has been defined as unsupportive or upsetting responses that an individual receives from other people concerning a stressful event in his or her life (Ingram & Betz, 1995). Thus, stressor-specific unsupportive social interactions occur in the context of a stressful life event, which, in the present study, was living with HIV. Rook's (1992) concept of negative social exchange, in contrast, encompasses distressing actions of others which may or may not take place in the context of a specific stressor.

The theoretical model of negative social interactions examined in the present study was Rook's (1990) direct effect model (Figure 1), which suggests that
unsupportive social interactions have direct negative effects on well-being independent of life stress. Rook (1990) noted that the model refers only to situations in which life stress either precedes or occurs contemporaneously with unsupportive social interactions. In addition, Rook (1990) observed that the model does not take into account the possibility of reciprocal effects among life stress, unsupportive social interactions, and impaired well-being. Applying the model to the present study, the following variables were examined: (a) stressor-specific unsupportive social interactions associated with having HIV, (b) multiple loss (the life stress variable), and (c) subjective well-being, self-reported physical health status, and immune function (the well-being indicators).

In addition, to further explore the effects of negative social interactions in the experience of people with HIV, the present study included an examination of the relationship between stressor-specific unsupportive social interactions and coping. A variety of coping strategies have been examined in previous studies of persons living with HIV. Researchers have found that active-behavioral coping was positively correlated with self-reported global ratings of physical health, and negatively correlated with disturbed mood in persons with HIV (Namir et al., 1987; Wolf, Balson, et al., 1991; Wolf, Dralle, et al., 1991). A coping strategy that appears to be less adaptive is avoidance coping, which has been negatively correlated with psychological well-being in a sample of people living with HIV (Fleishman & Fogel, 1994; Kurdek & Siesky, 1990). In another study of coping strategies in HIV-positive individuals, a negative correlation was found between passive coping and immune function (Goodkin, Fuchs, Feaster, Leeka, & Rishel, 1992). However, given the serious measurement problems inherent in many of these and other studies of coping, it is difficult to draw conclusions about the nature and effects of coping among
persons with HIV. In the present study, an attempt was made to use a coping instrument that is appropriate for HIV-positive individuals, and whose scoring procedure is based on psychometric data justifying the use of particular subscales. It was thought that exploring the relationship between unsupportive social interactions and coping might lead to a better understanding of how each of those variables in turn relates to well-being.

Potential Role of Negativity

Finally, the present study included an assessment of negative affectivity. As Watson and Pennebaker (1989) have demonstrated, self-reported measures of physical symptoms may contain a significant component of negative affectivity. Following the recommendations of Watson and Pennebaker, the present study included measures of negative affectivity as well as objective indicators of physical health (recent hospitalization, recent illnesses, and CD4 cell count).

Purposes of the Present Study

In summary, the present study was designed to test the usefulness of two theoretical frameworks in understanding stress, coping, and well-being in persons living with HIV: (a) Antonovsky's sense of coherence model, and (b) Rook's direct effect model of unsupportive social interactions. The overall purpose of the study was to examine why some HIV-positive individuals remain physically and psychologically healthier, for longer periods of time, compared to other persons who are infected with the virus.
Unsupportive social interactions  

Life stress  

Impaired well-being

Figure 1. Direct effect model of unsupportive social interactions. From "Parallels in the Study of Social Support and Social Strain" by K. S. Rook, 1990, Journal of Social and Clinical Psychology, 9, p. 125. Copyright by Guilford Press. Adapted with permission. Note. The model refers only to situations in which life stress either precedes or occurs contemporaneously with unsupportive social interactions. In addition, the model does not take into account the possibility of reciprocal effects among life stress, unsupportive social interactions, and impaired well-being.
CHAPTER II
LITERATURE REVIEW

The following issues will be addressed in the discussion of the selected literature:
(a) HIV and psychosocial research, (b) an overview of Antonovsky's theoretical model,
(c) an overview of the unsupportive social interactions model, (d) negative affectivity and physical health, and (e) issues of gender and ethnicity in research design.

HIV and Psychosocial Research

On June 5, 1981, the Centers for Disease Control (CDC) reported the first case in the United States of what is now known as AIDS (CDC, 1981). In the years since its discovery, AIDS has spread at an epidemic rate in the United States. As of December 1994, more than 441,500 cases of AIDS had been reported in this country (CDC, 1994). The number of deaths from AIDS in the United States also has risen dramatically, from 135 deaths in 1981, to a total of at least 270,870 deaths through December 1994 (CDC, 1994). According to recent CDC estimates, as many as 1 million people in the United States currently are infected with HIV, the virus that is thought to cause AIDS (CDC, 1993).

Throughout the epidemic, researchers in the social and behavioral sciences have studied the psychosocial aspects of HIV infection. In the early years of the epidemic, much of this research concerned topics such as risk behaviors associated with transmission of the virus, attitudes toward people with HIV, education and prevention, and prevalence rates in various subpopulations. In contrast, relatively few of the early studies focused on the experience of living with HIV.
An individual who is HIV positive encounters an array of interrelated stressors (Dew, Ragni, & Nimorwicz, 1990; Namir et al., 1987). For example, the person is faced with the challenge of dealing with a complex medical system and with the ongoing uncertainties regarding the clinical course of his or her HIV infection (Dew et al.; Namir, Wolcott, et al., 1989). In addition, the person living with HIV frequently experiences changes in physical abilities, income, and vocational and social functioning (Namir et al., 1987; Namir, Wolcott, et al.). Moreover, the individual often must deal with changes in relationships with a partner, family, friends, and employers (Dew et al.; Namir, Wolcott, et al.). Finally, the person with HIV faces the ongoing possibility of real or perceived social isolation resulting from discrimination or rejection (Dew et al; Namir, Wolcott, et al.).

During the past several years, the number of studies concerning the psychosocial dimensions of living with HIV has risen sharply. However, the empirical work in this area can hardly be viewed as a cohesive body of literature. Perhaps due in part to the urgency surrounding the AIDS epidemic, much of the research concerning the process of living with HIV appears to reflect a "shotgun" approach to identifying variables that are correlated with different dimensions of outcome (see Sagy et al., 1990). In addition, many studies of HIV-positive people are plagued by small sample size, inadequate instrumentation, and other methodological problems. As a result, despite the dramatic increase in the number of studies concerning HIV-positive individuals, relatively little is known about factors predicting individual differences in physical and psychological well-being in this population.

The fragmentation in this body of literature is due in part to a number of research design problems, including two major shortcomings in investigators' selection of
variables. First, although many studies of HIV-positive persons have included measures of psychological well-being, physical health status, or immune function, very few studies have incorporated indices of all three dimensions of outcome (e.g., Perry et al., 1992; Rabkin et al., 1991). Consequently, relationships among those facets of function and adjustment remain poorly understood.

Second, many investigators studying the process of living with HIV have failed to specify a theoretical framework (Kaplan, 1989). In the absence of an explicit theoretical structure describing the relationships among constructs, little progress can be made in integrating research findings and in developing testable models in HIV-related research (Kaplan). There is a great need for theory-driven models that can help investigators to reduce the number of variables studied and thus enhance the efficiency of the research process concerning health and well-being in persons with HIV (Antoni, 1991).

The present study of stress, coping, and well-being in people living with HIV was designed to address both of those methodological concerns regarding the specification of variables. First, in order to gain a more comprehensive understanding of the process of living with HIV, measures of psychological well-being, physical health status, and immune function were included. Second, the study was designed to examine the usefulness of two specific theoretical frameworks in research concerning health and well-being in persons living with HIV.

Research related to the process of living with HIV can have several important implications. First, findings regarding the influence of psychosocial and intra-individual variables on the well-being of persons with HIV may facilitate more effective counseling interventions with this population. Second, research concerning
HIV-positive individuals may help educators and others to facilitate a greater degree of understanding, sensitivity, and compassion among persons who currently are not infected with the virus. Third, knowledge gained from research in this area may enhance the quality of training for mental health professionals. Recent studies of counseling and clinical psychologists have underscored the need for improvements in training counselors to work with clients who are HIV positive (Campos, Brasfield, & Kelly, 1990; Hayes & Gelso, 1993). Finally, research concerning the process of living with HIV may be useful not only for HIV-positive persons, but also for their caregivers.

Overview of Antonovsky's Theoretical Model

Introduction. Aaron Antonovsky, a medical sociologist, proposed a salutogenic model for understanding the relationships among stress, health, and coping. Instead of attempting to explain why people develop particular diseases, the salutogenic orientation focuses on the origins of health (Antonovsky, 1987). Moreover, the salutogenic perspective rejects the view of a fundamental dichotomy between healthy and ill people (Antonovsky, 1987). Thus, in discussing what he described as the health ease/disease continuum, Antonovsky emphasized the heuristic value of thinking in terms of movement toward the healthy end of the continuum (Antonovsky, 1987).

A major distinction between Antonovsky's model and the traditional pathogenic or disease-based approach is the hypothesized role of stressors. The pathogenic orientation focuses on stressors themselves in an attempt to identify risk factors leading to a particular disease process such as coronary heart disease (Antonovsky, 1987; 1993b). In contrast, Antonovsky's approach views stressors as innumerable, complex,
and inevitable (Antonovsky, 1987, 1993b). Thus, in order to understand how a person copes with the countless stressors that occur in the course of living, Antonovsky emphasized the importance of identifying factors that contribute directly to health as opposed to searching simply for buffers or moderators of stress (Antonovsky, 1987, 1993b). Moreover, Antonovsky posited that adaptive coping is the key to movement toward the healthy end of the ease/disease continuum (Antonovsky, 1987, 1993b).

The cornerstone of Antonovsky's theoretical framework is the sense of coherence (SOC), a way of seeing the world which facilitates an individual's effective coping with the many stressors encountered in life (Antonovsky, 1987, 1993b). Antonovsky (1987) defined the SOC as follows:

a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that (1) the stimuli deriving from one's internal and external environments in the course of living are structured, predictable, and explicable; (2) the resources are available to one to meet the demands posed by these stimuli; and (3) these demands are challenges, worthy of investment and engagement. (p. 19)

Antonovsky (1987, 1993a) termed these three components of the SOC as comprehensibility (the cognitive component), manageability (the instrumental component), and meaningfulness (the motivational component).

The SOC is not a specific coping strategy; rather, it is a global orientation that facilitates successful coping with stressors (Antonovsky, 1987; Sagy et al., 1990). According to Antonovsky, when a person with a strong SOC is confronted with a stressful life situation, he or she is able to choose what seems to be the most appropriate strategy or coping response from among the variety of available resources.
appropriate strategy or coping response from among the variety of available resources (Antonovsky, 1987). Those potential resources, which Antonovsky termed "generalized resistance resources," include a variety of individual, group, and environmental factors such as social support, economic resources, ego strength, and cultural stability (Antonovsky, 1987).

**Relationship to hardiness.** It should be noted that similarities exist between Antonovsky's SOC concept and Kobasa's (1979) hardiness construct. Hardiness has been conceptualized as a multidimensional personality trait comprised of commitment, challenge, and control (Kobasa). In a discussion comparing the SOC and hardiness, Antonovsky identified two fundamental similarities between the conceptual frameworks upon which the constructs are based (Antonovsky, 1987). First, both models adhere to the salutogenic orientation, which seeks to explain why some individuals manage to maintain and even improve their health status despite being faced with a high stressor load (Antonovsky, 1987). Second, Antonovsky and Kobasa have shared the assumption that the way an individual sees his or her world is a crucial factor in coping and health outcome (Antonovsky, 1987).

In reviewing the specifics of Kobasa's model, Antonovsky has observed that the meaningfulness component of hardiness seems quite similar to the commitment component of the SOC (Antonovsky, 1987). According to Antonovsky, the main differences between his and Kobasa's frameworks can be found in the other two components of the constructs. For example, Kobasa's challenge component emphasizes an orientation toward change as a fundamental way of life, whereas Antonovsky's comprehensibility component reflects an orientation toward stability (Antonovsky, 1987).
According to Antonovsky, the greatest difference between the two theoretical models concerns the manageability component of the SOC and the control component of the hardiness construct (Antonovsky, 1987). Kobasa has developed her theory and conducted her research primarily in the context of middle-class American culture (Antonovsky, 1987). The control component of hardiness is based on the locus of control literature, which proposes a dichotomous view of an individual's perception of control (Antonovsky, 1987). Thus, according to this view, an individual perceives control of an event as being either in his or her own hands, or else in the power of someone or something external. Antonovsky criticized this approach as culturally narrow (Antonovsky, 1987). For example, Antonovsky remarked that a mistrust in power being in the hands of anyone else is a stance that might be appropriate in a culture based on individualism and free enterprise (Antonovsky, 1987).

Antonovsky did acknowledge that some of Kobasa's theoretical discussion is quite compatible with his notion of manageability (e.g., her description of the challenge component as including a sense that one will be able to cope). However, in summarizing his concerns about Kobasa's emphasis on the locus of control literature, Antonovsky stressed the importance of developing and operationalizing the manageability component in a way that will not limit its meaning to specific cultures (Antonovsky, 1987).

Relevance to HIV research. Several aspects of Antonovsky's theoretical framework make it a promising model for examining the process of living with HIV. First, the model has the potential for unifying some of the existing empirical literature concerning factors related to well-being in persons living with HIV. For example, studies have suggested that social support and specific coping strategies (e.g.,
active-behavioral coping) contribute to enhanced psychological and physical health in people with HIV (e.g., Namir et al., 1987; Namir, Wolcott, et al., 1989; Wolf, Balson, et al., 1991; Zich & Temoshok, 1987). By examining how social support and coping are related to the SOC, Antonovsky's model potentially can explain what those resources have in common and how they operate to promote well-being. Second, a substantial number of studies across a variety of cultures have provided evidence supporting the reliability and validity of the Sense of Coherence Scale, which Antonovsky developed to operationalize the SOC construct (Antonovsky, 1987, 1993b). Third, although no published studies were identified which applied Antonovsky's model and used his SOC scale in a sample of individuals living with HIV, several investigators have examined the SOC in persons with other potentially life-threatening illnesses or chronic physical conditions. For example, the SOC has been found to predict well-being in persons with other potentially life-threatening illnesses or chronic physical conditions, such as cancer (Gritz et al., 1990; Tishelman et al., 1991), coronary heart disease (Kravetz et al., 1993), or mild hypertension (Anson et al., 1993), as well as people who are recovering from surgery (Chamberlain et al., 1992) or experiencing chronic pain (Petrie & Azariah, 1990).

Antonovsky's model applied in the present study. One of the purposes of the present study was to examine the utility of Antonovsky's theoretical framework in understanding stress, coping, and well-being in persons living with HIV. Having included a discussion of the basic structure of Antonovsky's model and the nature of the SOC construct, this section of the literature review will focus on the other components in Antonovsky's conceptual framework: stress, generalized resistance resources, and health and well-being.
Previous studies of the relationship between perceived stress level and well-being in persons living with HIV have yielded conflicting results. Some investigators have found that negative life stressors were significantly correlated with outcome. For example, in a study of 67 HIV-positive gay men, Blaney et al. (1991) found that negative life events predicted greater psychological distress. Similarly, in another study of HIV-positive gay men, a significant correlation was found between major life stressors and immune function (Goodkin et al., 1992). The Goodkin et al. findings must be interpreted with caution, given that the results are based on a sample of only 11 individuals. In other studies, however, no consistent relationship was identified between life stress and symptom onset, illness stage, depressive symptoms, or immune status (Kessler et al., 1991; Perry et al., 1992; Rabkin et al., 1991; Rabkin, Williams, Neugebauer, Remien, & Goetz, 1990). Further research is needed to reconcile these conflicting results.

The potential source of stress evaluated in the present study was multiple loss, which is the experience of having known more than one person whose death represents a significant loss. When multiple members of an individual’s support network die, and when that pattern continues year after year, the grief reaction may become more complicated and may contribute to a sense of impending doom and chronic mourning (Dean et al., 1988). Particularly in the gay community, where AIDS has taken an enormous toll, multiple loss is a stressor which must be taken into account in efforts to understand the psychosocial implications of the HIV epidemic.

Moreover, as several researchers have suggested, there is no precedent for the phenomenon of AIDS-related multiple loss (e.g., Schwartzberg, 1993; Sherr et al., 1992). Unlike multiple deaths occurring in a natural disaster, multiple bereavement
from AIDS is ongoing and gradual (Schwartzberg; Sherr et al.). In addition, unlike massive deaths resulting from a wartime or holocaust situation, AIDS-related multiple loss is not the result of an intentionally inflicted evil (Schwartzberg).

Several recent studies of AIDS-related bereavement have begun to draw attention to the nature and extent of multiple loss. For example, in a panel of 624 gay men in New York City, respondents named an average of 6.2 people they knew who had died of AIDS (Dean et al., 1988). Only 5% of those sampled reported no losses whatsoever due to AIDS (Dean et al.). Two characteristics of published studies concerning AIDS-related multiple loss have made it difficult to draw conclusions about how that experience of bereavement is related to health and well-being in persons living with HIV. First, a number of these studies have been descriptive in nature, and have failed to include outcome measures (e.g., Biller & Rice, 1990; Dean et al.; Sherr, et al., 1992). Second, some studies have included only a small number of individuals who knew their own HIV antibody status, thus making it difficult to conduct separate data analyses on the HIV-positive portion of the sample (e.g., Martin, 1988). Consequently, additional research is needed to understand the effects of multiple bereavement on persons living with HIV.

The generalized resistance resource assessed in the present study was social support. A complex, multidimensional construct, social support may play an important role in coping with the stress associated with HIV infection (Namir, Wolcott, et al., 1989). In previous studies examining the qualitative dimensions of social support in persons living with HIV, satisfaction with support has been shown to correlate positively with psychological well-being, perceived physical health status, and adaptive

With regard to the structural dimensions of social support, greater perceived availability of support has been associated with decreased levels of physical distress and depression in persons newly diagnosed with AIDS (Zich & Temoshok, 1987). In addition, several investigators have examined the potential relationship between perceived availability of social support and more objective indicators of HIV disease progression. No significant correlations were found between perceived availability of support and immune function, or between the number of people who would help in times of need and the total number of physical symptoms (Namir, Alumbaugh, et al., 1989; Perry et al., 1992; Wolf, Dralle, et al., 1991). Further research is needed to understand the influence of both perceived availability of support and satisfaction with support in persons living with HIV.

As mentioned previously, the present study of people living with HIV included measures of multiple dimensions of health and well-being. Although numerous studies of HIV-positive individuals have examined immune function, physical health status, or psychological well-being, few studies have included all three dimensions of outcome (e.g., Perry et al., 1992; Rabkin et al., 1991). As a result, relatively little is known about relationships among those aspects of function and adjustment. In order to gain a more comprehensive understanding of the process of living with HIV, the present study included indices of subjective well-being, self-reported physical health status, and immune function.
Overview of the Unsupportive Social Interactions Model

In studies aimed at identifying factors that influence individual differences in stress vulnerability and stress resistance, many researchers have focused on social support. As one reviewer has noted, enthusiasm for the concept of social support in the stress and well-being literature has led to a tendency among researchers to equate social interaction with social support (Rook, 1984, 1992). However, as social exchange theorists (e.g., Thibaut and Kelley, 1959) have long emphasized, social ties have a dual nature, such that social relationships can be a source of stress as well as support (Rook, 1984, 1990).

In some cases, even well-intentioned attempts to provide support may be perceived by the recipient as unhelpful or upsetting (Kessler et al., 1985; Martin et al., 1994; Neidig & Dalgas-Pelish, 1991; Suls, 1982; Wortman & Lehman, 1985). In a variety of populations, a significant inverse relationship has been found between negative interpersonal interactions and psychological well-being. Those populations have included older adults (Okun et al., 1990; Rook, 1984), college students (Ingram & Betz, 1995), rape survivors (Davis et al., 1991), family caregivers of people with Alzheimer's disease (Fiore et al., 1983; Kiecolt-Glaser et al., 1988; Pagel et al., 1987), geriatric stroke patients (Norris et al., 1990; Stephens et al., 1987), and individuals who were recently bereaved (Finch et al., 1989; Lovell et al., 1993).

Findings suggest that negative and positive social interactions are independent predictors of psychological adjustment (e.g., Brenner et al., 1989; Manne & Zautra, 1989, Rook, 1984). Thus, it appears that negative and positive social interactions are separate constructs, and are not simply opposite ends of a single continuum. Moreover, in several studies comparing positive and negative elements of social
interactions, the elements perceived by the individual as negative were more consistently related to psychological well-being than were the perceived positive elements (e.g., Fiore et al., 1983; Kiecolt-Glaser et al., 1988; Rook, 1984).

Negative social interactions might be particularly salient in the interpersonal environments of people with HIV, given the stigma associated with the virus (Crandall & Coleman, 1992). Two qualitative studies have explored negative interpersonal interactions experienced by people living with HIV. Using a grounded theory approach, Limandri (1989) interviewed 29 men and women about their experience of having disclosed to others a stigmatizing condition such as HIV infection. For both disclosures to professionals and disclosures to family and friends, the individuals reported having received negative responses far more often than positive or neutral reactions (Limandri). Similarly, all 10 gay men with AIDS who participated in Bennett's (1990) in-depth interviews described having experienced rejection at least once as a result of having AIDS. These reported negative responses were experienced in interactions with a variety of individuals such as family members, friends, roommates, employers, and strangers. Moreover, the reactions ranged from direct and obvious, to subtle and covert.

As Bennett (1990) has suggested, quantitative research measuring the extent and impact of negative social interactions experienced by people with HIV could lead to the development of useful interventions. However, researchers have directed surprisingly little attention to studying the effects of negative social interactions on well-being in people with HIV. The results of four published reports (Hays et al., 1993; Lackner, Joseph, Ostrow, & Eshelman, 1993; Lackner, Joseph, Ostrow, Kessler et al., 1993; O'Brien et al., 1993) concerning people with HIV suggest that the relationship between
negative social interactions and well-being warrants further study in this population. However, it is difficult to draw further conclusions from those studies, given that the instrument used to assess negative social interactions was either a single-item scale (Hays et al., 1993) or an apparently modified 6-item measure with relatively unknown psychometric properties (Lackner, Joseph, Ostrow, & Eshelman; Lackner, Joseph, Ostrow, Kessler et al.; O'Brien et al.).

In the present study, stressor-specific unsupportive social interactions were examined using an instrument developed in a previous study (Ingram & Betz, 1995). The construct of stressor-specific unsupportive social interactions has been defined as unsupportive or upsetting responses that an individual receives from other people concerning a stressful event in his or her life (Ingram & Betz). Thus, stressor-specific unsupportive social interactions occur in the context of a stressful life event, which, in the present study, was living with HIV. Rook’s (1992) concept of negative social exchange, in contrast, encompasses distressing actions of others which may or may not take place in the context of a specific stressor.

The theoretical model of negative social interactions examined in the present study was Rook’s (1990) direct effect model (see Figure 1), which suggests that unsupportive social interactions have direct negative effects on well-being independent of life stress. Rook (1990) noted that the model refers only to situations in which life stress either precedes or occurs contemporaneously with unsupportive social interactions. In addition, Rook (1990) observed that the model does not take into account the possibility of reciprocal effects among life stress, unsupportive social interactions, and impaired well-being. Applying the model to the present study, the following variables were examined: (a) stressor-specific unsupportive social
interactions associated with having HIV, (b) multiple loss (the life stress variable), and 
(c) subjective well-being, self-reported physical health status, and immune function (the 
well-being indicators).

In addition, to further explore the effects of negative social interactions in the 
experience of people with HIV, the present study included an examination of the 
relationship between stressor-specific unsupportive social interactions and coping. 
In previous studies of people living with HIV, a variety of coping strategies have been 
examined. Researchers have found that active-behavioral coping was positively 
correlated with self-reported global ratings of physical health, and negatively correlated 
with disturbed mood in persons with HIV (Namir et al., 1987; Wolf, Balson, et al., 
1991; Wolf, Dralle, et al., 1991). A coping strategy that appears to be less adaptive is 
avoidance coping, which has been negatively correlated with psychological well-being 
in a sample of people living with HIV (Fleishman & Fogel, 1994; Kurdek & Siesky, 
1990). Moreover, a negative correlation has been found between passive coping and 
immune function in HIV-positive individuals (Goodkin et al., 1992).

However, given the serious measurement problems inherent in many of these and 
other studies of coping, it is difficult to draw conclusions about the nature and effects 
of coping among persons with HIV. In the present study, an attempt was made to use a 
coping instrument that is appropriate for HIV-positive individuals, and whose scoring 
procedure is based on psychometric data justifying the use of particular subscales. It 
was thought that exploring the relationship between unsupportive social interactions and 
coping might lead to a better understanding of how each of those variables in turn 
relates to well-being.
Negative Affectivity and Physical Health

As Watson and Pennebaker (1989) have demonstrated, self-reported measures of physical symptoms may contain a significant component of trait negative affectivity, which is a pervasive mood disposition. In contrast, trait negative affectivity does not operate as a confound for objective indicators of physical health, such as physician visits and laboratory measures of immune function. These conclusions raise concerns about the interpretability of findings in health research that are based exclusively on self-reported symptom measures.

Watson and Pennebaker have argued that researchers should not abandon self-report measures of physical health; rather, researchers should avoid interpreting those measures as indicators of objective organic health. In order to deal with this methodological concern, physical symptom scales should be used in conjunction with objective indicators of health status (Watson and Pennebaker). Moreover, investigators should include a measure of trait negative affectivity so that its influence can be identified and isolated (Watson and Pennebaker). In studies of physical well-being in persons living with HIV, additional research is needed which incorporates measures of negative affectivity as well as objective indicators of physical health.

Issues of Ethnicity and Gender in Research Design

Much of what is known about the experience of living with HIV is based on studies of gay White men (Cochran & Mays, 1991). Though research concerning gay White men with HIV is undoubtedly of great importance, there is a need for studies focusing on HIV-positive members of other groups as well. There are signs that some researchers have begun to pay greater attention to the role of ethnicity in the process of living with HIV (e.g., Ceballos-Capitaine et al., 1990; Mason, Marks, Simoni, Ruiz,
& Richardson, 1995; Ostrow et al., 1991; Szapocznik, 1995). At the same time, however, a number of recent published studies of people with HIV have included little or no information about the ethnic composition of the sample.

In addition, the experience of women living with HIV has been largely ignored in the empirical literature (Ickovics & Rodin, 1992). Most of the studies examined for this literature review failed to include any women in their samples. Although men continue to comprise the vast majority of persons with AIDS in the United States (CDC, 1994), the number and proportion of women with HIV and AIDS have increased rapidly in the past decade (Ickovics & Rodin). Women living with HIV may face a variety of special issues, including concerns related to child-bearing, the care of dependent children, and the lack of adequate support services designed to address problems encountered by women (Semple et al., 1993). Most women with HIV are African-American or Hispanic/Latina, and many are poor and less connected to formal community resources (Ickovics & Rodin; Mays & Cochran, 1988). Thus, the backgrounds and experiences of women with HIV may be quite different from those of men with HIV.

It is critical that researchers include women and people of ethnic minority background in studies of HIV-positive individuals. In addition, researchers should conduct data analyses for both the combined sample, and for subgroups (e.g., men and women, ethnic groups) separately. If, as in the present study, subgroups in a sample are too small to permit statistical comparisons between or among them, then, at a minimum, complete demographic characteristics of the sample should be reported. Even when results concerning women and people of ethnic minority background can be interpreted only as exploratory findings, presenting those analyses in published reports
may encourage other researchers to recognize the importance of including women and members of ethnic minority groups in studies of people with HIV.
CHAPTER III
METHOD

Participants

Research participants were recruited from among individuals participating in the patient cohort study at the Ohio State University AIDS Clinical Trials Unit (ACTU). Participation in the ACTU patient cohort is offered to individuals who were referred by their local physicians or were self-referred to the Ohio State University Infectious Disease Clinic. The patient cohort consists of persons who have been infected with HIV, and a limited number of persons who are not infected but who are at high risk for HIV.

The purpose of the ACTU patient cohort study is to collect longitudinal clinical and laboratory data which are used: (a) to help identify individuals who are eligible for experimental treatments of HIV or its complications, and (b) to better identify the natural history and time course of HIV infection (The Ohio State University AIDS Clinical Trials Unit, 1990).

During the initial appointment for individuals who have agreed to participate in the ACTU patient cohort, a detailed medical history is obtained, a brief physical exam is conducted by the cohort nurse, a blood sample is drawn, and skin tests are performed. In addition, participants in the cohort are asked to complete brief self-report measures of social support and perceived ability to cope with stress. During regular follow-up appointments, which are scheduled approximately every six months,
the physical examination, blood draw, and skin tests are repeated, and the participant again is requested to complete the self-report questionnaires.

Safeguards are included in the patient cohort study to minimize the potential for loss of confidentiality. Data collected in the cohort study are entered into an electronic database in which all patient identifiers other than the patient identification number have been removed. A list linking patients' names to their identification number is kept in a locked cabinet accessible only to the principal investigators in the cohort study and their authorized research personnel. For follow-up appointments, the patient identification code is used, and no name is required.

Individuals returning for a follow-up appointment in the ACTU patient cohort between mid-July and mid-September 1994 were given oral or written information concerning the present study by one of the ACTU research nurses. Specifically, the research nurse stated that the study is about stress, coping, and well-being in people living with HIV. The nurse also informed individuals that their participation in the study is voluntary, and that an individual's decision to decline to participate will have no effect on his or her right to continue receiving services from the ACTU. In addition, the nurse stated that participants would be asked to fill out a questionnaire packet which takes people an average of 45 minutes to one hour to complete, and that participants may work on the packet in the clinic or at home. The nurse also explained that participants would receive $10 cash, included in the packet, and that completed questionnaires should be returned to the researchers within one week in the provided postage-paid envelope. Finally, the nurse stated that the information requested in the questionnaire packet is completely anonymous and that researchers in the present study will not have access to participants' names or ACTU patient data.
Participants in the present study were 96 people living with HIV. Demographic characteristics of the sample are summarized in Table 1. Most of the participants were male, Caucasian, and gay (all of those who identified their sexual orientation as "gay or lesbian" were men). The average length of time that participants reported having known of their own HIV-positive status was approximately 4 years.

The sample was relatively well-educated, and nearly half of the participants were employed full-time. Most participants reported living alone or with one other person. Approximately two-thirds of the sample reported being in a partnered relationship; of these, more than half reported that their partner was HIV-positive.

The demographic characteristics of the women in the sample differed somewhat from those of the men, particularly in terms of sexual orientation, ethnicity, and income. Of the nine women in the sample who reported their sexual orientation, all identified as heterosexual. Consistent with previous studies of women with HIV/AIDS (see Ickovics & Rodin, 1992), the proportion of African Americans was greater in the female sample (30%) than in the male sample (7%), and women were generally of lower socio-economic status compared to men. The mean household income for the women in the present study ($15,271, SD = 13,885) was half that of the men ($30,416, SD = 22,392). In contrast, no significant differences were found in the means for women and men regarding age and the length of time the person had known she or he was HIV-positive.
Table 1

Demographic Characteristics of Participants

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Table 1 (continued)

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Measures

Happiness Measures. Happiness was assessed by the 2-item Happiness Measures (HM; Fordyce, 1977). As a measure of subjective well-being, the HM is thought to reflect both cognitive and affective content (Diener, 1984). The first item evaluates the global perceived quality of the respondent's happiness ("In general, how happy or unhappy do you usually feel?"). The 11-point response scale has descriptive phrases for each point. The lowest point on the scale is 0 = extremely unhappy (utterly depressed, completely down), and the highest point is 10 = extremely happy (feeling ecstatic, joyous, fantastic!). The second item asks the respondent to estimate the percentage of time he or she generally spends feeling happy, unhappy, and neutral. The respondent is asked to estimate these percentages such that they add up to 100%.

A combination score for the HM was derived by combining the scale score and the percent happy estimate in equal weights. Fordyce (1977) reported test-retest reliability estimates of .86 over a 2-week interval and .67 over a 4-month interval for the combination score. According to Larsen, Diener, and Emmons (1985), the magnitude of the test-retest reliabilities suggests that the components of subjective well-being measured by the instrument include both state and trait aspects. Validity evidence includes correlations with other measures of mood, life satisfaction, anxiety, depression, and negative affect (Fordyce; Larsen et al.; Stock, 1992). In addition, non-significant correlations were found between the HM and measures of social desirability (Fordyce). In a study evaluating the psychometric properties of several measures of subjective well-being and happiness, the single-item HM scales compared favorably with the multi-item measures, and consistently performed better than all of the other single-item scales (Larsen et al.).
Satisfaction With Life Scale. Global life satisfaction, which has been conceptualized as the cognitive or judgmental component of subjective well-being, was assessed by the Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985; see Appendix A). The SWLS consists of five items intended to measure the respondent's overall judgment of his or her life. Respondents are asked to rate the items using a 7-point scale ranging from 1 = strongly disagree to 7 = strongly agree (e.g., "In most ways my life is close to my ideal" and "If I could live my life over, I would change almost nothing"). Scores on the SWLS, which are obtained by summing across the 5 items, can range from 5 (low satisfaction) to 37 (high satisfaction). Estimates of internal consistency reliability have ranged from .83 to .93 (Brett, Brief, Burke, George, & Webster, 1990; Diener et al.; Larsen et al., 1985; Pavot & Diener, 1993; Pavot, Diener, Colvin, & Sandvik, 1991). Test-retest reliability estimates of .84 have been reported for both a 2-week interval and a 1-month interval (Pavot et al.). Using a 2-month interval, Diener et al. reported a test-retest reliability estimate of .82. Evidence supporting the validity of the SWLS includes high correlations with other measures of life satisfaction and moderate correlations with indices of self-esteem, reported symptoms, neuroticism, emotionality, and peer-reported satisfaction with life (Diener et al.; Pavot et al.). Correlations between the single-item HM scales (Fordyce, 1977) and the SWLS have ranged from .57 (Diener et al.) to .68 (Pavot et al.). In the present study, Cronbach's alpha was .85.

Sense of Coherence Scale. Sense of coherence was measured by the short form of the Sense of Coherence Scale (SOC Scale; Antonovsky, 1987; see Appendix B). The scale consists of 13 items intended to assess the extent to which an individual tends to see his or her life as having meaning, comprehensibility, and manageability. Responses for each item are based on a 7-point scale with two anchoring phrases. An
example of an item and its response scale is "When something happened, have you generally found that:"
(1 = you over-estimated or under-estimated its importance, 7 = you saw things in the right proportion). Five of the items are reverse scored, such as "Doing the things you do every day is:"
(1 = a source of deep pleasure and satisfaction, 7 = a source of pain and boredom). Scores are obtained by summing across the 13 items. The possible range of scores is 13 to 91, with higher scores indicating a stronger sense of coherence.

In a recent report summarizing the psychometric properties of the SOC Scale, Antonovsky (1993b) noted that the instrument has been used in 14 languages, with all social classes, and with adults of all ages. For example, the scale has been administered to groups such as Israeli male retirees, male patients at U.S. Veterans Administration clinics, mothers living on a kibbutz who have disabled children, Czech cancer patients, and minority homeless women living in the United States. According to Antonovsky (1993b), Cronbach's alpha in 26 studies using the 29-item version of the SOC Scale has ranged from .82 to .95. In 16 studies using the 13-item short form, coefficient alpha has ranged from .74 to .91 (Antonovsky, 1993b). Extensive evidence supporting the validity of the SOC Scale includes correlations with measures that can be grouped into four categories: (a) global orientation toward oneself and one's environment, (b) perceived stressors, (c) health and well-being, and (d) attitudes and behaviors (Antonovsky, 1993b). Cronbach's alpha for the present study was .91.

**Positive and Negative Affect Schedule.** Trait negative affect (NA) was assessed using the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988; see Appendix C). As Watson and Clark (1984) have described, trait NA is a pervasive disposition to experience unpleasant emotional states such as anger, scorn, guilt, revulsion, tension, and nervousness. The instrument contains 10 NA items and
10 positive affect items. The PANAS was selected as the trait NA measure for the present study because it appears to contain no somatic complaint or health-related items, unlike most other NA measures (see Watson, 1988a; Watson & Pennebaker, 1989). Examples of items from the NA scale include "afraid," "ashamed," "distressed," and "irritable." For each descriptor, respondents are asked to use a 5-point scale (ranging from 1 = very slightly or not at all to 5 = extremely) to rate the extent to which they have felt that way in general. Scores on the NA scale, which can range from 10 to 50, are calculated by summing across the 10 items.

In studies assessing the reliability and validity of the PANAS, several different temporal instructions have been used with the instrument (e.g., "today," "during the past few weeks," "during the past year," "in general, that is, on the average"). In the proposed study, the recency with which participants have learned that they are HIV-positive is expected to vary widely across the sample. Accordingly, the "general" instructions were deemed more appropriate than instructions imposing a specific time frame. The "general" instructions were thought to enable respondents to make an overall assessment of their feelings.

When accompanied by longer-term instructions (e.g., "general" or "past year"), the NA scale has demonstrated trait-like stability (Watson et al., 1988). A test-retest reliability estimate of .71 over an 8-week period has been reported for the NA scale using the "general" instructions (Watson et al.). In contrast, when used with shorter term instructions, the NA scale demonstrated less test-retest stability (e.g., estimates of .39 for the "today" instructions, and .48 for "past few weeks"), suggesting that the scale is sensitive to fluctuations in mood when used in that format (Watson et al.). An internal consistency reliability estimate of .87 has been reported for the NA scale using the "general" instructions (Watson et al.). Moreover, across a range of temporal
instructions, Cronbach's alpha coefficients for the NA scale have been uniformly high (from .84 to .88), which suggests that the internal consistency of the scale is not affected by time frame (Watson et al.; Watson, 1988b). Validity evidence includes correlations at predicted levels between the NA scale and measures of depression, anxiety, and general psychological distress (Watson et al.). In the present study, Cronbach's alpha was .90.

Social Support Questionnaire. Global perceptions of available social support were measured using an adapted version of the 6-item form of the Social Support Questionnaire (SSQ-6; Sarason, Sarason, Shearin, & Pierce, 1987). The first part of each item assesses the number of people the respondent believes he or she can rely on in times of need, in each of a variety of situations. Unlike the original form of the SSQ-6, which calls for the respondent to list the initials of each of those individuals, the adapted version of the instrument asks the respondent to indicate only the number of people (e.g., "How many people can you really count on to be dependable when you need help?," "How many people can you really count on to care about you, regardless of what is happening to you?"). In the second part of each item, respondents are asked to rate how satisfied they are with the perceived support available in that particular situation, using a 6-point scale ranging from very dissatisfied (1) to very satisfied (6). Scores for each respondent are the mean number of support persons (Number scale) and the mean level of satisfaction (Satisfaction scale) across the six items. Internal consistency reliability estimates for both scales have ranged from .90 to .93 (Sarason et al.). Evidence for the validity of the SSQ-6 includes correlations with various social support indices and personality variables (Sarason et al.). The SSQ-6 has been used to assess social support in a variety of samples, including people living with HIV (e.g., Hays, Turner, & Coates, 1992; Kurdek & Siesky, 1990). In the
present study, Cronbach's alpha was .89 for the Number scale and .96 for the Satisfaction scale.

**Center for Epidemiologic Studies Depression Scale.** Depressive symptomatology was assessed using the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977; see Appendix D). The CES-D is a self-report measure consisting of 20 items (e.g., "I was bothered by things that usually don't bother me," "I felt sad," and "I had crying spells"). Respondents are asked to indicate how often they experienced each symptom during the past week, using a 4-point scale which ranges from 0 = rarely or none of the time (less than 1 day) to 3 = most or all of the time (5-7 days). Four of the items are worded in the positive direction and are reverse scored (e.g., "I enjoyed life"). Scores on the CES-D, which are obtained by summing across the 20 items, can range from 0 to 60, with higher scores indicating greater depression. For purposes of the proposed study, an item assessing suicidal ideation was added to the CES-D on an exploratory basis. Radloff reported internal consistency reliability estimates (coefficient alpha) ranging from .84 to .90. Evidence supporting the validity of the CES-D included correlations with clinical ratings of depression, the severity of negative life events, and other self-report measures of depression (Radloff). The CES-D has been used in several studies of people with HIV (e.g., Fleishman & Fogel, 1994; Hays, Turner, & Coates, 1992; Kelly et al., 1993; Schneider, Taylor, Hammen, Kemeny, & Dudley, 1991). In the present study, coefficient alpha was .94.

**Health-related quality-of-life questionnaire.** Health-related quality-of-life was measured by a 20-item instrument developed specifically for use in studies of HIV (Bozzette, Hays, Berry, Kanouse, & Wu, 1995). Adapted from scales used in the Medical Outcomes Study, the instrument was designed to provide a brief but psychometrically sound measure of the following dimensions of health: physical...
functioning, role functioning, energy/fatigue, social functioning, cognitive functioning, pain, current health perceptions, and mental health. The number of response choices varies across the items, ranging from three to six options per item. Examples of items from the questionnaire along with their respective response choices and subscales include: from the physical functioning scale, "How much does your health limit the kinds of moderate activities you can do, like moving a table or carrying groceries?" (1 = limited a lot to 3 = not limited at all); and from the energy/fatigue scale, "How much of the time during the past 4 weeks did you feel tired?" (1 = all of the time to 6 = none of the time). Some items are reverse scored, and all items are re-coded using a 0 to 100 scale, with 0 indicating poorest health and 100 indicating best health. Scores are then obtained for each of the eight subscales by calculating the mean score for the items comprising that subscale. In addition, a Perceived Health Index is calculated as a global score by summing weighted values of six of the subscales (physical functioning, pain, energy/fatigue, mental health, social functioning, and role functioning). To derive the subscale weights for the Perceived Health Index, Bozzette et al. computed a regression equation representing the independent contribution of the subscales in current health ratings reported by respondents in their sample.

Bozzette et al. (1995) assessed the reliability and validity of their questionnaire in a sample of 1,934 people with HIV. Internal consistency reliability estimates were reported for five of the subscales, ranging from .78 (cognitive functioning) to .85 (mental health). For the Perceived Health Index, the alpha coefficient was .94. Evidence supporting the validity of the instrument includes correlations with the number of reported symptoms and the number of reduced activity days. In the present study, Cronbach's alpha was .90.
**Ways of Coping Scale.** Coping was measured using a revised version of the Ways of Coping Scale (WOC; Folkman & Lazarus, 1985). The WOC has been used, with some modification, in several studies of coping with HIV (e.g., Kurdek & Siesky, 1990; Nicholson & Long, 1990; Taylor et al., 1992). The version of the WOC used in the proposed study contains 56 items concerning a broad range of cognitive and behavioral strategies people use to deal with a stressor (e.g., "I talked to someone to find out more," "I tried to keep my feelings to myself," and "I tried to forget the whole thing"). The 56-item scale consists of 50 items from the WOC-Cancer Version (WOC-CA) developed by Dunkel-Schetter, Feinstein, Taylor, and Falke (1992). One of the items from the WOC-CA was re-worded and divided into two items (i.e., in the item "Tried to make myself feel better by eating, drinking, smoking, or drug use," the word "over-eating" was substituted for "eating," and the portion of the item concerning "drinking, smoking, or drug use" became the basis for a separate item). Two other coping strategies commonly used by persons with HIV were added on an exploratory basis ("attended support groups" and "meditated, or used relaxation or visualization"), as suggested in a study using a revised version of the WOC to assess coping with thoughts of developing AIDS (Taylor et al.). Three other HIV-related coping strategies also were added on an exploratory basis ("ate more healthy foods than usual," "exercised more than usual," and "became more involved in community activism"). Respondents were asked to rate how often they have used each method to deal with the stressful part of having HIV. The 4-point response scale ranges from 0 = does not apply/never to 4 = very often.

Scores for each of five subscales ("seek and use social support," "focus on the positive," "distancing," "cognitive escape-avoidance," and "behavioral escape-avoidance") were calculated by summing across the items that contribute to the
particular subscale. Dunkel-Schetter et al. (1992) derived the subscales from a factor analysis of the WOC-CA in a sample of 603 cancer patients. Internal consistency reliability estimates for the five subscales ranged from .74 to .86 (Dunkel-Schetter et al.). Evidence for the validity of the WOC-CA includes significant relationships in regression analyses between all five subscales and emotional distress (Dunkel-Schetter et al.). In the present study, Cronbach's alpha values were as follows: Seek and Use Social Support, .75; Focus on the Positive, .77; Distancing, .73; Cognitive Escape-Avoidance, .59; and Behavioral Escape-Avoidance, .76.

The WOC was chosen for purposes of this study over numerous other coping measures. Some of the other measures were rejected because their psychometric properties had not been assessed thoroughly (e.g., the Multidimensional Coping Inventory; Endler & Parker, 1990). Other scales were disregarded because their authors failed to provide an adequate explanation or justification for their method of scale development and scoring (e.g., a 47-item coping inventory developed for studies of persons diagnosed with AIDS; Namir et al., 1987). Some instruments were rejected because they contained several items deemed appropriate for a discrete problem or event, but inappropriate in the assessment of coping with a chronic condition such as HIV infection. For example, the COPE (Carver, Scheier, & Weintraub, 1989) includes items such as "I take additional action to get rid of the problem," "I get used to the idea that it happened," and "I reduce the amount of effort I'm putting into solving the problem." An additional concern about the COPE is that its authors conducted a factor analysis but then decided to separate some of the identified factors into more than one subscale for scoring purposes (Endler & Parker). Finally, no consideration was given to the Responses to HIV Scale (Reed, Kemeny, Taylor, Wang, & Visscher, 1994), a 47-item adaptation of the WOC containing substantial content.
modifications for persons living with HIV and AIDS. Although the Responses to HIV Scale appears to be a potentially useful and psychometrically sound instrument for examining coping in people with HIV, the measure was not described in a published report until after the start of the present investigation.

The WOC has received favorable reviews (e.g., Tennen & Herzberger, 1985). However, a major concern regarding the WOC is the questionable stability of its factor structure (Conger, 1992). This issue is particularly important because subscales used in scoring the WOC have been based on factor analytic results. Though factor analyses of the WOC typically reveal between six and nine factors (Gibson & Brown, 1992), as few as 2 and as many as 28 factors have been reported (Somerfield & Curbow, 1992). Moreover, across studies in which the same or similar numbers of factors have been identified, the structure of those factors often has differed (Endler & Parker, 1990). The inconsistency in reports of the instrument's factor structure may be due in part to serious methodological problems in factor analytic procedures employed in several studies of the WOC. For example, in a study of the original version of the WOC, Folkman & Lazarus (1980) used a sample of only 100 respondents to factor analyze their 68-item instrument. In addition, some factor analytic studies of the WOC and many studies of other coping measures have used an orthogonal rotation procedure such as Varimax, in the absence of any empirical justification for expecting coping factors to be uncorrelated (e.g., Folkman & Lazarus, 1980; Jarrett, Ramirez, Richards, & Weinman, 1992). To allow for the possibility of intercorrelated factors, an oblique rotation procedure should be chosen (R. C. MacCallum, personal communication, February 8, 1993).

Tennen and Herzberger (1985) have noted that instead of using subscales derived from previous studies, some researchers employing the WOC have factor analyzed data
obtained from their own samples in order to identify the instrument's factor structure and subscales. In the present study, however, it would have been inappropriate to conduct a factor analysis of the WOC data, because the sample size was too small to satisfy Cattell's (1952) guideline of at least four individuals per each item to be factor analyzed. Consequently, it became necessary to use factor analytic results from a previous study in deciding how to score the WOC in the present investigation. Tennen and Herzberger have advised researchers to generalize factor analytic results only to populations that are similar to the sample upon which the analysis was based. Moreover, Tennen & Herzberger have warned that even in studies using samples drawn from the same population, patterns of coping with one aspect of a stressor may not apply to other aspects of the stressful situation (e.g., in people coping with serious illness, strategies for coping with pain may differ from strategies for coping with invasive treatment [p. 694]). Unfortunately, factor analytic results from previous studies using the WOC in samples of people with HIV are not readily generalizable to the present study. For example, in some previous studies of HIV-positive persons, WOC scoring was based either on factor analytic results that apparently were derived from a different population (e.g., Nicholson & Long, 1990) or on subscales whose origin was unspecified (e.g., Kurdek & Siesky, 1990). In another study of the WOC, the factor analysis was conducted using a combined sample of HIV-positive and HIV-negative gay men who were asked to indicate the ways they had coped with "thoughts of developing AIDS" (Taylor et al., 1992).

In the absence of reported studies using appropriate methods to factor analyze WOC data in samples of HIV-positive people concerning strategies employed to cope with the stressful part of having HIV, it appeared that the Dunkel-Schetter et al. (1992) study provided the most defensible basis for scoring the WOC in the present
investigation. The five-factor solution derived by Dunkel-Schetter et al. was based on appropriate factor analytic techniques, including oblique rotation, in a relatively large sample. In addition, there was thought to be some potential similarity between the sample of cancer patients in the Dunkel-Schetter et al. study and the sample of people with HIV in the present investigation. In both studies, participants were asked about how they cope with the stressful part of what is for them a chronic and life-threatening physical condition.

**Unsupportive Social Interactions Inventory.** Stressor-specific unsupportive social interactions were measured using the 24-item short form of the Unsupportive Social Interactions Inventory (USII; Ingram, 1991; Ingram & Betz, 1995). The USII was designed to assess unsupportive or upsetting responses that a person receives from other people concerning a stressful event in his or her life. Each item represents a type of interpersonal response that is potentially unsupportive or upsetting. In the present study, having HIV was the stressful event to which the USII referred. Six additional items from the original 79-item USII were included at the end of the 24-item scale on an exploratory basis in the present study because they were thought to be particularly relevant to people with HIV. The 24-item short form of the USII was developed by conducting a principal factors analysis on the original 79 items using data from a sample of 351 college students (Ingram & Betz). A four-factor solution was found to be the most interpretable, and the resulting factors were labeled Distancing, Bumbling, Minimizing, and Blaming. For each factor, the six items with the highest factor loadings were deemed to comprise a subscale and were retained for the 24-item short form of the USII. Items were adapted for this study by replacing the words "the event" with "my having HIV," and by making minor additional changes where necessary to preserve the meaning of the item (e.g., where initial revisions would produce the
phrase "my having HIV was a negative one," that phrase was changed to "my having HIV was a difficult situation"). Examples of items from the 24-item short from include: from the Distancing subscale, "When I was talking to someone about my having HIV, he or she did not seem to want to hear about it"; from the Bumbling subscale, "Someone didn't seem to know what to say, or seemed afraid of saying/doing the 'wrong' thing"; from the Minimizing subscale, "Someone felt I was over-reacting to my having HIV"; and from the Blaming subscale, "Someone made comments which blamed me or tried to make me feel responsible for having HIV." Examples of items added on an exploratory basis include "After becoming aware of my having HIV, someone avoided me or had less contact with me than usual" and "Someone's outlook on my having HIV was so pessimistic that it made me feel even worse." For each item, respondents are asked to rate "How much of this I received" (0 = none to 4 = a lot). Scores for the total scale and subscales are obtained by summing across the relevant items. Subscales for the present study were identified by conducting a factor analysis of USII data provided by this sample. The range of scores for the 24-item USII total scale is 0 to 96.

Internal consistency reliability coefficients (Cronbach's alpha) of .96 and .86 have been reported for the original 79-item USII and the 24-item short form, respectively (Ingram, 1991; Ingram & Betz, 1995). Correlations between both the 79-item and 24-item forms of the USII and measures of social support, stress, physical symptoms, and psychological symptoms provided evidence of construct validity (Ingram; Ingram & Betz).

Multiple loss scale. Multiple loss and grief reactions were assessed using an instrument developed for a concurrent study (Jones, 1994; see Appendix E). Respondents were asked to list the initials of those persons whose death represents a
significant loss, and to complete a separate questionnaire for up to three persons whose
deaths represent the most significant losses. Grief reactions and facts related to each
person whose death represents one of the most significant losses were assessed using a
modified form of the Texas Revised Inventory of Grief (TRIG; Faschingbauer,
DeVaul, & Zisook, 1977). The TRIG begins with a series of questions about the
nature of the respondent's relationship to the deceased and the recency of the death, and
how suddenly and unexpectedly the person died. Part I consists of eight items which
assess past feelings of grief and grief-related behaviors (e.g., "I was unusually irritable
after this person died" and "I was angry that the person who died had left me"). Part II
is a 13-item scale which assesses present grief (e.g., "I still cry when I think of the
person who died," and "I am unable to accept the death of the person who died"). For
Parts I and II, respondents are asked to rate each item from 1 = completely false to 5
= completely true.

Scores for Past Behaviors are obtained by summing across the eight items in Part
I and can range from 8 to 40, with higher scores indicating greater amounts of past
grief-related behavior. Scores for Present Feelings are obtained by summing across the
13 items in Part II and can range from 13 to 65, again with higher scores indicating
greater amounts of present grief feelings. For purposes of this study, an overall
Present Grief score was calculated by summing across the Part II scores for each loss
and calculating a mean grief score for each respondent.

Several additional changes to the TRIG were made for the purposes of this study.
An additional question assessing the respondent's caregiving relationship to the
deceased was added. One of the true/false items from the 5-item section of "Related
Facts" was moved to the Part II scale ("I feel that I have really grieved for the person
who died") to allow for more variability in responding, and one item--"I feel that I am
now functioning about as well as I was before the death"--was to changed to
"Compared to how I was functioning before the person died, I feel that I am now
functioning ...." and the response alternatives were changed to 1 = much worse to 5 =
much better to facilitate interpretation of responses. One item was changed from "I
attended the funeral of the person who died" to "I attended the funeral (or memorial) of
the person who died," and the item "I learned of the person's death in a timely
manner" was added.

Faschingbauer (1981) reported alpha coefficients ranging from .77 to .81 for the
8-item Past Behaviors scale and an alpha coefficient of .86 for the 13-item Present
Feelings scale. Construct validity was supported based on two hypotheses: (a) that
bereaved females would score higher on Present Feelings than would males, because
emotional awareness and expression traditionally have been suppressed among Western
males, and (b) that because of their greater cultural closeness, spouses would likely
experience greater levels of grief emotion than would other non-blood relatives. In an
initial sample of 57 psychiatric outpatients who had lost a loved one to death, both
hypotheses were supported (Faschingbauer et al., 1977).

In a study of 86 people who had lost more than one person to AIDS-related death
in the past three years, Jones (1994) reported a Cronbach's alpha coefficient of .90 for
the Present Feelings scale. Evidence of construct validity includes findings that Present
Grief was significantly positively correlated with depression, and significantly
negatively correlated with happiness and satisfaction with life (Jones). In the present
study, Cronbach's alpha for the Present Feelings scale was .90.

Qualitative questionnaire. An open-ended question invited participants to write
down any additional comments about thoughts or feelings they may have concerning
their experiences of living with HIV (See Appendix F).
Health status inventory. Recent hospitalization, CD4 cell count, and recent illnesses were assessed by an inventory developed for this study (See Appendix G). The first part of the inventory asks respondents how many days they have been hospitalized overnight in the past six months.

In the second part of the inventory, respondents are asked to report their most recent CD4 cell count, and the month and year when that count was taken. Derived from flow cytometer analysis of an individual's blood sample, CD4 cell count denotes the absolute number of CD4 lymphocytes per cubic millimeter of blood. CD4 (helper/inducer) lymphocytes enhance the immune response by stimulating the production of antibodies. HIV infection destroys CD4 cells, thereby inhibiting immune function (Kiecolt-Glaser & Glaser, 1988). For individuals whose immune system has not been impaired, CD4 counts of more than 1,000 per cubic millimeter are common; for persons in the final stages of HIV infection, CD4 counts often drop below 200 per cubic millimeter (Wolf, Dralle, et al., 1991). CD4 cell count is considered the most widely used indicator of immune suppression in HIV infection, and it has been employed as an outcome variable in a number of psychoimmunological studies of persons with HIV (e.g., Perry et al., 1992; Rabkin et al., 1991). In a sample of 221 HIV-positive individuals, many of whom had some HIV-related symptoms but none of whom met criteria for the final stages of AIDS, Perry et al. found that 36% of the sample had CD4 counts of more than 500, 49% had counts between 200 and 500, and 15% had counts below 200. Similarly, in a sample of 124 HIV-positive men who did not meet the diagnostic criteria for AIDS, 30% had CD4 counts of more than 500, 41% had counts between 250 and 500, and 29% had counts of less than 250 (Rabkin et al., 1991). In a study of 1,934 men and women with advanced HIV disease, 26% had CD4 counts of more than 200, 52% had counts between 50 and 200, and 22% had counts
below 50 (Bozzette et al., 1995). In the present study, consistent with previous research about coping with HIV/AIDS (e.g., Reed et al., 1994), CD4 cell count data were included in the analyses if the respondent reported that his or her count was taken within the past six months.

In the third part of the inventory, respondents are asked to indicate whether, in the past six months, they had experienced certain illnesses. The list of 15 illnesses which are commonly, but in some instances not exclusively, associated with HIV include: CMV (cytomegalovirus), hairy leukoplakia, Kaposi's sarcoma/KS, pneumocystis/PCP, toxoplasmosis, and vaginitis or vaginal yeast infection. In addition, respondents are asked to list any other HIV-related illnesses they had experienced in the past six months. Scores are obtained by calculating the total number of reported illnesses.

Demographic questionnaire. A demographic questionnaire assessed variables such as the participant's sex, age, race/ethnicity, sexual orientation, relationship status, level of education, socio-economic status, employment status, and length of time knowing that he or she is HIV-positive (see Appendix H).

Procedure

When an individual agreed to participate in the present study, the research nurse handed him or her a packet which included the questionnaire booklet, a small envelope containing $10 cash, and a large stamped envelope addressed to the researcher. The questionnaire booklet contained instruments arranged in the following order: the Happiness Measures, the Satisfaction With Life Scale, the Sense of Coherence Scale, the Positive and Negative Affect Schedule, the Social Support Questionnaire, the Center for Epidemiologic Studies Depression Scale, the measure of health-related quality-of-life, the Ways of Coping Scale, the Unsupportive Social Interactions
Inventory, the multiple loss scale, the qualitative questionnaire, the health status inventory, and the demographic questionnaire. The sequence of the instruments was designed to control for possible order effects. For example, to avoid order effects that might arise from instruments that measure constructs with a negative valence (e.g., the Unsupportive Social Interactions Inventory, and the multiple loss questionnaire), instruments that were intended to measure the respondent's global, overall appraisals (e.g., the Happiness Measures, the Satisfaction with Life Scale, and the Sense of Coherence Scale) were placed at the beginning of the booklet. Moreover, instruments designed to assess global appraisals were placed before the HIV-specific scales (e.g., the Ways of Coping Scale, and the measure of health-related quality-of-life). In addition, the health status inventory, which was developed for this study, and the multiple loss measure, which was developed for a concurrent investigation, were placed in the latter part of the booklet, followed by the demographic questionnaire.

A written debriefing statement (see Appendix I) inserted in the back of the booklet explained the purposes of the study and indicated that ACTU staff will provide participants with a summary of the research findings upon request. The debriefing statement also included information about support groups and other services available in the central Ohio area for people with HIV.

A total of 150 questionnaire booklets were distributed during the 8-week period of data collection. Of these, 97 booklets were returned, for a return rate of 65%. One of the 97 packets was returned in its entirety, uncompleted, accompanied by a note apologizing for the delay in mailing the packet and stating that the writer's husband was too ill to complete the booklet.
Data Analysis

A principal factors analysis with an oblique rotation was conducted on the Unsupportive Social Interactions Inventory in an attempt to examine the instrument's factor structure in this sample of people living with HIV.

Means, standard deviations, ranges, and internal consistency reliability estimates were calculated for the measured variables. Intercorrelations among the measured variables were computed.

Finally, three sets of hierarchical multiple linear regression models were evaluated. The first two sets of regression models were analyzed using each of the well-being measures as criterion variables (happiness, satisfaction with life, depression, health-related quality-of-life, recent hospitalization, recent illnesses, and CD4 cell count). For equations in which health-related quality-of-life was the criterion variable, negative affectivity was entered as an additional predictor.

In the first set of regression equations, which were designed to assess Antonovsky's theoretical framework, the predictors were entered in the following order: (a) present grief (as the stressor measure), (b) sense of coherence, (c) social support (as a generalized resistance resource), and (d) the interaction of sense of coherence and social support.

The second set of regression equations was intended to test the hypothesis that unsupportive social interactions would account for a significant amount of the variance in well-being beyond the variance accounted for by social support. Accordingly, predictors in the second set of models were entered in the following sequence: (a) present grief, (b) social support, and (c) unsupportive social interactions.

The third set of regression equations was designed to test the hypothesis that various kinds of unsupportive social interactions would have differential utility in
predicting the use of certain coping strategies. In the third set of regression equations, all of the subscales from the Unsupportive Social Interactions Inventory were entered as predictors in a single step. Separate equations were evaluated using each of five coping strategies as the criterion variable (seek and use social support, focus on the positive, distancing, cognitive-escape avoidance, and behavioral escape-avoidance).
CHAPTER IV
RESULTS

Factor Analysis of the Unsupportive Social Interactions Inventory

The 30 items from the USII were subjected to an exploratory common factor analysis using the SAS program (SAS Institute, 1989). A non-iterative procedure was used with squared multiple correlations as the prior communality estimates.

The eigenvalues for the first 10 factors are presented in Table 2. When the eigenvalues were plotted, the scree test suggested retaining either four or five factors. To allow for the possibility of intercorrelated factors, an oblique (Harris-Kaiser) rotation was performed for the four- and five-factor models.

The 30 USII items were then subjected to an additional oblique rotation using the TARROT program (Browne, 1992). In this analysis, for the four- and five-factor models, a partially specified target matrix of loadings was constructed based on the results of the Harris-Kaiser rotation. For each loading that was expected to be low or trivial, a zero was placed in the target matrix; for all other loadings, an unconstrained value was assigned to the target matrix. The unrotated factor matrix was then rotated toward the target matrix.

The four-factor solution, which was found to be more interpretable than the five-factor model, accounted for 79% of the common variance. The loadings for the 30 items on the four factors and the final communality for each item are presented in Table 3.
After the pattern of high and low loadings on each of the factors was examined, the factors were labeled Patronizing, Blaming, Intruding, and Self-Absorbed. The Patronizing factor appears to reflect condescending responses that a person might receive from others about his or her having HIV. The Blaming factor appears to represent responses of criticism and fault-finding. The Intruding factor seems to represent responses from others that are overbearing, and it includes responses that are invasive or prying, as well as attempts to force optimism or to downplay the concerns of the person with HIV. The Self-Absorbed factor appears to imply responses in which the primary focus is on the person doing the responding (e.g., a focus on that person's point of view, needs, or emotions), rather than on the person with HIV.

When the factor analytic results from the present study were compared with results from the college student sample in the original USII study, similarities were identified in the factor structure across the two samples. For example, four of the five items that loaded highly on the Blaming factor in the present study are items from the Blaming subscale in the original USII study. In addition, four of the six highest loading items on the Intruding factor in the present study are items from the Minimizing subscale in the previous USII study. Moreover, all of the items that loaded highly on the Self-Absorbed factor in the present study (other than items that were included on an exploratory basis) were from the Distancing or Bumbling subscales in the original USII study. In contrast, the items that loaded highly on the Patronizing factor include items from each of the four original USII subscales.

In the present study, USII factor intercorrelations ranged from negligible (-.03 between Intruding and Self-Absorbed) to small (-.20 between Intruding and Blaming).

In addition to a Total Score for the 24-item USII, subscale scores were calculated for each of the four factors in the present study. Each subscale included the items with the highest positive loadings on its corresponding factor (see Table 3); loadings of
items on their respective factors ranged from .44 to .92. The six USII items that were used in the present study on an exploratory basis were included in the subscale scores, but not in the USII Total Score.

Estimates of internal consistency were computed for the USII. Cronbach's alpha values were as follows: Total scale (24 items), .93; Patronizing (6 items), .84; Blaming (5 items), .87; Intruding (6 items), .76; and Self-Absorbed (13 items), .91.
Table 2

Eigenvalues for First 10 Factors Obtained from Non-Iterative Principal Axis Factoring of the Unsupportive Social Interactions Inventory

<table>
<thead>
<tr>
<th>Factor</th>
<th>Eigenvalue</th>
<th>% of Common Variance</th>
<th>Cumulative Common Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>11.9</td>
<td>58.0</td>
<td>58.0</td>
</tr>
<tr>
<td>2</td>
<td>1.8</td>
<td>8.9</td>
<td>66.8</td>
</tr>
<tr>
<td>3</td>
<td>1.4</td>
<td>6.8</td>
<td>73.6</td>
</tr>
<tr>
<td>4</td>
<td>1.2</td>
<td>5.8</td>
<td>79.4</td>
</tr>
<tr>
<td>5</td>
<td>1.0</td>
<td>5.1</td>
<td>84.5</td>
</tr>
<tr>
<td>6</td>
<td>0.8</td>
<td>3.9</td>
<td>88.4</td>
</tr>
<tr>
<td>7</td>
<td>0.7</td>
<td>3.3</td>
<td>91.7</td>
</tr>
<tr>
<td>8</td>
<td>0.6</td>
<td>2.9</td>
<td>94.6</td>
</tr>
<tr>
<td>9</td>
<td>0.5</td>
<td>2.3</td>
<td>96.9</td>
</tr>
<tr>
<td>10</td>
<td>0.4</td>
<td>2.0</td>
<td>98.9</td>
</tr>
</tbody>
</table>

Note. n = 96.
### Table 3

**Factor Loadings for 30 Items from the Unsupportive Social Interactions Inventory—Target Rotation**

<table>
<thead>
<tr>
<th>Abbreviated item</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>20. Did things for me that I wanted to do and could've done myself(^1)</td>
<td>.84</td>
</tr>
<tr>
<td>21. Discouraged me from expressing feelings such as anger, hurt, or sadness(^1)</td>
<td>.72</td>
</tr>
<tr>
<td>26. Acted cold, aloof, or nasty toward me(^1)</td>
<td>.60</td>
</tr>
<tr>
<td>10. Seemed disappointed in me(^1)</td>
<td>.50</td>
</tr>
<tr>
<td>27. Avoided contact with me or had less contact than usual(^1)</td>
<td>.45</td>
</tr>
<tr>
<td>22. Felt that it could've been worse or wasn't as bad as I thought(^1)</td>
<td>.44</td>
</tr>
<tr>
<td>19. Told me that I had gotten myself into the situation in the first place, and now must deal with the consequences(^2)</td>
<td>.28</td>
</tr>
<tr>
<td>8. &quot;I told you so,&quot; or similar comment(^2)</td>
<td>-.13</td>
</tr>
<tr>
<td>1. Felt that I was over-reacting to having HIV(^2)</td>
<td>-.16</td>
</tr>
<tr>
<td>3. &quot;Should/shouldn't have&quot; comments about my role in having HIV(^2)</td>
<td>.06</td>
</tr>
<tr>
<td>24. Blaming me, trying to make me feel responsible for having HIV(^2)</td>
<td>.42</td>
</tr>
<tr>
<td>14. Felt that I should focus on the present and/or the future, and that I should forget about what's happened and get on with my life(^3)</td>
<td>-.06</td>
</tr>
<tr>
<td>7. Said I should look on the bright side(^3)</td>
<td>-.04</td>
</tr>
<tr>
<td>12. Felt that I should stop worrying about having HIV and just forget about it(^3)</td>
<td>.40</td>
</tr>
<tr>
<td>6. Responded with uninvited physical touching, e.g., hugging(^3)</td>
<td>.28</td>
</tr>
<tr>
<td>17. Told me to be strong, to keep my chin up, or that I shouldn't let it bother me(^3)</td>
<td>-.10</td>
</tr>
<tr>
<td>13. Asked &quot;why&quot; questions about my role in having HIV(^3)</td>
<td>.21</td>
</tr>
<tr>
<td>29. Understood that having HIV was difficult, but didn't understand extent of impact on me(^4)</td>
<td>-.04</td>
</tr>
<tr>
<td>30. Someone's outlook on it was so depressing/pessimistic that it made me feel even worse(^4)</td>
<td>-.04</td>
</tr>
</tbody>
</table>

*(table continues)*
<table>
<thead>
<tr>
<th>Abbreviated item</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>4. Didn't seem to know what to say, or seemed afraid of saying/doing the &quot;wrong&quot; thing</td>
<td>-0.07</td>
</tr>
<tr>
<td>11. Changed the subject before I wanted to</td>
<td>0.04</td>
</tr>
<tr>
<td>28. Talked with another person about my having HIV, despite my request for confidentiality or without checking with me first</td>
<td>-0.12</td>
</tr>
<tr>
<td>18. Didn't seem to want to hear about it</td>
<td>0.16</td>
</tr>
<tr>
<td>5. Refused to provide the type of help/support I was asking for</td>
<td>0.28</td>
</tr>
<tr>
<td>23. From voice tone, expression, or body language, I got the feeling he/she was uncomfortable talking about it</td>
<td>0.40</td>
</tr>
<tr>
<td>2. When I was talking about it, person didn't give me enough time, or made me feel like I should hurry</td>
<td>-0.06</td>
</tr>
<tr>
<td>15. Tried to cheer me up when I wasn't ready to</td>
<td>0.06</td>
</tr>
<tr>
<td>25. Someone who definitely knew acted as if it had never happened</td>
<td>0.26</td>
</tr>
<tr>
<td>9. Seemed to be telling me what he/she thought I wanted to hear</td>
<td>-0.27</td>
</tr>
</tbody>
</table>

Note. Items are numbered in the order they were presented on the USII. Items 1 through 24 comprise the 24-item version of the USII. Items 25 through 30 were used on an exploratory basis in the present study. h² = final communality; Factor 1 = Patronizing; Factor 2 = Blaming; Factor 3 = Intruding; Factor 4 = Self-Absorbed. Superscripts denote items comprising USII subscales: a = Patronizing scale item; b = Blaming scale item; c = Intruding scale item; d = Self-Absorbed scale item. The USII is copyrighted by K. M. Ingram, 1995. All rights reserved.
Descriptive Statistics

Table 4 presents the means, standard deviations, and ranges for the measured variables. Participants reported moderate levels of stressor-specific unsupportive social interactions. The mean for the USII Total Score in the present study was 25.90 (SD = 17.81), somewhat lower than the mean of 30.55 (SD = 15.78) found in a sample of college students for unsupportive responses received from others concerning the most negative event the person had experienced in the past 12 months (Ingram & Betz, 1995). Table 5 presents the USII items with the lowest and highest means in the present study.

The mean Present Grief score of 36.14 (SD = 10.91) was nearly identical to the mean of 37.0 (SD = 9.6) reported by Jones (1994) in a study of individuals who had experienced AIDS-related multiple loss. Participants in the present study reported lower levels of sense of coherence (M = 56.03, SD = 16.12) compared to samples in eight of nine previous studies of the 13-item version of the SOC Scale (Antonovsky, 1993b). The eight studies cited by Antonovsky, in which the SOC mean ranged from 68.7 (SD = 10.0) to 58.5 (SD = 12.1), included samples of U.S. faculty members, undergraduates, and male patients at Veteran’s Administration clinics, as well as adolescents and Israeli Kibbutz residents. A study of U.S. minority homeless women (Nyamathi, 1991) was the only study noted by Antonovsky in which the SOC mean was lower (M = 55.0, SD = 0.7) than in the present study.

For the Social Support Questionnaire, no normative data were available from previous studies of people with HIV. The mean on the SSQ-6 Satisfaction scale in the present study was 4.61 (SD = 1.49), which was similar to means found by Ingram, Corning, and Schmidt (1995) in a sample of homeless women (M = 4.65, SD = 1.19), and a sample of low-income housed women (M = 4.72, SD = 1.26).

Means on the Ways of Coping Scale in the present study were lower on Seek and Use Social Support (M = 22.74, SD = 6.34) and Focus on the Positive (M = 14.75, SD
than were the means found by Jones (1994) for those coping scales ($M = 25.1$, $SD = 6.3$; $M = 17.4$, $SD = 5.1$, respectively). Participants in the present study reported greater use of Distancing ($M = 27.67$, $SD = 6.36$), Cognitive Escape-Avoidance ($M = 19.99$, $SD = 5.36$), and Behavioral Escape-Avoidance ($M = 13.90$, $SD = 5.77$), in comparison to participants in the Jones study ($M = 23.5$, $SD = 9.4$; $M = 18.3$, $SD = 5.1$; $M = 15.8$, $SD = 5.0$, respectively).

The mean Negative Affectivity score was 26.24 ($SD = 8.87$), which was higher than means reported by Watson and Clark (1991) for four separate samples. The mean PANAS-NA scores in the studies cited by Watson and Clark ranged from a low of 18.2 ($SD = 6.3$) in a sample of adults, to 25.5 ($SD = 10.0$) in a sample of psychiatric inpatients. The mean PANAS-NA score in the present investigation also was somewhat higher than the mean found by Brandon, Copeland, and Saper (1995) in a recent study of adult smokers participating in treatment at a smoking clinic ($M = 23.29$, $SD = 8.82$).

On the well-being measures for which normative data were available, mean scores in the present study were less favorable than means found in previous studies. In the present study, the mean on the Happiness Measures ($M = 54.70$, $SD = 23.75$) was somewhat lower than Fordyce's (1988) reported mean of 61.66 ($SD = 17.84$) for a sample of community college students and slightly lower than Jones' (1994) reported mean of 55.3 ($SD = 21.5$). The mean Satisfaction with Life Scale score was 17.66 ($SD = 7.61$), compared to a mean of 21.1 ($SD = 6.5$) in Jones' study. Pavot and Diener (1993) noted that means for the SWLS have varied considerably in previous studies, ranging from 11.8 ($SD = 5.6$) for a sample of alcoholic inpatients, to 27.9 ($SD = 5.7$) for a sample of older French-Canadian men. According to Pavot and Diener, a score of 20 represents the neutral point on the scale; the score found in the present study falls within the "slightly dissatisfied" range (scores from 15 to 19).
In the present study, the mean depression score (M = 20.20, SD = 13.74) was higher than the mean CES-D score found in both Jones’ sample (M = 17.2, SD = 11.3) and in a study by Schneider et al. (1991) of people with HIV (M = 14.6, SD = 11.2). However, the mean CES-D score in the present study was lower than the mean found by Kelly et al. (1993) in another sample of people with HIV (M = 25.09, SD not reported). In a study of samples from six different populations, Weissman, Sholomskas, Pottenger, Prusoff, and Locke (1977) reported means on the CES-D ranging from a low of 9.10 (SD = 8.60) in a community sample, to a high of 38.10 (SD 9.01) in a sample of acutely depressed outpatients.

The mean Perceived Health Index on the health-related quality-of-life scale in the present study (M = 59.56, SD = 20.20) was somewhat lower than the mean reported by Bozzette et al. (1995) in a sample of people with HIV (M = 66, SD = 19). Finally, the mean CD4 count in the present study (M = 220.90, SD = 224.66) is slightly higher than the cut-off value of 200, often cited as the value below which counts commonly drop for people in the final stages of AIDS (Wolf, Dralle, et al., 1991). In the present study, 13% of the sample had CD4 counts of more than 500, 33% had counts between 200 and 500, 17% had counts between 50 and 199, and 37% had counts below 50. No normative data were available for recent hospitalization and recent illnesses.
Table 4
Means and Standard Deviations for the Measured Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>Possible range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unsupportive Social Interactions (USII)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Score</td>
<td>25.90</td>
<td>17.81</td>
<td>0 - 96</td>
</tr>
<tr>
<td>Patronizing</td>
<td>5.58</td>
<td>5.36</td>
<td>0 - 24</td>
</tr>
<tr>
<td>Blaming</td>
<td>4.49</td>
<td>4.92</td>
<td>0 - 20</td>
</tr>
<tr>
<td>Intruding</td>
<td>8.22</td>
<td>5.12</td>
<td>0 - 24</td>
</tr>
<tr>
<td>Self-Absorbed</td>
<td>15.60</td>
<td>11.09</td>
<td>0 - 52</td>
</tr>
<tr>
<td>Present Grief</td>
<td>36.14</td>
<td>10.91</td>
<td>13 - 65</td>
</tr>
<tr>
<td>Sense of Coherence (SOC Scale)</td>
<td>56.03</td>
<td>16.12</td>
<td>13 - 91</td>
</tr>
<tr>
<td>Social Support (SSQ-6)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>4.72</td>
<td>3.91</td>
<td>1 - 21(^a)</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>4.61</td>
<td>1.49</td>
<td>1 - 6</td>
</tr>
<tr>
<td>Coping (WOC)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seek and Use Social Support</td>
<td>22.74</td>
<td>6.34</td>
<td>0 - 44</td>
</tr>
<tr>
<td>Focus on the Positive</td>
<td>14.75</td>
<td>5.45</td>
<td>0 - 32</td>
</tr>
<tr>
<td>Distancing</td>
<td>27.67</td>
<td>6.36</td>
<td>0 - 48</td>
</tr>
<tr>
<td>Cognitive Escape-Avoidance</td>
<td>19.99</td>
<td>5.36</td>
<td>0 - 36</td>
</tr>
<tr>
<td>Behavioral Escape-Avoidance</td>
<td>13.90</td>
<td>5.77</td>
<td>0 - 40</td>
</tr>
<tr>
<td>Negative Affectivity (PANAS-NA)</td>
<td>26.24</td>
<td>8.87</td>
<td>10 - 50</td>
</tr>
<tr>
<td>Well-Being</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happiness (HM)</td>
<td>54.70</td>
<td>23.75</td>
<td>0 - 100</td>
</tr>
<tr>
<td>Satisfaction with Life (SWLS)</td>
<td>17.66</td>
<td>7.61</td>
<td>0 - 37</td>
</tr>
<tr>
<td>Depression (CES-D)</td>
<td>20.20</td>
<td>13.74</td>
<td>0 - 60</td>
</tr>
<tr>
<td>Health-Related Quality-of-Life</td>
<td>59.56</td>
<td>20.20</td>
<td>0 - 100</td>
</tr>
<tr>
<td>Hospitalization</td>
<td>3.22</td>
<td>7.84</td>
<td>0 - 183</td>
</tr>
<tr>
<td>Illnesses</td>
<td>1.61</td>
<td>1.50</td>
<td>0 - 7(^b)</td>
</tr>
<tr>
<td>CD4 Count</td>
<td>220.90</td>
<td>224.66</td>
<td>0 - 974(^c)</td>
</tr>
</tbody>
</table>

Note. USII = Unsupportive Social Interactions Inventory; Present Grief = Present Grief score for multiple loss questionnaire; SOC Scale = Sense of Coherence Scale; SSQ-6 = Social Support Questionnaire, 6-item form; PANAS-NA = Positive and Negative Affect Schedule, Negative Affect Scale; WOC = Ways of Coping Scale;
Higher scores on the Unsupportive Social Interactions Inventory, Present Grief scale, Sense of Coherence Scale, Social Support Questionnaire, Negative Affect Scale, Happiness Measures, Satisfaction with Life Scale, Center for Epidemiologic Studies Depression Scale, and the Physical Health Index indicate higher levels of unsupportive social interactions, present grief, sense of coherence, social support (number of people or satisfaction with support), negative affectivity, happiness, satisfaction with life, depression, and health-related quality-of-life, respectively. Higher scores on the Ways of Coping Scale subscales indicate greater use of that particular coping strategy. Higher scores on Hospitalization and Illnesses indicate a greater number of days hospitalized overnight and kinds of illnesses experienced, respectively, in the past 6 months. Lower scores on CD4 count indicate fewer CD4 cells and greater immune suppression. Superscripts a, b, and c indicate sample ranges; possible range is from 0 to no specific upper limit.
<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Items with Highest Means</strong></td>
<td></td>
</tr>
<tr>
<td>17. Told me to be strong, to keep my chin up, or that I shouldn't let it bother me</td>
<td>1.94</td>
</tr>
<tr>
<td>29. Understood that having HIV was difficult, but didn't understand extent of impact on me</td>
<td>1.79</td>
</tr>
<tr>
<td>14. Felt that I should focus on the present and/or the future, and that I should forget about what's happened and get on with my life</td>
<td>1.72</td>
</tr>
<tr>
<td>4. Didn't seem to know what to say, or seemed afraid of saying/doing the &quot;wrong&quot; thing</td>
<td>1.58</td>
</tr>
<tr>
<td>28. Talked with another person about my having HIV, despite my request for confidentiality or without checking with me first</td>
<td>1.57</td>
</tr>
<tr>
<td><strong>Items with Lowest Means</strong></td>
<td></td>
</tr>
<tr>
<td>8. &quot;I told you so,&quot; or similar comment</td>
<td>0.76</td>
</tr>
<tr>
<td>21. Someone discouraged me from expressing feelings such as anger, hurt, or sadness</td>
<td>0.76</td>
</tr>
<tr>
<td>19. Told me that I had gotten myself into the situation in the first place, and now must deal with the consequences</td>
<td>0.71</td>
</tr>
<tr>
<td>16. Refused to take me seriously</td>
<td>0.66</td>
</tr>
<tr>
<td>20. Did things for me that I wanted to do and could have done myself</td>
<td>0.66</td>
</tr>
</tbody>
</table>

*Note.* Possible range for each item is 0 to 4. Superscripts denote USII subscales:  

- **a** = Patronizing scale item;  
- **b** = Blaming scale item;  
- **c** = Intruding scale item;  
- **d** = Self-Absorbed item.
Correlational Analyses

Table 6 shows correlations among the measured variables. A number of significant correlations \((p < .001)\) were found with the USII scales. The USII Total score and subscales all were significantly associated with each other (rs ranging from .48 to .91). The Patronizing scale was the only USII measure that was significantly related to satisfaction with social support \((r = -.33)\). The USII Total Score, and the Patronizing, Blaming, and Self-Absorbed scales were significantly correlated with sense of coherence (rs ranging from -.37 to -.51) and negative affectivity (rs ranging from .42 to .47). All of the USII variables except Intruding were significantly related to the WOC Behavioral Escape-Avoidance scale (rs ranging from .37 to .42); the only other significant association between unsupportive social interactions and coping was found between Intruding and Seek and Use Social Support \((r = .34)\). All of the USII scales except Intruding were significantly correlated with happiness (rs ranging from -.38 to -.51), depression (rs ranging from .50 to .57), and health-related quality-of-life (rs ranging from -.33 to -.39). However, none of the USII scales were significantly related to satisfaction with life, recent hospitalization, recent illnesses, or CD4 count. Moreover, no significant relationships were found between unsupportive social interactions and present grief.

In addition, a number of significant correlations \((p < .001)\) were found with the measures of sense of coherence, social support, and negative affectivity. Sense of coherence was significantly correlated with satisfaction with social support \((r = .48)\), negative affectivity \((r = -.78)\), Focus on the Positive \((r = .55)\), Behavioral Escape-Avoidance \((r = -.42)\), and the well-being measures of happiness, satisfaction with life, depression, and health-related quality-of-life (rs ranging from .48 to .80). Similarly, satisfaction with social support was significantly associated with negative affectivity \((r = -.42)\), Focus on the Positive \((r = .40)\), Behavioral Escape-Avoidance \((r = -.42)\), and the well-being measures of happiness \((r = .51)\), satisfaction with life \((r = .36)\), and
depression \( (\tau = -.50) \). In addition, negative affectivity was significantly related to Focus on the Positive \( (\tau = -.39) \), Behavioral Escape-Avoidance \( (\tau = .49) \), and the well-being measures of happiness \( (\tau = -.67) \), satisfaction with life \( (\tau = -.66) \), depression \( (\tau = .73) \), and health-related quality-of-life \( (\tau = -.47) \).

Several additional significant correlations were found with coping and well-being. Significant relationships found among the coping scales were between Seek and Use Social Support and Focus on the Positive \( (\tau = .49) \), Focus on the Positive and Distancing \( (\tau = .40) \), and Distancing and Cognitive Escape-Avoidance \( (\tau = .33) \). A number of significant associations were found between coping and well-being. Focus on the Positive was significantly correlated with happiness \( (\tau = .47) \), satisfaction with life \( (\tau = .43) \), and depression \( (\tau = -.39) \). Cognitive Escape-Avoidance was significantly associated with depression \( (\tau = .42) \), and Behavioral Escape-Avoidance was significantly associated with happiness \( (\tau = -.41) \) and depression \( (\tau = .53) \). Finally, several significant relationships were found among the well-being measures. Happiness, satisfaction with life, and health-related quality-of-life all were positively associated with each other \( (\tau s \text{ ranging from } .40 \text{ to } .64) \). Depression was negatively correlated with happiness, satisfaction with life, and health-related quality-of-life \( (\tau s \text{ ranging from } -.57 \text{ to } -.79) \). CD4 count was significantly associated with recent hospitalization \( (\tau = -.36) \).
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<th>Variable</th>
<th>USII</th>
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<th>SOC</th>
<th>SSQ</th>
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Table 6 (continued)

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Note: USII = Unsupportive Social Interactions Inventory; Multiple Loss = multiple loss questionnaire; Present Grief = Present Grief score for multiple loss questionnaire; SOC-13 = Sense of Coherence Scale, 13-item form; SSQ-6-Satisfaction = Social Support Questionnaire, 6-item form; Satisfaction scale; PANAS-NA = Positive and Negative Affect Schedule, Negative Affect Scale; Coping = Ways of Coping Scale (WOC); Seek/Use Sppt. = Seek and Use Social Support subscale of WOC; Focus on Posit. = Focus on the Positive subscale of WOC; Distancing = Distancing subscale of WOC; Cog. Esc.-Avoid. = Cognitive Escape-Avoidance subscale of WOC; Beh. Esc.-Avoid. = Behavioral Escape-Avoidance subscale of WOC; Happiness = Happiness Measures; Satisf. w/ Life = Satisfaction with Life Scale; Depression = Center for Epidemiologic Studies Depression Scale; HRQOL = Perceived Health Index of the health-related quality-of-life scale; Hospitalization = days hospitalized overnight in the past 6 months; Illnesses = types of illnesses experienced in the past 6 months; and CD4 Count = self-reported CD4 (T-cell) count.

*** p < .001.
Regression Analyses

Table 7 presents the results of the first set of regression equations, which was designed to test Antonovsky's theoretical framework. Using each of the seven well-being measures as the criterion variables, the predictors were entered in the following order: (a) present grief, (b) sense of coherence, (c) social support, and (d) the interaction of sense of coherence and social support. Present grief, used as the stressor measure, did not account for a significant amount of the variance in any of the criterion variables. In contrast, sense of coherence did provide a significant amount of predictive variance in happiness, satisfaction with life, and depression, beyond the variance accounted for by present grief (change in $R^2 = .56, .48, \text{ and } .63$, respectively). After sense of coherence was entered in the model, total $R^2$ was .56 for happiness, .49 for satisfaction with life, and .70 for depression. In the model predicting health-related quality-of-life, negative affectivity was entered as a predictor in a step before sense of coherence. Negative affectivity accounted for an additional 20% of the variance in health-related quality-of-life beyond the variance explained by present grief. Sense of coherence, in turn, explained a significant amount of additional variance (9%) in health-related quality-of-life. After sense of coherence was entered, total $R^2$ was .31 for health-related quality-of-life. Neither social support nor the interaction between sense of coherence and social support accounted for a significant amount of additional predictive variance for any of the criterion variables. In the models predicting hospitalization, recent illnesses, and CD4 count, none of the predictor variables explained a significant amount of the variance.

Table 8 shows the results of the second set of regression equations, which was intended to test the hypothesis that unsupportive social interactions would account for a significant amount of the variance in well-being beyond the variance explained by social support. The predictors were entered in the following order: (a) present grief,
(b) satisfaction with social support, and (c) unsupportive social interactions (USII Total Score). Social support accounted for a significant amount of the variance in happiness, satisfaction with life, and depression, beyond the variance accounted for by present grief (change in $R^2 = .25$, .13, and .32, respectively). Unsupportive social interactions accounted for a significant amount of additional variance in happiness (13%) and depression (15%), beyond the variance explained by present grief and social support. However, unsupportive social interactions did not provide a significant amount of incremental predictive variance in satisfaction with life. Total $R^2$ was .37 for happiness, .18 for satisfaction with life, and .50 for depression. In the model predicting health-related quality-of-life, negative affectivity was entered as a predictor in a step before unsupportive social interactions. Negative affectivity accounted for an additional 20% of the variance in health-related quality-of-life beyond the variance explained by present grief and social support. Neither social support nor unsupportive social interactions accounted for a significant amount of additional variance in health-related quality-of-life. However, when negative affectivity was excluded from the model, unsupportive social interactions accounted for an additional 15% of the variance in health-related quality-of-life beyond the variance explained by present grief and social support. Total $R^2$ for health-related quality-of-life was .28 for the model with negative affectivity and .18 for the model without negative affectivity. In the models predicting hospitalization, recent illnesses, and CD4 count, none of the predictor variables explained a significant amount of the variance.

Four additional sets of the second regression model were evaluated, each using one of the USII subscales as the unsupportive social interactions variable. The Patronizing and Blaming subscales performed in a manner similar to the USII Total Score, each accounting for a significant amount of the variance in happiness (change in $R^2 = .10$ and .19, respectively) and depression (change in $R^2 = .17$ and .18, respectively), beyond the variance explained by social support and present grief. For the model predicting
related quality-of-life, Patronizing and Blaming accounted for a significant amount of additional variance only when negative affectivity was not entered in a prior step (change in $R^2 = .15$ and .11, respectively). The Self-Absorbed subscale was found to be the best predictor of well-being, accounting for a significant amount of incremental variance in happiness, satisfaction with life, and depression (change in $R^2 = .11$, .09, and .18, respectively). As with the Total, Patronizing, and Blaming scales, the Self-Absorbed subscale explained a significant amount of the variance in health-related quality-of-life only if negative affectivity was excluded from the model (change in $R^2 = .14$). The Intruding subscale did not account for a significant amount of additional variance in any of the well-being measures.

Table 9 presents the results of the third set of regression equations, which was designed to test the hypothesis that various kinds of unsupportive social interactions would have differential utility in predicting the use of certain coping strategies. In the third set of regression equations, all of the USII subscales were entered as predictors in a single step. Separate equations were tested using each of the five WOC coping strategies as the criterion variable. Unsupportive social interactions accounted for a significant amount of the variance in Seek and Use Social Support, Focus on the Positive, and Behavioral Escape-Avoidance (total $R^2 = .22$, .21, and .24, respectively). Tests of beta weights indicated that the USII Patronizing and Intruding subscales were significant unique predictors of Seek and Use Social Support, and the Intruding subscale was a significant unique predictor of Focus on the Positive. Unsupportive social interactions did not account for a significant amount of the variance in Distancing and Cognitive Escape-Avoidance.
Table 7
Hierarchical Multiple Linear Regression Models for the Prediction of Well-Being from Present Grief, Sense of Coherence, and Social Support

<table>
<thead>
<tr>
<th>Step and variable</th>
<th>df</th>
<th>$R^2$</th>
<th>$\Delta R^2$</th>
<th>$\Delta F$</th>
<th>B</th>
<th>SE B</th>
<th>$\beta$</th>
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<tbody>
<tr>
<td><strong>Equation 1: Predicting Happiness</strong></td>
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<td>.56</td>
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<td><strong>Equation 2: Predicting Satisfaction with Life</strong></td>
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<tr>
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Table 7 (continued)

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<th>$B$</th>
<th>SE B</th>
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<th>$t$</th>
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</table>

**Equation 5: Predicting Hospitalization**

1. Present Grief (1, 72) .05 .05 3.88 0.18 0.09 0.23 1.97
2. SOC (2, 71) .05 .00 0.01 0.00 0.06 0.01 0.08
3. Soc. Support (3, 70) .10 .05 4.04 1.48 0.74 0.26 2.01
4. SOC x Soc. Support (4, 69) .10 .00 0.02 -0.01 0.04 -0.08 -0.14

**Equation 6: Predicting Illnesses**

1. Present Grief (1, 72) .00 .00 0.25 -0.01 0.02 -0.06 -0.50
2. SOC (2, 71) .01 .00 0.28 -0.01 0.01 -0.06 -0.53
3. Soc. Support (3, 70) .02 .01 1.07 0.13 0.13 0.14 1.03
4. SOC x Soc. Support (4, 69) .02 .00 0.01 -0.00 0.01 -0.06 -0.10

**Equation 7: Predicting CD4 Count**

1. Present Grief (1, 64) .00 .00 0.07 0.74 2.72 0.03 0.27
2. SOC (2, 63) .02 .02 1.10 -1.84 1.76 -0.13 -1.05
3. Soc. Support (3, 62) .09 .07 4.87 -47.79 21.66 -0.32 -2.21
4. SOC x Soc. Support (4, 61) .09 .00 0.28 0.60 1.12 0.36 0.53

Note. Present Grief = Present Grief score for multiple loss questionnaire; SOC = Sense of Coherence Scale; Soc. Support = Social Support Questionnaire, Satisfaction scale; Negative Affectivity = Positive and Negative Affect Schedule, Negative Affect Scale; Happiness = Happiness Measures; Satisfaction with Life = Satisfaction with Life Scale; Depression = Center for Epidemiologic Studies Depression Scale; Health-Related Quality-of-Life = Perceived Health Index of the health-related quality-of-life scale; Hospitalization = days hospitalized overnight in the past 6 months; Illnesses = types of illnesses experienced in the past 6 months; and CD4 Count = self-reported CD4 (T-cell) count.

** * p < .01. ** ** * p < .001.**
Table 8

Hierarchical Multiple Linear Regression Models for the Prediction of Well-Being from Present Grief, Social Support, and Unsupportive Social Interactions

<table>
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<th>$\Delta F$</th>
<th>$B$</th>
<th>SE of $B$</th>
<th>$\beta$</th>
<th>$t$</th>
</tr>
</thead>
</table>

**Equation 1: Predicting Happiness**

1. Present Grief (1, 67) .00 .00 0.01 -0.02 0.28 -0.01 -0.08
2. Social Support (2, 66) .25 .25 21.67*** 7.78 1.67 0.50 4.66***
3. USII—Total Score (3, 65) .37 .13 13.25*** -0.55 0.15 -0.40 -3.64***

**Equation 2: Predicting Satisfaction with Life**

1. Present Grief (1, 68) .00 .00 0.00 0.00 0.09 0.00 0.01
2. Social Support (2, 67) .13 .13 10.40** 1.84 0.57 0.37 3.23**
3. USII—Total Score (3, 66) .18 .04 3.55 -0.10 0.05 -0.23 -1.89

**Equation 3: Predicting Depression**

1. Present Grief (1, 64) .03 .03 1.75 0.21 0.16 0.16 1.32
2. Social Support (2, 63) .34 .32 30.61*** -4.82 .87 -0.56 -5.53***
3. USII—Total Score (3, 62) .50 .15 18.47*** 0.34 0.08 0.43 4.30***

**Equation 4: Predicting Health-Related Quality-of-Life**

1. Present Grief (1, 68) .00 .00 0.19 -0.10 0.23 -0.05 -0.43
2. Social Support (2, 67) .03 .03 1.85 2.16 1.59 0.16 1.36
3. Negative Affectivity (3, 66) .23 .20 17.42*** -1.09 0.26 -0.50 -4.17***
4. USII—Total Score (4, 65) .28 .05 4.64 -0.31 0.14 -0.27 -2.16

*(table continues)*
Table 8 (continued)

<table>
<thead>
<tr>
<th>Step and variable</th>
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<th>$\Delta R^2$</th>
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<th>$B$</th>
<th>SE $B$</th>
<th>$\beta$</th>
<th>$t$</th>
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</thead>
</table>

Equation 5: Predicting Hospitalization

1. Present Grief  
   $(1, 69)$ .00 .00 0.06 -0.02 0.07 -0.03 -0.24
2. Social Support  
   $(2, 68)$ .06 .06 4.51 0.92 0.43 0.25 2.12
3. USII—Total Score  
   $(3, 67)$ .07 .01 0.39 -0.03 0.04 -0.08 -0.63

Equation 6: Predicting Illnesses

1. Present Grief  
   $(1, 69)$ .03 .03 2.28 -0.02 0.02 -0.18 -1.51
2. Social Support  
   $(2, 68)$ .04 .01 0.64 0.08 0.11 0.09 0.80
3. USII—Total Score  
   $(3, 67)$ .04 .00 0.02 0.00 0.01 0.02 0.15

Equation 7: Predicting CD4 Count

1. Present Grief  
   $(1, 62)$ .00 .00 0.19 1.17 2.70 0.05 0.43
2. Social Support  
   $(2, 61)$ .09 .09 6.05 -44.32 18.01 -0.30 -2.46
3. USII—Total Score  
   $(3, 60)$ .12 .02 1.64 -2.26 1.76 -0.17 -1.28

Note. Present Grief = Present Grief score for multiple loss questionnaire; USII—Total Score = Unsupportive Social Interactions Inventory, Total Score; Social Support = Social Support Questionnaire, Satisfaction scale; Negative Affectivity = Positive and Negative Affect Schedule, Negative Affect Scale; Happiness = Happiness Measures; Satisfaction with Life = Satisfaction with Life Scale; Depression = Center for Epidemiologic Studies Depression Scale; Health-Related Quality-of-Life = Perceived Health Index of the health-related quality-of-life scale; Hospitalization = days hospitalized overnight in the past 6 months; Illnesses = types of illnesses experienced in the past 6 months; and CD4 Count = self-reported CD4 (T-cell) count.

** $p < .01$.  *** $p < .001$.  


Table 9

Hierarchical Multiple Linear Regression Models for the Prediction of Coping Strategies from Unsupportive Social Interactions

<table>
<thead>
<tr>
<th>Step and variable</th>
<th>df</th>
<th>$R^2$</th>
<th>Δ$R^2$</th>
<th>ΔF</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>t</th>
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<tbody>
<tr>
<td>Equation 1: Predicting Seek and Use Social Support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. USII</td>
<td>(4, 81)</td>
<td>.22</td>
<td>.22</td>
<td>5.55***</td>
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<td></td>
<td></td>
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<tr>
<td>Patronizing</td>
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<td>-0.49</td>
<td>0.18</td>
<td>-0.40</td>
<td>-2.69**</td>
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<tr>
<td>Blaming</td>
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<td>-0.12</td>
<td>0.19</td>
<td>-0.10</td>
<td>-0.65</td>
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<tr>
<td>Self-Absorbed</td>
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<td>0.16</td>
<td>0.09</td>
<td>0.27</td>
<td>1.71</td>
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<td>Intruding</td>
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<td>0.54</td>
<td>0.15</td>
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Equation 2: Predicting Focus on the Positive

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<th>B</th>
<th>SE B</th>
<th>β</th>
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<tbody>
<tr>
<td>1. USII</td>
<td>(4, 81)</td>
<td>.21</td>
<td>.21</td>
<td>5.42***</td>
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<tr>
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<td>-0.32</td>
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<tr>
<td>Self-Absorbed</td>
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<td>0.08</td>
<td>-0.01</td>
<td>-0.64</td>
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<tr>
<td>Intruding</td>
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<td>0.13</td>
<td>0.45</td>
<td>3.57***</td>
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Equation 3: Predicting Distancing

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<th>SE B</th>
<th>β</th>
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<tr>
<td>1. USII</td>
<td>(4, 82)</td>
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<td>.04</td>
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<td>Blaming</td>
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<td>-0.00</td>
<td>0.21</td>
<td>-0.00</td>
<td>-0.00</td>
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<tr>
<td>Self-Absorbed</td>
<td></td>
<td>0.03</td>
<td>0.10</td>
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<td>0.34</td>
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<tr>
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<td>0.01</td>
<td>0.17</td>
<td>0.00</td>
<td>0.03</td>
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(table continues)
Table 9 (continued)

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<th>$B$</th>
<th>SE $B$</th>
<th>$\beta$</th>
<th>$t$</th>
</tr>
</thead>
</table>

Equation 4: Predicting Cognitive Escape-Avoidance

1. USII (4, 79) .12 .12 2.67
   - Patronizing -0.31 0.16 -0.31 -1.99
   - Blaming 0.34 0.17 0.32 2.04
   - Self-Absorbed 0.07 0.08 0.16 0.92
   - Intruding 0.08 0.14 0.08 0.57

Equation 5: Predicting Behavioral Escape-Avoidance

1. USII (4, 81) .24 .24 6.29***
   - Patronizing 0.27 0.16 0.24 1.67
   - Blaming 0.21 0.17 0.18 1.26
   - Self-Absorbed 0.13 0.08 0.25 1.57
   - Intruding -0.30 0.14 -0.26 -2.14

Note. Seek and Use Social Support = Seek and Use Social Support subscale of the Ways of Coping Scale (WOC); Focus on the Positive = Focus on the Positive subscale of the WOC; Distancing = Distancing subscale of the WOC; Cognitive Escape-Avoidance = Cognitive Escape-Avoidance subscale of the WOC; Behavioral Escape-Avoidance = Behavioral Escape-Avoidance subscale of the WOC; Patronizing = Patronizing subscale of the Unsupportive Social Interactions Inventory (USII); Blaming = Blaming subscale of the USII; Self-Absorbed = Self-Absorbed subscale of the USII; Intruding = Intruding subscale of the USII.

** $p < .01$.  *** $p < .001$.  

$E < .01$.  $E < .001$.
Partial Correlations Controlling for Negative Affectivity

Two types of findings in the present study suggested that negative affectivity might have spuriously accounted for the observed relationships between unsupportive social interactions and well-being. First, negative affectivity was more strongly correlated with the measures of well-being than were any of the USII scales. Second, results of regression analyses revealed that unsupportive social interactions did not account for a significant amount of the variance in health-related quality-of-life beyond the variance explained by negative affectivity. Accordingly, a post-hoc analysis was conducted to further examine the relationships between unsupportive social interactions and well-being. Table 10 presents partial correlations between the USII scales and the well-being measures after controlling for negative affectivity. Significant partial correlations were found between depression and the USII Total, Patronizing, Blaming, and Self-Absorbed scales (pr = .32, .33, and .31, p < .01; pr = .38, p < .001; respectively). In addition, a significant partial correlation was found between happiness and the USII Blaming scale (pr = -.30, p < .01). For health-related quality-of-life, the only other well-being measure for which the zero-order correlations with unsupportive social interactions were significant, none of the partial correlations with the USII scales were significant after controlling for negative affectivity.

Similar analyses also were conducted to examine the extent to which negative affectivity accounted for the observed relationships between well-being and two of the other major variables in the present study, sense of coherence and satisfaction with social support. Table 11 presents partial correlations between sense of coherence and well-being, and between social support and well-being, after controlling for negative affectivity. Significant partial correlations were found between sense of coherence and happiness, satisfaction with life, and depression (pr = .37, .37, and -.54, p < .001; respectively). In addition, significant partial correlations were found between social...
support and happiness, and between social support and depression ($r = .34$ and $-32$, $p < .01$; respectively). Although the zero-order correlations were significant between sense of coherence and health-related quality-of-life, and between social support and satisfaction with life, neither of the partial correlations for those pairs of variables was significant after controlling for negative affectivity.
Table 10

Partial Correlations of Unsupportive Social Interactions with Well-Being After Controlling for Negative Affectivity

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total</th>
<th>Patron.</th>
<th>Blaming</th>
<th>Self-Absorb.</th>
<th>Intruding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Happiness</td>
<td>-.15</td>
<td>-.11</td>
<td>-.30**</td>
<td>-.12</td>
<td>.04</td>
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<tr>
<td>Satisfaction with Life</td>
<td>.04</td>
<td>.09</td>
<td>-.01</td>
<td>-.02</td>
<td>.12</td>
</tr>
<tr>
<td>Depression</td>
<td>.32**</td>
<td>.33**</td>
<td>.38***</td>
<td>.31**</td>
<td>-.02</td>
</tr>
<tr>
<td>Health-Related Quality-of-Life</td>
<td>-.19</td>
<td>-.22</td>
<td>-.14</td>
<td>-.18</td>
<td>-.08</td>
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<tr>
<td>Hospitalization</td>
<td>-.06</td>
<td>.20</td>
<td>.04</td>
<td>-.06</td>
<td>.01</td>
</tr>
<tr>
<td>Illnesses</td>
<td>-.04</td>
<td>.09</td>
<td>-.04</td>
<td>.06</td>
<td>-.15</td>
</tr>
<tr>
<td>CD4 Count</td>
<td>-.17</td>
<td>-.22</td>
<td>-.14</td>
<td>-.17</td>
<td>-.10</td>
</tr>
</tbody>
</table>

Note. USII = Unsupportive Social Interactions Inventory; Total = USII Total score; Patron. = USII Patronizing subscale; Blaming = USII Blaming subscale; Self-Absorb. = USII Self-Absorbed subscale; Intruding = USII Intruding subscale; Negative Affectivity = Positive and Negative Affect Schedule, Negative Affect Scale; Happiness = Happiness Measures; Satisfaction with Life = Satisfaction with Life Scale; Depression = Center for Epidemiologic Studies Depression Scale; Health-Related Quality-of-Life = Perceived Health Index of the health-related quality-of-life scale; Hospitalization = days hospitalized overnight in the past 6 months; Illnesses = types of illnesses experienced in the past 6 months; and CD4 Count = self-reported CD4 (T-cell) count. Partial correlations for the USII scales were calculated after controlling for Negative Affectivity. All significance tests are two-tailed. ** p < .01. *** p < .001.
Table 11

Partial Correlations of Sense of Coherence and Social Support with Well-Being After Controlling for Negative Affectivity

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sense of Coherence</th>
<th>Social Support</th>
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</thead>
<tbody>
<tr>
<td>Happiness</td>
<td>.37***</td>
<td>.34**</td>
</tr>
<tr>
<td>Satisfaction with Life</td>
<td>.37***</td>
<td>.13</td>
</tr>
<tr>
<td>Depression</td>
<td>-.54***</td>
<td>-.32**</td>
</tr>
<tr>
<td>Health-Related Quality-of-Life</td>
<td>.20</td>
<td>-.01</td>
</tr>
<tr>
<td>Hospitalization</td>
<td>-.10</td>
<td>.18</td>
</tr>
<tr>
<td>Illnesses</td>
<td>.03</td>
<td>.12</td>
</tr>
<tr>
<td>CD4 Count</td>
<td>-.01</td>
<td>-.16</td>
</tr>
</tbody>
</table>

Note. Sense of Coherence = Sense of Coherence Scale; Social Support = Social Support Questionnaire, Satisfaction Scale; Negative Affectivity = Positive and Negative Affect Schedule, Negative Affect Scale; Happiness = Happiness Measures; Satisfaction with Life = Satisfaction with Life Scale; Depression = Center for Epidemiologic Studies Depression Scale; Health-Related Quality-of-Life = Perceived Health Index of the health-related quality-of-life scale; Hospitalization = days hospitalized overnight in the past 6 months; Illnesses = types of illnesses experienced in the past 6 months; and CD4 Count = self-reported CD4 (T-cell) count. Partial correlations for the Sense of Coherence and Social Support were calculated after controlling for Negative Affectivity. All significance tests are two-tailed. ** p < .01. *** p < .001.
Qualitative Data

Thirty-nine percent of the participants (n = 37) responded to the open-ended question which invited additional comments about thoughts or feelings they may have concerning their experiences of living with HIV. Several common themes emerged in their responses.

Perspective about living with HIV. A number of participants commented on the way that they currently view their lives and, in some instances, described having been on a personal journey to re-evaluate their approach to living. Some reported that they focus on maintaining a positive attitude or on living one day at a time. One participant described HIV as "an inconvenience," and added, "I wish I didn't have it, but I do and life goes on!" A few participants noted that a significant health-related event had prompted them to make changes in their approach to living with HIV. For example, one participant stated as follows:

I have since my hospitalization 1 week ago started regaining faith in God and starting [sic] to take responsibility for myself. I am in therapy and I feel hopeful. I have joined a theater group of actors that will perform for educational audiences regarding HIV.

Another participant described having moved back to Columbus from another state, given up a successful teaching career, and confronted his family with his AIDS diagnosis in a single week. Reflecting on those events, he commented as follows:

But all things considered, right now I'm doing fairly well emotionally. I attribute this mainly to an emphasis on emotional well-being that I made in my life over the past several years. If I hadn't "taken care" of myself before this happened, had strong goals and commitments, chosen supportive friends, and worked consciously on developing my self-esteem, the events of the past two
months probably would have broken me. However, therein lies the irony. I contracted the HIV virus during a time in my life when I was much less secure, and had little, it seemed, to live for. I feel as if I'm paying now for who I was and what I did then. This virus doesn't respect emotional well-being; it doesn't care that I straightened out my life, only to watch it tumble down around my ears. . . . I am very thankful that somewhere along the line I learned to care enough about my life to keep wanting to live it.

**HIV-related stressors.** It is clear from the participants' comments that the stressors associated with living with HIV are varied and numerous. Several participants reported about health-related stressors that are part of their daily experience of living with HIV. Examples include physical fatigue, the frustration of not feeling well for an extended period of time, and having to take AZT pills every four hours.

Several participants reported having experienced multiple stressors around the time they learned of their HIV-positive status. One person stated that he found out he was HIV-positive shortly before his fiancée died of AIDS-related causes, and that he soon was forced to move out of his home with nowhere to go. Another participant reported the following:

I found out I was HIV-positive one month after being attacked by a group of teenagers with baseball bats. My ex-lover told me he had lied about being tested negatively. (I had asked several times in the course of our relationship; my tests were always negative.)

Describing the multiple stressors she encounters related to her family, a female participant commented as follows:

My husband has AIDS with a low T4 count. I find it very frustrating most of the time working full-time (my husband is permanently disabled), caring for our almost 3 yr. old son, house chores, grocery shopping, cooking and alternate
weekends with my 2 daughters from my first marriage. My husband has left me out of his will . . . and has removed me as his beneficiary. I'm being treated as this whole mess is my fault when it plainly isn't. I don't know how to reach my husband and make him understand what he is doing to me. He refuses counseling and I feel as I am at the end of my rope and don't know how much more I can take.

Many participants described losses they have experienced or anticipated. A commonly cited experience of loss was multiple bereavement. One person reported having participated in the direct care of 14 people with HIV who have since died. It appears that reactions to multiple bereavement are far from uniform. As one person explained, "It is hard seeing all around you dying of AIDS but with each death it gives me more strength to help others." Another participant commented that it is very difficult for him to get close to people, "especially those I believe are dying."

Other losses mentioned by participants included the actual or feared loss of a job, professional identity, financial security, a home or apartment, a relationship with a partner, and the ability to take care of oneself.

Several participants commented about how they have been affected by the stigma associated with HIV. One person described the extent to which he thinks about potential negative reactions from others, and referred to an example of an unsupportive response he had received:

I try to avoid public places because I am afraid people will see death on my face as if tattooed there. I am afraid to get close to people and to confide in them because of how they may react. One professor, for example, told me to 'open the phone book; it's available to everyone.'
In addition, one participant reported being afraid to date because he fears rejection based on his HIV status, and another stated that he chooses not to belong to a support group because he does not want to be recognized.

Others reported fearing that if they disclosed their HIV status, they would increase the likelihood that people they care about might encounter prejudice and discrimination. One participant explained his dilemma about disclosure as follows:

I have children ages 6 and 8. My wife and I believe in honesty and discussing our feelings with our children. Because of the stigma we have never told our children of the AIDS diagnoses. Too many negatives are given in the media and in many homes, and we fear ridicule for our children.

One participant speculated about how different life might be in the absence of HIV-related stigma:

It could be a much more emotionally healthy and educational experience for me and others around me if there weren't such moral stigmas attached and such an attitude of fear and ignorance.

In view of the complex stressors associated with HIV, it is not surprising that several participants reported currently feeling overwhelmed or having considered attempting suicide at some point since learning they are HIV-positive.

**Coping.** Participants described a variety of strategies they have used to cope with living with HIV. Some reported becoming involved in HIV-related activism, public speaking, or other volunteer work. Others stated that they have been receiving counseling, following a health treatment plan that combines traditional medicine and alternative approaches to healing, or making other special efforts to reduce stress in their lives. As one participant explained, "I look forward to each day. I plan exciting escapades and I do things I would not normally do." Another participant described his coping strategy as follows:
I think one of the reasons I've done OK (my T-cell count has been under 70 for 7½ years) is I refuse to give up the routine in my life. I have attempted to excel at work and last year received an employee of the year award. I've taken up a new hobby that involves national competition and have become known on that level, traveling and meeting new people and new challenges.

Relatively few participants reported using passive coping strategies such as wishing the virus would go away.

Several participants reported deriving strength from prayer, religious faith, or their belief in God. One person described his spiritual journey as follows:

I've gained a great deal of peace through meditation and other spiritual paths/practices. I think that my spiritual health has been most difficult to balance, primarily because so many religions view homosexuality and AIDS so negatively. It's difficult to maintain a strong positive self-image when you are told that on a spiritual level you are condemned. I've worked hard to find spiritual fulfillment, and I have finally found it. It's amazing how much easier it is to maintain emotional and physical well-being now!

Several participants commented about the positive experiences they have had with health care professionals. Some of these participants mentioned specifically that staff at the Clinical Trials Unit genuinely seem to care about them. Others conveyed their appreciation for the opportunities they have had to participate in the Clinical Trials program, and one expressed hope that the research might help other people with HIV even if it did not benefit him directly.

As several of the comments indicated, it appears that another coping strategy is to remind oneself that he or she currently is healthy. In addition, some participants attempted to distinguish themselves from other people with HIV who are not doing as well as they are. For example, one participant stated that, "By far the majority of
people that I personally know dying from AIDS seemed to have an 'I need pity' attitude."

Interpersonal relationships. Several participants mentioned the important role that social support has played in their experience of living with HIV. For example, one participant commented as follows:

My significant other . . . is very supportive of me. I'm still working on telling my parents. I've told one of my two brothers, and he was very supportive as well--comment was 'You're my brother and I love you. Why should this stop that?' Most of my friends have been helpful while I was hospitalized for cryptococcus. I received quite a bit of financial support from them, as well as rides, dinners, assistance with housework, and general socializing.

Others reported a different experience, citing the lack of support they felt, particularly from their family of origin. One person expressed his belief that people cannot really understand the experience of living with HIV unless they are themselves HIV-positive.

Several others described changes they have made in their dating patterns as a result of their HIV-positive status. One person observed that one of the few situations in which he thinks about being HIV-positive is when he is trying to date someone new. Another participant who reported that he has been coping quite well with his HIV status nevertheless described his wish to have romantic partner, "One thing I want desperately and don't have now is feeling head over heals in love with somebody. I want to feel that again."

Need for systemic change. Several participants pointed to the need for changes at the social systems level in response to HIV and AIDS. For example, some participants commented about the need for affordable counseling for children who are affected by HIV, as well as the need for additional services designed for heterosexual men and women.
Another person expressed his disillusionment with the health care system as follows:

I feel very frustrated and angry with the health care system. I am upset that the insurance company has so much control over what types of treatment I will receive and which medications will be covered. An example of this is my doctor has prescribed the drug Marinol to stimulate my appetite and control nausea. The cost is not covered by insurance. At my local drug store the cost is $350 per month! Therefore I am forced to break laws and buy pot off the street at a cost of $160 for 3 months worth. And risk incarceration if caught! This is only one example of many I have encountered. I would like to see the FDA and insurance companies loosen up on drugs relating to a terminal illness.

Finally, several participants commented on the need for additional efforts to educate people about HIV. Goals participants cited for educational programs included reducing or eliminating the stereotypes and stigma associated with HIV, and teaching young people about ways to prevent transmission of the virus.
CHAPTER V
DISCUSSION

The primary purpose of the present study was to examine why some HIV-positive individuals remain physically and psychologically healthier, compared to other persons who are infected with the virus. Two theoretical frameworks were applied in this study: (a) Antonovsky's sense of coherence model, and (b) Rook's direct effect model of unsupportive social interactions. Findings suggest that both theoretical models might advance our understanding of stress, coping, and well-being in people living with HIV.

Sense of Coherence Model

As predicted by Antonovsky's (1979, 1987) model, findings in the present study indicated that SOC contributed directly to well-being in this sample of people with HIV. In regression analyses, SOC explained a significant amount of the variance in happiness, satisfaction with life, and depression beyond the variance accounted for by present grief. Moreover, SOC explained a significant amount of the variance in health-related quality-of-life after controlling for both present grief and negative affectivity. Thus, individuals with a stronger SOC tended to report more favorable levels of happiness, satisfaction with life, depression, and health-related quality-of-life, compared to individuals with a weaker SOC. However, SOC was not a significant predictor of hospitalization, recent illnesses, or CD4 count.

Results from the present study also suggest that SOC functions independently of social support in contributing to enhanced well-being (see Hart, Hittner, & Paras,
The data indicated that SOC and satisfaction with social support were moderately correlated, but that neither social support nor the interaction between SOC and social support explained a significant amount of incremental variance in any of the well-being measures beyond the variance explained by SOC. These findings are consistent with previous studies showing significant direct relationships between SOC and well-being, and weaker or non-significant indirect effects of SOC on well-being through generalized resistance resources, such as appraisal of threat and involvement in social interaction activities (Nyamathi, 1993; Sagy et al., 1990). As Antonovsky has emphasized, the person with a strong SOC is not tied to one type of generalized resistance resource in coping with a stressor; rather, he or she has the flexibility to choose the resource that seems to be the most appropriate in the situation (Antonovsky, 1993a).

The present study also provided important findings about the relationship between SOC and trait negative affectivity. Not surprisingly, SOC was highly correlated with negative affectivity ($r = -.78$). However, after controlling for negative affectivity, significant partial correlations were found between SOC and happiness, satisfaction with life, and depression, indicating that the associations between SOC and those dimensions of well-being were not simply a function of negative affectivity.

Findings from the present investigation provide preliminary information about the usefulness of Antonovsky's (1987) SOC Scale in studies of people with HIV. The 13-item version of the SOC Scale demonstrated good internal consistency reliability in the present sample. Of particular interest was the finding that the mean SOC score in the present study was lower than the mean found in most previous studies, none of which involved samples of people with HIV (Antonovsky, 1993b). According to Antonovsky, a person's SOC crystallizes at approximately age 30, and remains at
relatively the same level, "barring major, enduring changes in one's life situation" (Sagy et al., 1990, p. 14). As Tishelman et al. (1991) have suggested in discussing their study of cancer patients, a diagnosis of cancer may constitute the kind of radical and enduring change that could alter a person's SOC. The mean SOC score in the present study may reflect that, at least for some individuals, being HIV-positive is such a major life change that it can lower one's level of SOC.

Unsupportive Social Interactions Model

Four types of unsupportive responses that a person with HIV might receive from others about his or her having HIV were identified in the present study: patronizing, blaming, intruding, and self-absorbed. Although prior qualitative studies (Bennett, 1990; Limandri, 1989) have suggested that negative interpersonal interactions are an important part of the experience of living with HIV, the present study is possibly the first to use a multi-item measure with known psychometric properties in examining the nature and effects of HIV-specific unsupportive social interactions.

One of the most important findings in the present study was that unsupportive social interactions accounted for a significant amount of the variance in happiness and depression beyond the variance explained by present grief and social support. These results are consistent with Rook's (1990) direct effect model of the relationship between unsupportive social interactions and well-being. In addition, only one of the five USII scores was significantly associated with social support. Taken together, and consistent with prior studies (e.g., Brenner et al., 1989; Manne & Zautra, 1989; Rook, 1984), these findings suggest that unsupportive social interactions and social support are separate predictors of well-being and are not simply opposite ends of a single continuum. Thus, it appears that explanatory power can be gained by adding
unsupportive social interactions to the traditional model of stress, social support, and well-being.

No significant relationships were found between any of the USII measures and hospitalization, recent illnesses, or CD4 count. Similarly, in prior research concerning the positive dimensions of interpersonal relationships, no significant associations were found between social support and objective indicators of HIV disease progression, such as CD4 count or total number of physical symptoms (Namir, Alumbaugh, et al., 1989; Perry et al., 1992; Turner, Hays, & Coates, 1993; Wolf, Dralle, et al., 1991). It should be noted that these cross-sectional findings do not assess possible longitudinal effects of interpersonal factors on objective indicators of physical health in people with HIV.

In addition, none of the USII measures were significantly correlated with satisfaction with life. There are a number of possible explanations for these findings. For example, the mechanisms by which unsupportive social interactions interfere with well-being may be more closely linked to the affective components of well-being such as happiness and depression, than to satisfaction with life, which has been conceptualized as the cognitive or judgmental component of subjective well-being (Diener et al., 1985).

Unsupportive social interactions explained a significant amount of the variance in health-related quality-of-life beyond the variance accounted for by present grief and social support. However, when negative affectivity was added to the regression model in a step after social support, unsupportive social interactions did not provide a significant amount of additional predictive variance in health-related quality-of-life. When the influence of negative affectivity was explored further by calculating partial correlations, relationships between the USII scales and health-related quality-of-life
were no longer statistically significant after controlling for negative affectivity. Moreover, relationships between the USII Total, Patronizing, and Self-Absorbed scales and depression were statistically nonsignificant after controlling for negative affectivity. In contrast, significant associations were found between four of the USII scales and depression, and between Blaming and happiness, after controlling for negative affectivity. Thus, after negative affectivity was controlled for, correlations that were smaller to begin with (in the present study, those having an absolute value of .39 or less) were reduced below a level of statistical significance; however, correlations that initially were larger remained statistically significant (see Smith, Wallston, & Dwyer, 1995). These findings clearly indicate that the observed relationships between unsupportive social interactions and well-being are not simply an artifact of negative affectivity.

As Smith et al. (1995) have suggested, rather than treating negative affectivity as a "nuisance variable" and seeking to eliminate its influence from one's data, a more appropriate strategy is to examine relationships between negative affectivity and health-related processes systematically. Smith et al. have emphasized that there is insufficient evidence to conclude that negative affectivity exists as the prior causal variable in relation to the variables with which it has been found to be correlated. In the present study, although it is possible that high trait negative affectivity causes a person to report experiencing more unsupportive social interactions, it also is plausible that experiencing high levels of unsupportive social interactions may lead to an increase in trait negative affectivity. Perhaps there are reciprocal effects between negative affectivity and unsupportive social interactions, which, in turn, influence the extent to which each of those variables is related to various dimensions of well-being. Moreover, it is possible that counseling or psychoeducational interventions aimed at
reducing the incidence or effects of unsupportive social interactions might serve to lower the level of trait negative affectivity among individuals who are the target of the intervention (see Elliott, Sherwin, Harkins, & Marmarosh, 1995).

An interesting pattern was found in the present study regarding unsupportive social interactions and coping. In regression analyses, unsupportive social interactions predicted the coping strategies of Seek and Use Social Support, Focus on the Positive, and Behavioral Escape-Avoidance. Intruding was a significant unique predictor of Seek and Use Social Support, and Focus on the Positive, such that people reporting more Intruding also reported using more of both coping strategies. Intruding, which is characterized by overbearing responses, was the only USII scale that was not significantly correlated with any of the well-being measures. It may be that Intruding responses prompt the recipient, regardless of his or her state of well-being, to seek additional support from others. Unlike the other three USII subscales, the Intruding scale includes several responses that some recipients plausibly could experience as supportive (e.g., "Someone felt that I should focus on the present and/or the future, and that I should forget about what's happened and get on with my life"). Responses experienced as supportive would be more likely to encourage the recipient to continue seeking and using social support. Moreover, there is some content similarity between several items in the USII Intruding scale and several items in the WOC Focus on the Positive scale. Thus, it is possible that, at least for some people with HIV, receiving a response telling them to "look on the bright side" (Intruding) could lead the person to "rediscover what is important in life" (Focus on the Positive). It should be noted that other individuals might experience Intruding responses as unhelpful or upsetting. Although causal relationships cannot be inferred from these data, it may be that for some individuals, Intruding responses encourage the use of adaptive coping strategies.
Although unsupportive social interactions predicted Behavioral Escape-Avoidance, a coping strategy which has been described as behavioral signs of avoidance that are likely to be maladaptive (Dunkel-Schetter, et al., 1992), none of the USII subscales were unique predictors in the regression model. However, correlations between Behavioral Escape-Avoidance and Patronizing, Blaming, and Self-Absorbed all were significant. Consistent with previous studies of people with HIV, Behavioral Escape-Avoidance was associated with higher levels of depression (e.g., Fleishman & Fogel, 1994) as well as decreased happiness. Although unsupportive social interactions may predispose individuals to engage in behavioral avoidance coping, it is equally plausible that individuals who engage in such avoidance behaviors are likely to receive more unsupportive responses from others.

Another purpose of the present study was to gather additional data about the utility and psychometric properties of the USII. In this sample of people with HIV, the USII Total scale and subscales demonstrated good internal consistency reliability. Evidence of discriminant validity includes findings that unsupportive social interactions were largely unrelated to social support. Construct validity evidence includes findings about the relationship of unsupportive social interactions to various dimensions of well-being. Among the USII subscales, Self-Absorbed was the most consistent predictor of well-being, followed by Patronizing and Blaming. Intruding was the USII subscale most consistently related to adaptive coping. Similarities were found when the factor structure in the present study was compared to results from the factor analysis in the college student sample in the original USII study. However, the Patronizing factor in the present study appears to be conceptually distinct from any of the factors identified in the original study.
It is interesting to note that the mean for the USII Total score in the present study was somewhat lower than the mean found in the college student sample. The difference in means may be attributable to methodological differences in the two studies. In the original USII study, participants were asked to complete the USII immediately after identifying and recalling the most negative life event they had experienced in the past 12 months. It may be that such a procedure led the college students to exaggerate their reports of unsupportive social interactions received in connection with that negative life event. Alternatively, it is possible that differences in USII means across the two studies are related to the extent to which other people were aware of the participants' stressful life event. If few people know about an individual's stressful event, then there are few people from whom the person could experience an unsupportive response regarding that event. Given the stigma associated with HIV, it is plausible that participants in the present study had told fewer people about their HIV status, compared to the number of people the college students had informed of their most negative recent life event. Although no attempt was made in either study to assess how many people knew of the participant's stressful event, in the present study, several participants' written comments suggested that they had told only one person about their HIV status. Thus, it may be that patterns of disclosure of one's stressful event differed substantially across the two samples and, in turn, accounted for the differences in USII means. However, it would be a mistake to draw any conclusions about mean differences in USII scores for college students and people with HIV, unless these findings are replicated in future studies.

It appears that the USII has several advantages in studies of people who have experienced a stressful life event such as living with HIV. First, the instrument was designed to measure stressor-specific unsupportive social interactions, a construct that
is grounded in theory and is part of a testable model about relationships among stress, interpersonal interactions, and well-being. Second, factor analytic findings indicate that the USII assesses multiple dimensions of unsupportive social interactions. Third, the USII has demonstrated favorable psychometric properties in the present study and the original instrument development study. Fourth, the instrument is short enough to be incorporated into studies of stress, coping, and well-being without unduly burdening research participants.

**Additional Findings**

**Multiple loss.** The results concerning multiple loss are somewhat puzzling when they are compared to findings reported by Jones (1994) in a study of individuals who had experienced AIDS-related multiple bereavement. Means on the Present Grief scale across the two studies were nearly identical. However, in the present study, no significant relationships were found between present grief and any of the well-being measures. In contrast, Jones found a significant positive association between present grief and depression, and significant negative relationships between present grief and happiness as well as satisfaction with life. It should be noted that the same measures of depression, happiness, and satisfaction with life were used in both studies.

This pattern of findings is especially perplexing in light of results from a study by Martin and Dean (1993) suggesting that bereavement has stronger effects on the distress levels of people who are HIV-positive compared to those who are HIV-negative. Given that approximately 70% of Jones' (1994) sample reported being HIV-negative, one might expect stronger associations between grief and impaired well-being in the present study. There is at least one plausible explanation for these inconsistent findings.
Because participants in Jones' study were aware that his investigation concerned multiple loss, they may have unintentionally responded to the questionnaires in ways that supported their own hypotheses about the effects of multiple loss (Jones, p. 46). Thus, participants in Jones' study may have exaggerated the extent to which their well-being has been impaired.

Qualitative data. Participants' comments about living with HIV reflected both the heterogeneity of experiences and the existence of common themes. Five themes were identified: a personal perspective about living with HIV, the presence of HIV-related stressors, coping, interpersonal relationships, and the need for systemic change. There was some overlap between these themes and several of the representations identified in Schwartzberg's (1993) qualitative study of the way people ascribe meaning to AIDS and their HIV infection. For example, Schwartzberg found that some people experienced HIV as a catalyst for personal or spiritual growth. Similarly, some of the themes from the present study were consistent with categories identified in a separate study of individuals with AIDS who viewed themselves as doing well (Gloersen et al., 1993). In the Gloersen et al. study, categories of "doing well" included relating mind and body, participating in health care, and experiencing support.

As data from the present study suggest, living with HIV is a profoundly challenging process involving multiple stressors. Although some people are at times overwhelmed by that process, living with HIV also can be experienced as an opportunity for personal growth and empowerment.

Limitations

There are several limitations to the present investigation. First, because of the correlational nature of the research design, causality cannot be determined. For example, although it is possible that high levels of unsupportive social interactions may
based on self-report. Although the study included objective indicators of physical health, such as CD4 cell count, no attempt was made to compare actual laboratory findings with participants' reports of those values. Third, the majority of participants in this study were gay White men from relatively advantaged educational and socioeconomic backgrounds. Moreover, the sample was drawn from an AIDS clinical trials program. Given the unique characteristics of this sample, the findings may not be generalizable to other populations. Fourth, although there was a fair return rate in this study, no data are available about individuals who chose not to return the questionnaire booklet. Fifth, factor analytic results for the USII should be viewed with caution, given the relatively small ratio of participants to items that were factor analyzed. Finally, caution should be exercised in interpreting results for the coping strategy of cognitive escape-avoidance, in light of the relatively low alpha coefficient found for that subscale.

**Implications**

Nevertheless, this study has several tentative implications for counseling and other services designed to promote the well-being of people living with HIV. First, the study suggests that, in counseling people with HIV, it might be helpful to explore the client's sense of coherence. The extent to which the person views his or her world as meaningful, comprehensible, and manageable may be a more important determinant of psychological well-being than are the specific strategies the person uses to cope with living with the virus. Second, the study underscores the importance of exploring both the positive and negative dimensions of the client's social network and social interactions. Thus, in working with an HIV-positive client, counselors should ask about unsupportive responses the client has received from others about his or her having HIV. Counselors can then talk with the client about cognitive, affective, and
behavioral strategies for handling unsupportive social interactions. Third, findings from this study can help educate mental health professionals, health care providers, and other caregivers about the nature of unsupportive social interactions. Caregivers of a person with HIV could be taught how to avoid making unsupportive responses, and how to react in a helpful way after becoming aware that the person with HIV has received an unsupportive response from someone else. Fourth, information about unsupportive social interactions can be incorporated into preventative interventions for people with HIV, such as wellness and stress management programs. For example, people with HIV can be taught specific communication skills for responding to unsupportive social interactions.

Directions for Future Research

The results from this study raise several issues for future research concerning people living with HIV. First, it might be useful to include a more comprehensive assessment of some of the variables measured in this study. For example, in addition to examining global perceptions of available social support, researchers could include a measure of various types of received support (e.g., tangible assistance, emotional support). Similarly, although the present study measured the stressors of multiple loss and unsupportive social interactions, future investigations could include an assessment of other forms of stress such as negative life events. Moreover, in addition to examining multiple bereavement, researchers could study other forms of loss that people with HIV might experience, such as job loss, loss of financial security, and losses associated with relocating to a different geographic area in order to live with caregivers from their family of origin. In addition, it might be useful to include more objective measures of physical well-being, such as actual laboratory values for individuals' CD4 cell counts and records of physician visits.
Second, this study underscores the value of continuing to study multiple dimensions of the experience of living with HIV. For example, it appears to be useful to assess both interpersonal and intra-individual factors, both positive and negative elements of social interactions, and both psychological and physical well-being. Moreover, within the domain of physical well-being, it would be a mistake to rely exclusively on CD4 cell count. In attempting to understand the extent and quality of the person's physical health, it also is important to include measures of the person's perceptions of his or her physical functioning, as well as indicators of illness, such as symptoms and hospitalization.

Third, future research can build on this study by including samples from different populations. For example, researchers could attempt to replicate these findings in samples of people from non-White ethnic groups. In addition, it would be helpful to include a sufficient number of women in future studies so that analyses can be conducted concerning potential gender differences. It also would be useful to include a control group of people who are at risk for HIV infection but currently are HIV-negative.

Fourth, longitudinal studies could lead to an increased understanding of relationships among the variables and of the mechanisms underlying those associations. For example, it would be useful to determine whether the level of unsupportive social interactions predicts subsequent psychological and physical well-being. In addition, it may be that the coping strategies a person chooses and continues to use are determined by the kinds of unsupportive social interactions he or she experiences shortly after finding about being HIV-positive. Longitudinal studies also could enable researchers to explore the stability of variables such as sense of coherence and negative affectivity. For example, by gathering data about sense of coherence before and after the person
learns he or she is HIV-positive, researchers could test the hypothesis that being HIV-positive is such a major life change that it can lower one's level of SOC.

Fifth, although this study provided favorable evidence concerning the psychometric properties and utility of the USII, it would be helpful to gather more reliability and validity data and to cross-validate the instrument's factor structure in additional samples of people with HIV. An unexplored issue regarding the use of the USII in this population is the role of self-disclosure of one's HIV-positive status. In the present study, no attempt was made to assess the extent and pattern of an individual's self-disclosure of being HIV-positive. It is possible that persons who reported low levels of unsupportive social interactions had disclosed their HIV-positive status to few people. Whether there is a linear relationship between unsupportive social interactions and the extent of disclosure is a testable hypothesis. Alternatively, perhaps there is a complex relationship between unsupportive social interactions and self-disclosure of HIV-positive status, such that the number of individuals the person informs is less important than the pattern of disclosure (e.g., the degree of closeness the person had with individuals to whom he or she discloses).

Sixth, future studies could be designed to test the effectiveness of particular interventions intended to promote well-being in people living with HIV. For example, as mentioned previously, interventions could be designed to help individuals with HIV respond to unsupportive social interactions they receive from others. Studies could assess how such an intervention potentially influences well-being, trait negative affectivity, and subsequent reports of unsupportive social interactions. Similarly, studies could assess the effects of interventions designed to enhance a person's sense of coherence. In addition, intervention studies could explore whether potential beneficial
effects for people living with HIV can be derived from educating their caregivers and significant others about unsupportive social interactions.

Finally, this study underscores the value of using both quantitative and qualitative approaches to understanding the experience of living with HIV.
APPENDIX A

SATISFACTION WITH LIFE SCALE
Instructions: Below are five statements with which you may agree or disagree. Using the 1-7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding. The 7-point scale is as follows:

1 = strongly disagree  
2 = disagree  
3 = slightly disagree  
4 = neither agree nor disagree  
5 = slightly agree  
6 = agree  
7 = strongly agree

___ A. In most ways my life is close to my ideal.

___ B. The conditions of my life are excellent.

___ C. I am satisfied with my life.

___ D. So far I have gotten the important things I want in life.

___ E. If I could live my life over, I would change almost nothing.
APPENDIX B

SENSE OF COHERENCE SCALE
Instructions: Here is a series of questions relating to various aspects of our lives. Each question has seven possible answers. Please indicate your response to each question by circling the number that represents your response.

1. Do you have the feeling that you don't really care about what goes on around you?
   - 1 Very seldom or never
   - 2
   - 3
   - 4
   - 5
   - 6
   - 7 Very often

2. Has it happened in the past that you were surprised by the behavior of people whom you thought you knew well?
   - 1 Never happened
   - 2
   - 3
   - 4
   - 5
   - 6
   - 7 Always happened

3. Has it happened that people whom you counted on disappointed you?
   - 1 Never happened
   - 2
   - 3
   - 4
   - 5
   - 6
   - 7 Always happened

4. Until now your life has had
   - 1 No clear goals or purpose at all
   - 2
   - 3
   - 4
   - 5
   - 6
   - 7 Very clear goals and purpose

5. Do you have the feeling that you're being treated unfairly?
   - 1 Very often
   - 2
   - 3
   - 4
   - 5
   - 6
   - 7 Very seldom or never

6. Do you have the feeling that you are in an unfamiliar situation and don't know what to do?
   - 1 Very often
   - 2
   - 3
   - 4
   - 5
   - 6
   - 7 Very seldom or never
7. Doing the things you do every day is

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<th>5</th>
<th>6</th>
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<tbody>
<tr>
<td>A source of deep pleasure and satisfaction</td>
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<td></td>
<td></td>
<td></td>
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<td>A source of pain and boredom</td>
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8. Do you have very mixed-up feelings and ideas?

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<tr>
<td>Very often</td>
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<td>Very seldom or never</td>
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9. Does it happen that you have feelings inside you would rather not feel?

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<tr>
<td>Very often</td>
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<td></td>
<td>Very seldom or never</td>
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10. Many people—even those with a strong character—sometimes feel like sad sacks (losers) in certain situations. How often have you felt this way in the past?

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<tbody>
<tr>
<td>Never</td>
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<td>Very often</td>
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11. When something happened, have you generally found that

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<tr>
<td>You over-estimated or under-estimated its importance</td>
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<td>You saw things in the right proportion</td>
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12. How often do you have the feeling that there's little meaning in the things you do in your daily life?

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<tbody>
<tr>
<td>Very often</td>
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<td>Very seldom or never</td>
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13. How often do you have feelings that you're not sure you can keep under control?

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<th>7</th>
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<tbody>
<tr>
<td>Very often</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Very seldom or never</td>
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APPENDIX C

POSITIVE AND NEGATIVE AFFECT SCHEDULE
Instructions: This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you generally feel this way, that is, how you feel on the average. Use the following scale to record your answers.

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<th>1</th>
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<th>3</th>
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<tbody>
<tr>
<td>very slightly or not at all</td>
<td>a little</td>
<td>moderately</td>
<td>quite a bit</td>
<td>extremely</td>
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<tr>
<td>_____ interested</td>
<td>_____ irritable</td>
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<tr>
<td>_____ distressed</td>
<td>_____ alert</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>_____ excited</td>
<td>_____ ashamed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>_____ upset</td>
<td>_____ inspired</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>_____ strong</td>
<td>_____ nervous</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>_____ guilty</td>
<td>_____ determined</td>
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<tr>
<td>_____ scared</td>
<td>_____ attentive</td>
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<tr>
<td>_____ hostile</td>
<td>_____ jittery</td>
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<tr>
<td>_____ enthusiastic</td>
<td>_____ active</td>
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<td></td>
</tr>
<tr>
<td>_____ proud</td>
<td>_____ afraid</td>
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APPENDIX D

CENTER FOR EPIDEMIOLOGIC STUDIES DEPRESSION SCALE
**Instructions:** Circle the number for each statement which best describes how often you felt or behaved this way — **DURING THE PAST WEEK.**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Rarely or None of the Time (Less than 1 Day)</th>
<th>Some or a Little of the Time (1-2 Days)</th>
<th>Occasionally or A Moderate Amount of Time (3-4 Days)</th>
<th>Most or All of the Time (5-7 Days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I was bothered by things that usually don't bother me.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. I did not feel like eating; my appetite was poor.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. I felt that I could not shake off the blues even with help from my family and friends.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4. I felt that I was just as good as other people.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5. I had trouble keeping my mind on what I was doing.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6. I felt depressed.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7. I felt that everything I did was an effort.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8. I felt hopeful about the future.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9. I thought my life had been a failure.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>10. I felt fearful.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>11. My sleep was restless.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>12. I was happy.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>13. I talked less than usual.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>14. I felt lonely.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>15. People were unfriendly.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>16. I enjoyed life.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>17. I had crying spells.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>18. I felt sad.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>19. I felt that people disliked me.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>20. I could not get &quot;going&quot;.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
Now we are going to shift gears a bit. The next set of questionnaires ask about losses (deaths) of people in your life. If you find yourself becoming upset, please feel free to take a few minutes to stretch or take a short walk before returning to the questionnaires.
Instructions: The following questions ask you about losses which you may have experienced in the past several years.

In the box below, please list the initials of those persons whose death has been a loss for you. If you have not experienced any losses, please skip to page 24.

Please go back and circle the initials of up to three persons whose deaths have been the most significant losses for you.

Now, on the following pages, please answer a few questions about each of the persons whose initials you circled, beginning on page 18 with the first set of initials you circled.
THIS PERSON'S INITIALS: ______________________

THIS PERSON WAS MY (check one only):
☐ Mother  ☐ Father  ☐ Brother  ☐ Sister  ☐ Lover/Spouse
☐ Friend  ☐ Acquaintance  ☐ Other (specify) ________________

LOOKING BACK. I WOULD GUESS THAT MY RELATIONSHIP WITH THIS PERSON WAS (check only one):
☐ Closer than any relationship I've ever had before or since.
☐ Closer than most relationships I've had with other people.
☐ About as close as most of my relationships with others.
☐ Not as close as most of my relationships.
☐ Not very close at all.

THIS PERSON DIED (check one only):
☐ within the past 3 months  ☐ 9-12 months ago  ☐ more than 5 years ago
☐ 3-6 months ago  ☐ 1-2 years ago
☐ 6-9 months ago  ☐ 2-5 years ago

THIS PERSON'S DEATH WAS (check all that apply):
☐ Slow  ☐ Sudden  ☐ HIV-related

PLEASE CHECK THE BOX WHICH BEST DESCRIBES YOUR ROLE AS A CAREGIVER FOR THIS PERSON (check only one):
☐ I was completely responsible for caregiving for this person.
☐ I shared caregiving responsibilities with others, but I was ultimately responsible.
☐ I shared caregiving responsibilities more or less equally with other people.
☐ I helped out with caregiving responsibilities.
☐ I had no caregiving responsibilities at all.

PART 1: PAST BEHAVIOR
Think back to the time this person died and answer the next 8 questions about your feelings and actions at that time by checking the appropriate box as it applied to you after this person died. Check the best answer.

<table>
<thead>
<tr>
<th></th>
<th>Completely True</th>
<th>Mostly True</th>
<th>True &amp; False</th>
<th>Mostly False</th>
<th>Completely False</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>After this person died, I found it hard to get along with certain people.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>2.</td>
<td>I found it hard to work well after this person died.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>3.</td>
<td>After this person's death I lost interest in my family, friends, and outside activities.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4.</td>
<td>I felt a need to do things that the person who died had wanted to do.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>5.</td>
<td>I was unusually irritable after this person died.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>6.</td>
<td>I couldn't keep up with my normal activities for the first 3 months after this person died.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>7.</td>
<td>I was angry that the person who died had left me.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>8.</td>
<td>I found it hard to sleep after this person died.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Please continue to answer questions about this person on the next page ➔
PART II: PRESENT FEELINGS

Now respond to the following 15 items by checking how you presently feel about this person's death.

PLEASE DO NOT LOOK BACK AT PART I: PAST BEHAVIOR.

1. I still cry when I think of this person.......................... Mostly True Mostly False
2. I still get upset when I think about this person.................. Mostly True Mostly False
3. I cannot accept this person's death................................. Mostly True Mostly False
4. Sometimes I very much miss this person.......................... Mostly True Mostly False
5. Even now it's painful to recall memories of this person........ Mostly True Mostly False
6. I am preoccupied with thoughts (often think) about this person.. Mostly True Mostly False
7. I hide my tears when I think about this person.................. Mostly True Mostly False
8. No one will ever take the place in my life of this person...... Mostly True Mostly False
9. I can't avoid thinking about this person.......................... Mostly True Mostly False
10. I feel that it's unfair that this person died...................... Mostly True Mostly False
11. Things and people around me still remind me of this person... Mostly True Mostly False
12. I am unable to accept the death of this person.................. Mostly True Mostly False
13. At times I still feel the need to cry for this person............ Mostly True Mostly False
14. I feel that I have really grieved for this person.............. Mostly True Mostly False
15. Compared to how I was functioning before this person died, I feel that I am now functioning.......................... Much Worse About As Well Much Better

PART III: RELATED FACTS

Now please respond to the following items by circling True or False:

1. I learned of this person's death in a timely manner. True False
2. I attended the funeral (or memorial) of the person who died. True False
3. I seem to get upset each year at about the same time as the person died. True False
THIS PERSON'S INITIALS: _______________

THIS PERSON WAS MY (check one only):
□ Mother □ Father □ Brother □ Sister □ Lover/Spouse
□ Friend □ Acquaintance □ Other(specify)_______________

LOOKING BACK, I WOULD GUESS THAT MY RELATIONSHIP WITH THIS PERSON WAS (check only one):
□ Closer than any relationship I've ever had before or since.
□ Closer than most relationships I've had with other people.
□ About as close as most of my relationships with others.
□ Not as close as most of my relationships.
□ Not very close at all.

THIS PERSON DIED (check one only):
□ within the past 3 months □ 9-12 months ago □ more than 5 years ago
□ 3-6 months ago □ 1-2 years ago
□ 6-9 months ago □ 2-5 years ago

THIS PERSON'S DEATH WAS (check all that apply):
□ Slow □ Sudden □ HIV-related

PLEASE CHECK THE BOX WHICH BEST DESCRIBES YOUR ROLE AS A CAREGIVER FOR THIS PERSON (check only one):
□ I was completely responsible for caregiving for this person.
□ I shared caregiving responsibilities with others, but I was ultimately responsible.
□ I shared caregiving responsibilities more or less equally with other people.
□ I helped out with caregiving responsibilities.
□ I had no caregiving responsibilities at all.

PART I: PAST BEHAVIOR

Think back to the time this person died and answer the next 8 questions about your feelings and actions at that time by checking the appropriate box as it applied to you after this person died. Check the best answer.

1. After this person died, I found it hard to get along with certain people.................................................................................. □ Q Q Q Q Q
2. I found it hard to work well after this person died........................ □ □ □ □ □
3. After this person's death I lost interest in my family, friends, and outside activities................................................................. □ Q Q Q Q Q
4. I felt a need to do things that the person who died had wanted to do.......................................................................................... □ Q Q Q Q Q
5. I was unusually irritable after this person died......................... □ Q Q Q Q Q
6. I couldn't keep up with my normal activities for the first 3 months after this person died......................................................... □ Q Q Q Q Q
7. I was angry that the person who died had left me..................... □ Q Q Q Q Q
8. I found it hard to sleep after this person died............................ □ Q Q Q Q Q

Please continue to answer questions about this person on the next page □
PART II: PRESENT FEELINGS
Now respond to the following 15 items by checking how you presently feel about this person's death. PLEASE DO NOT LOOK BACK AT PART I: PAST BEHAVIOR.

1. I still cry when I think of this person
2. I still get upset when I think about this person
3. I cannot accept this person's death
4. Sometimes I very much miss this person
5. Even now it's painful to recall memories of this person
6. I am preoccupied with thoughts (often think) about this person
7. I hide my tears when I think about this person
8. No one will ever take the place in my life of this person
9. I can't avoid thinking about this person
10. I feel that it's unfair that this person died
11. Things and people around me still remind me of this person
12. I am unable to accept the death of this person
13. At times I still feel the need to cry for this person
14. I feel that I have really grieved for this person
15. Compared to how I was functioning before this person died, I feel that I am now functioning

PART III: RELATED FACTS
NOW PLEASE RESPOND TO THE FOLLOWING ITEMS BY CIRCLING TRUE OR FALSE:
1. I learned of this person's death in a timely manner.
2. I attended the funeral (or memorial) of the person who died.
3. I seem to get upset each year at about the same time as the person died.

If you circled more than two sets of initials on page 17, please go on to page 22 and answer the questions about the third set of initials you circled.
If you circled only two sets of initials on page 17 please skip to page 24.
THIS PERSON'S INITIALS:__________________

THIS PERSON WAS MY (check one only):
☐ Mother ☐ Father ☐ Brother ☐ Sister ☐ Lover/Spouse
☐ Friend ☐ Acquaintance ☐ Other(specify)_______________

LOOKING BACK. I WOULD GUESS THAT MY RELATIONSHIP WITH THIS PERSON WAS (check only one):
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☐ Closer than most relationships I've had with other people.
☐ About as close as most of my relationships with others.
☐ Not as close as most of my relationships.
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THIS PERSON'S DEATH WAS (check all that apply):
☐ Slow ☐ Sudden ☐ HIV-related

PLEASE CHECK THE BOX WHICH BEST DESCRIBES YOUR ROLE AS A CAREGIVER FOR THIS PERSON (check only one):
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☐ I had no caregiving responsibilities at all.

PART I: PAST BEHAVIOR

Think back to the time this person died and answer the next 8 questions about your feelings and actions at that time by checking the appropriate box as it applied to you after this person died. Check the best answer.

1. After this person died, I found it hard to get along with certain people................................................................. ☐ ☐ ☐ ☐ ☐ ☐
2. I found it hard to work well after this person died.................. ☐ ☐ ☐ ☐ ☐ ☐
3. After this person's death I lost interest in my family, friends, and outside activities..................................................... ☐ ☐ ☐ ☐ ☐ ☐
4. I felt a need to do things that the person who died had wanted to do................................................................. ☐ ☐ ☐ ☐ ☐ ☐
5. I was unusually irritable after this person died.......................... ☐ ☐ ☐ ☐ ☐ ☐
6. I couldn't keep up with my normal activities for the first 3 months after this person died..................................................... ☐ ☐ ☐ ☐ ☐ ☐
7. I was angry that the person who died had left me..................... ☐ ☐ ☐ ☐ ☐ ☐
8. I found it hard to sleep after this person died.......................... ☐ ☐ ☐ ☐ ☐ ☐

Please continue to answer questions about this person on the next page ☞
PART II: PRESENT FEELINGS
Now respond to the following 15 items by checking how you presently feel about this person's death. PLEASE DO NOT LOOK BACK AT PART I: PAST BEHAVIOR.

<table>
<thead>
<tr>
<th>Item</th>
<th>Completely True</th>
<th>Mostly True</th>
<th>True &amp; False</th>
<th>Mostly False</th>
<th>Completely False</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I still cry when I think of this person..............................</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>2. I still get upset when I think about this person.....................</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>3. I cannot accept this person's death......................................</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4. Sometimes I very much miss this person..................................</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>5. Even now it's painful to recall memories of this person.............</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>6. I am preoccupied with thoughts (often think) about this person......</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>7. I hide my tears when I think about this person........................</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>8. No one will ever take the place in my life of this person...........</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>9. I can't avoid thinking about this person................................</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>10. I feel that it's unfair that this person died..........................</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>11. Things and people around me still remind me of this person..........</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>12. I am unable to accept the death of this person.......................</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>13. At times I still feel the need to cry for this person...............</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>14. I feel that I have really grieved for this person....................</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>15. Compared to how I was functioning before this person died.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel that I am now functioning........................................</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

PART III: RELATED FACTS
NOW PLEASE RESPOND TO THE FOLLOWING ITEMS BY CIRCLING TRUE OR FALSE:

1. I learned of this person's death in a timely manner.                     True False
2. I attended the funeral (or memorial) of the person who died.            True False
3. I seem to get upset each year at about the same time as the person died. True False

When you are finished with this page, please go on to the next page.

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APPENDIX F
QUALITATIVE QUESTIONNAIRE
Thank you for answering all of these questions about your experiences of living with HIV. We are also very interested in your special thoughts and comments. Please feel free to use this page to tell us about any thoughts or feelings you have.

When you are finished with this page, please go on to the next page.
APPENDIX G

HEALTH STATUS INVENTORY
Now, please answer a few questions about your health.
All responses are anonymous and confidential.

1. How many days have you been hospitalized overnight in the past 6 months? ____

2. Do you know your most recent CD4 (T-cell) count?
   - Yes □ No □
   If yes, what was your most recent CD4 (T-cell) count? ____________
   When was your most recent CD4 (T-cell) count taken? ____________ (month and year)

3. Which, if any, of the following illnesses have you had in the past 6 months? (Check all that apply)
   - CMV □
   - Cryptococcus □
   - Cryptosporidiosis □
   - Esophagitis □
   - Hairy leukoplakia □
   - Herpes zoster/shingles □
   - Histoplasmosis □
   - Kaposi's sarcoma/KS □
   - Lymphoma □
   - MAI □
   - Pneumocystis/PCP □
   - Thrush □
   - Toxoplasmosis □
   - Tuberculosis □
   - Vaginitis or vaginal yeast infection □

4. Have you had any HIV-related illness(es) in the past 6 months other than those listed in Question #3?
   - Yes □ No □
   If yes, please list: ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
APPENDIX H

DEMOGRAPHIC QUESTIONNAIRE
Now, please answer a few questions about yourself.
All responses are anonymous and confidential.

1. What is your sex?  □ Male  □ Female
2. What is your age?______
3. What is your racial/ethnic background? (Check all that apply)
   □ African-American (Black)
   □ Caucasian (White)
   □ American Indian
   □ Hispanic/Latino/Latina
   □ Asian/Pacific Islander
   □ Other (specify)_____________________
4. What is your highest level of education? (Check one only)
   □ Elementary
   □ High School
   □ Some College
   □ Bachelor’s Degree
   □ Master’s Degree
   □ Doctorate
5. Are you currently employed?
   □ Yes, full-time  □ Yes, part-time  □ No
6. How many people, including yourself, live in your household?______
7. What is the approximate annual income of your household before taxes?
   $_____________________
8. What is your sexual/affectional orientation?
   □ Gay or Lesbian  □ Bisexual  □ Heterosexual
9. Are you HIV-positive?
   □ Yes  □ No  □ Don’t know
   If yes, how long have you known?______
10. Are you currently in a relationship with a partner/spouse?
    □ Yes  □ No
    If yes, is your partner/spouse HIV-positive?
       □ Yes  □ No  □ Don’t know
APPENDIX I
DEBRIEFING STATEMENT
Statement to Research Participants

Thank you for your time and effort in this study. We very much appreciate your help.

When you have completed the questionnaire packet, please return it to us by mail in the stamped, self-addressed envelope provided. Do not include your name anywhere on the packet.

This research project is to learn about stress, coping, and well-being in people living with HIV. We hope to finish our work on this project by autumn 1994. If you would like to obtain a summary of the results of this study, we will be happy to provide one to you. At the conclusion of the study, copies of the research summary will be available from staff at the Ohio State University AIDS Clinical Trials Unit.

If there are aspects of this study which have concerned you or about which you would like more information, please call us at the Counseling Psychology Area office, (614) 292-5303.

If you experience any feelings or reactions that make you uncomfortable, and you would like to discuss them with a counselor, you may contact one of the centers listed below:

Southeast Community Mental Health Center
1455 South Fourth Street
Columbus, Ohio 43207-1013
Phone: 444-0800

North Central Mental Health Center
1301 North High Street
Columbus, Ohio 43201-2460
Phone: 299-6600

Thank you again for your valuable contribution to this research project.

Kathleen M. Ingram, M.A.
Kathleen M. Ingram, M.A.
Department of Psychology - Counseling Area
The Ohio State University
126 Townshend Hall
1885 Neil Avenue Mall
Columbus, Ohio 43210
References


Browne, M. W. (1992). TARROT: A computer program for carrying out an orthogonal or oblique rotation to a partially specified target. [Computer program]. The Ohio State University.


The Ohio State University AIDS Clinical Trials Unit. (1990). *Establishment of a patient cohort for The Ohio State University AIDS Clinical Unit*. Columbus, OH: Author.


