A RAND NOTE

MEASURING THE ABILITY TO COPE WITH SERIOUS ILLNESS

Anita L. Stewart

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PREFACE

The research leading to this Note was supported in part by National Institute of Mental Health Training Grant MH14664, in part by Public Health Service Grant 2 SO7 RR-5710-13, and in part by The Rand Corporation using its own corporate research funds. It was conducted in partial fulfillment of the requirements for a Ph.D. degree from the University of California at Los Angeles.

The contents of this Note should be of interest to researchers studying the mechanisms by which people cope with serious illness and the effects of such illnesses on people's lives. The conceptual model presented provides a way of thinking about the psychosocial aspects of grave illness, and the measures developed could be applied to a variety of health research questions.

SUMMARY

This Note contains a Ph.D. dissertation on a conceptual framework of coping with serious illness. Coping responses are behavioral responses (thoughts or actions) to concerns associated with the illness. These must be viewed within the context of the person's life and illness situation. Coping responses and context variables can be evaluated in relation to certain outcomes, such as psychological well-being or survival.

A set of over 75 measures were developed assessing a variety of coping responses, context variables, and outcomes; 60 of these are multi-item measures. Reliability and validity information and suggestions for improving the measures were developed in a sample of 158 people with either cancer or myocardial infarction; data are cross-sectional, obtained from self-administered questionnaires.

Measures were constructed in beliefs about recovery from the illness, attitudes about death, attribution of the illness, sense of control, self-esteem, social networks, social support, will to live, active coping, acceptance/rejection of illness, the doctor-patient relationship, benefits of illness, positive and negative feelings, functional status, symptoms, pain, and general health.

Studies of interrelationships among the measures include the dimensionality of the context variables; the dimensionality of coping responses; associations among context and coping measures; the relationship of all of these measures to sociodemographic characteristics, outcomes, and physician ratings; and the dimensionality of all of the measures.

Results suggest that there are four dimensions of coping responses: (1) relax/routine/enjoy, (2) active distraction, (3) concern with the illness, and (4) rejecting the sick role. Four dimensions of context variables were: (1) social network/social support, (2) personal, (3) beliefs in self-care/religious/spiritual, and (4) belief in the efficacy of medical care.

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Dennis Jaffe, Kouji Nakata, and Joanne Mantell helped write items for the questionnaire. Sandra Berry designed and formatted the questionnaire. The Survey Production Group of The Rand Corporation prepared the questionnaire.

Dr. Michael Van Scoy-Mosher, Dr. Gregory Sarna, Dr. Fred Rosenfelt, and Dr. Barry Rosenbloom allowed me access to their patients. Dr. Kathleen Ell cooperated by using the questionnaire in her study of patients. Janet MacKenzie contacted patients at the Bresler Center.

The Rand Corporation contributed considerable financial resources, through its educational assistance program and through the Directed Studies Committee in the Computer Services Department, both of which provided funds for data entry, data analysis, and text processing.

My dissertation committee took the time and effort to read and comment on this study. Shelley Taylor, my chairperson, provided encouragement throughout the various stages of the research.

Lucy Wilson and Lois Haigazian typed for countless hours on the manuscript.

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1. INTRODUCTION

People who have a serious and possibly life-threatening illness are faced with a number of medical concerns (e.g., pain, symptoms, and finding an appropriate medical treatment). Additional concerns have to do with the psychological and social effect of the illness--for example, facing possible death, not being able to work or care for one's children, and simply trying to be happy.

Coping with illness refers to what a person does in response to all the concerns associated with the illness. It is increasingly recognized that how people cope with their illness may be as important as the medical care they receive in determining satisfactory outcomes.

Research on illness has focused on determining optimal medical treatments. We know very little, however, about which psychological and social responses will provide optimal conditions for recovery. If researchers could determine that certain coping responses improve a person's quality of life, facilitate healing, or lengthen life, patients can be assisted in planning coping strategies that will increase their chances of achieving these outcomes.

MODELS OF HEALTH AND ILLNESS

Until quite recently, concepts of health and illness largely conformed to what is sometimes referred to as the medical model which emphasizes the physiological and biological aspects of disease. Within the medical model, health is generally defined as the absence of disease, the patient's role is to seek medical care in response to illness, and the physician's role is to diagnose and treat illness (Parsons, 1951).

This medical model is gradually being modified in favor of a broader model that includes mental, emotional, and spiritual aspects of disease and health, in addition to the physiological and biological aspects. The emerging model concerns the "whole mind-body-spirit personality, with emphasis on life-style, well-being, and wellness" (Yahn, 1979). Health is increasingly being defined in terms of positive

well-being (in addition to the absence of disease). For example, optimal health has been defined as a synthesis of body, emotions, mind, will, and spirit (O'Regan and Carlson, 1979).

Several researchers have suggested that this new model should be thought of as a hierarchy of models rather than as a single all-encompassing model (Engel, 1979; Howard and Strauss, 1975; Antonovsky, 1979). Thus, an individual's health can be evaluated at any of several levels such as physiological, biological, psychological, social, environmental, or cultural. At each level, an autonomous model can be conceived (Engel, 1979). For example, at the physiological level, the introduction of a virus may cause a sign of illness to occur. In this hierarchical scheme, each level is related to other levels, and a breakdown at one level may influence variables at another level. For example, the loss of a job (environmental) may result in emotional distress (psychological), which in turn disrupts the digestive process (biological).

Health is defined by Engel in terms of the "relative intactness and functioning of each component system on each hierarchical level" (1979, p. 161).

Within this hierarchical conception, the medical model represents an attempt to view health and illness on only two levels, the physiological and biological. Consideration of psychological, social, environmental, or cultural influences has largely been out of the realm of traditional medicine.

Within the new model, the promotion of health and the treatment of disease become a joint effort of the individual, the family, the medical community, and society. An example of a conflict in such effort occurs when the medical community urges people to take personal responsibility for their health by not smoking, yet society allows a proliferation of alluring cigarette ads.

This new and broader approach to illness and health is not a new one; it was commonly advocated in the early days of medicine, is today the underlying philosophy of much nonwestern medicine, and has for many years fallen under the rubric of "psychosomatic medicine." It has suffered from a considerable lack of reputability and even today stirs up controversy within the medical community. Although it is commonly

termed holistic medicine, even this term stirs controversy as connoting quackery. Critics of the holistic viewpoint frequently point to the lack of "scientific" evidence, often with justification. Nevertheless, concepts of holistic medicine are rapidly gaining recognition and respect (Challes, 1979; Holden, 1980; Yahn, 1979).

Because of the increasing recognition given to concepts of holistic medicine, research on how psychosocial and other factors relate to health and illness will undoubtedly increase in the next decade. One of the challenges that researchers in the holistic medicine arena face is to conduct methodologically sound research.

In conducting research based on the holistic model, an important first step is to develop a strong conceptual framework. This should include a thorough clarification of the concepts involved, as well as a preliminary understanding of how the concepts are organized. Once this framework is established, the operationalization of the concepts can follow--i.e., the development of reliable and valid measures of the concepts. Finally, tests of the relationships among the various concepts can be made using these measures.

II. A CONCEPTUAL MODEL OF COPING

AN OVERVIEW OF COPING

Defining Coping

There are many definitions of coping. Some refer to coping in general, and some are specific to coping with illness. For example:

> Coping refers to strategies for dealing with threat (Lazarus, 1966).
>
> Coping is the instrumental behavior and problemsolving capacities of persons in meeting life demands and goals (Mechanic, 1968).
>
> Coping is all cognitive and motor activities which a sick person employs to preserve his bodily and psychic integrity, to recover reversibly impaired function and compensate to the limit for any irreversible impairment (Lipowski, 1970).
>
> Coping is any response to external life-strains that serves to prevent, avoid, or control emotional distress (Pearlin and Schooler, 1978).
>
> Coping is what one does about a perceived problem in order to bring about relief, reward, quiescence and equilibrium (Weisman and Worden, 1976).
>
> Coping is to deal with and attempt to . . . overcome problems and difficulties (Webster's, 1975).
>
> Coping is adaptation under very difficult conditions (White, 1974).
>
> Coping is the cognitive and behavioral efforts made to master, minimize, tolerate, reduce, or minimize internal and environmental demands and the conflicts among them (Lazarus and Launier, 1978).

Coping is viewed as a response in nearly all of these definitions, where the response could be either a behavior or a cognition.

Many of the definitions include reference to a particular outcome,

usually a positive one--e.g., "to bring about relief," "to recover . . . impaired function," or "to avoid distress." There are several problems with this. First, a person may be making a response that is intended to lead to a particular outcome, but for some reason the outcome is not achieved (e.g., the person meditates to reduce distress but it doesn't work). Nevertheless, the response should be considered as a coping response. A second problem with defining coping in terms of outcomes is that many desired outcomes may be distant in time from the response, thus whether the response is a coping response could not be assessed until that time. In fact, it may be necessary for a person to tolerate a short-term undesirable outcome (e.g., distress of surgery) in order to achieve a long-term desired outcome (survival). In this example, one would probably want to refer to the response of facing up to surgery as coping, even though the short-term outcome is distress. A third problem is that people differ in the outcomes they desire. One person may choose to face a great deal of initial distress to achieve a longer life, whereas another may prefer to risk a shorter life to maintain a certain quality of that life. Again, one would want to be able to define both of these responses as coping.

For these reasons, it is preferable to limit the definition of coping to the responses and describe the outcomes separately.

A simple definition of coping is presented here that takes into account some of the problems discussed above, and is appropriate in describing coping with a serious illness:

> Coping is any behavioral response (thought or action) to concerns associated with the illness.

Whether the coping responses are effective or not can thus be dealt with as a separate issue. The word "concerns" was chosen over "problems" because not all illness-related concerns are problems (e.g., the concern about the meaning of one's life is not necessarily a problem).

Schemes for Organizing Coping Responses

In describing coping responses, one must decide whether to simply list the specific responses or organize these responses according to some apparent underlying scheme.

Most researchers who have attempted to organize coping responses have done so based on the purpose of the coping response. Many investigators consider the essential purpose of coping responses as the reduction of emotional distress (Lazarus, 1974; Moos, 1976; Pearlin and Schooler, 1978; Wolff et al., 1964). Lazarus (1979) classifies coping responses into two types: 1) problemsolving responses, which are aimed at changing the situation; and 2) emotion-focused responses, which are intended to make the person feel better. Pearlin and Schooler (1978) classify coping responses according to three purposes, two of which parallel Lazarus's: 1) responses that change the situation; 2) responses that control the stress itself; and 3) responses that control the meaning of the situation. Hamburg and Adams (1967) suggest five purposes of coping behaviors as those that: 1) keep distress within manageable limits; 2) maintain a sense of personal worth; 3) restore relationships with significant other people; 4) enhance prospects for the recovery of bodily functions; and 5) increase the likelihood of working out a personally valued and socially acceptable situation after maximum physical recovery has been attained. Lipowski (1970) suggests that the purposes of coping are to: 1) preserve bodily integrity; 2) preserve psychic integrity; 3) recover reversibly impaired function, and 4) compensate for any irreversible impairment.

There are two problems with organizing coping responses according to their purpose. First, many responses may serve more than one purpose. Second, such an organization scheme should be derived empirically (e.g., using factor analytic methods) rather than according to an investigator's a priori theory. In order to do this, measures of the separate responses must first be obtained. Because of these problems, it is preferable to first assess specific coping responses without attempting to organize the responses into a scheme.

Areas of Concern Regarding Serious Illness

Coping is defined here as a response to concerns associated with the illness. A number of areas of concern to people faced with a serious illness have been suggested. A summary of these is presented in Table 1, based on the work of Cohen and Lazarus (1979); Moos and Tsu (1979); Straus and Glaser (1975); USDHHS (1980); Weisman (1979); and Yager and Robinson (1980). These areas of concern are highly interrelated--i.e., problems in one area clearly affect other areas. Different concerns will be foremost for different people depending on the nature of the illness, the particular life situation, and the personality of the individual.

Outcomes of Coping

These areas of concern to some extent provide the basis for describing the outcomes that could be used to assess the effectiveness of various coping responses. That is, some of the areas of concern are also categories of outcomes. Outcomes that might be of interest include: 1) length of survival; 2) physiological (e.g., functioning of immune system, sedimentation rate, tumor size); 3) physical (e.g., symptoms, pain, bodily functioning); 4) feelings (e.g., positive well-being, depression); 3) social (e.g., role and social functioning); and 4) self-concept (e.g., self-esteem, competence).

The relative value of each of these outcomes may differ among individuals. For example, one person may consider the most valuable outcome being able to work, even at the cost of a shorter survival time, whereas another person may hold the reverse values. For most people, lowered emotional distress will almost certainly be a valued outcome. However, other outcomes may be equally valued, such as relating to friends or continuing to work. To obtain some of these other outcomes may require at least a temporary state of increased distress. The consideration of the value of various outcomes to the individual has implications in assessing the effectiveness of various coping responses. An investigator may not be able to objectively define one outcome as more valuable than any other. This again illustrates the importance of defining coping responses separately from the outcomes of those

Table 1

SUMMARY OF AREAS OF CONCERN REGARDING SERIOUS ILLNESS

Area of Concern	Example
Survival	Desire to live Fear of dying
Bodily integrity	Pain Bodily function Tumor size Symptoms
Self-concept	Self-esteem Sense of competence and mastery Body image
Social role	Ability to work Ability to be a mother
Finances	Money for medical care, drugs Money for household help, child care
Family	Relationships with family, separation from family Burden on family, dependency
Friends	Relationships with friends and associates, isolation, separation, rejection
Religion	Concern with life after death Desire to be closer to God
Existential, belief systems	Evaluation of the meaning of the illness Concerns of life, death, destiny Regrets about the past
Feelings, emotions	Avoid depression, anxiety Maintain feelings of well-being, pleasure, hope Express negative feelings

Table 1--continued

Area of Concern	Example
Dependency	Burden on others Need for help vs. need for independence
Sexuality	Desirability Ability to function sexually
Preparing for uncertain future	Financial support for family Change in life goals
Dealing with hospital environment and special treatment procedures	Chemotherapy, radiation Unknown procedures Rules of hospital Adjust to new surroundings
Developing relations with care givers	Doctors, nurses Appropriate behavior, how to deal with disagreements
Dealing with treatment regimens	Learning and maintaining prescribed treatment regimens (e.g., change in diet, lifestyle, giving injections)

responses. It may in fact be necessary to evaluate all of these outcomes in order to assess the effectiveness of coping.

If these outcomes are measured at the same time as the coping and context variables, they may be more appropriately labeled as concurrent psychological states or concurrent health. For purposes of classification as measures, however, they will be referred to here as outcomes.

Context Within Which Coping Responses Occur

The coping responses a person makes depend on many things such as the nature of the illness, the person's beliefs about illness, the person's self-esteem, and the availability of friends or family. In other words, the person's coping responses occur within the context of that person's life and illness situation. To adequately assess how people cope with serious illness, this context must be recognized. The holistic approach considers this context as an essential part of the person's illness, and of the person's responses to that illness.

Some of these contextual variables may facilitate certain coping responses (e.g., having friends facilitates seeking emotional support) and can be considered coping resources (Pearlin and Schooler, 1978; Antonovsky, 1979). Other factors may limit the availability of certain coping responses (e.g., a physician who is unwilling to allow the patient to participate in the decision about treatment hinders that person's sense of control); these become coping hindrances.

Seven general categories of contextual variables are: 1) psychological (e.g., sense of control, self-esteem, self-sufficiency); 2) sociocultural (e.g., availability of friends); 3) medical (e.g., type of treatment, information imparted by the physician, expectations of physician); 4) environmental (e.g., cost of medical care, life events); 5) sociodemographic (e.g., age, income); 6) illness (e.g., nature of illness, prognosis); and 7) constitutional (e.g., general resistance, genetics).

Coping as a Process

Clearly, any discussion of coping must consider its dynamic nature, that is, different coping responses may occur depending on the stage in the process (Lipowski, 1970). Most investigators who allude to such a process suggest that denial is more common in the early phases of coping (Hamburg and Adams, 1967; Lazarus, 1979; Moos, 1976; Visotsky et al., 1961), followed by a recognition and reorganization phase in which the new situation is faced and incorporated into the person's life (Moos 1976; Visotsky et al., 1961). The transition from denial to the recognition phase is not accomplished at a single point in time, but is

gradual (Hamburg and Adams, 1967). The denial stage is viewed as preventing people from being overwhelmed, allowing a gradual transition to the recognition and reorganization phase (Hamburg and Adams, 1967; Moos, 1976). This recognition and reorganization phase may be viewed as containing the adaptive tasks, such as those outlined in Table 1.

There is some controversy over whether there are stages of coping. Silver and Wortman (1980) suggest that there is little empirical evidence to support a stage model, based on their own review of the literature on coping with undesirable life events.

Before one can describe the process of coping, however, the basic concepts must be clearly understood. Thus, we continue with a more detailed description of some of the elements of coping.

Framework of Coping with Serious Illness

Coping responses to the concerns associated with the illness must be viewed within a particular context and can be evaluated according to a number of outcomes. This is the framework within which coping responses can be viewed. A summary of the elements of this framework is presented in Fig. 1.

The elements identified within this framework are based on a synthesis of the literature on coping, and on the author's discussions with social workers, nurses, physicians, and counselors who work with ill people.

CONCEPTUALIZATION OF COMPONENTS OF COPING

Each of the elements that appears in the framework of Fig. 1 will be discussed below. These will be grouped into sections corresponding to the three categories that appear in the framework (context, coping responses, outcomes). In some instances, a particular element may appear within two categories, with a subtle difference in meaning distinguishing each appearance. For example, although feelings of anger properly belong under mental outcomes, the actual expression (or nonexpression) of anger will fall under coping responses. This example illustrates the importance of the framework. That is, the framework forces a careful look at what is meant by each element when its role in coping is being discussed.

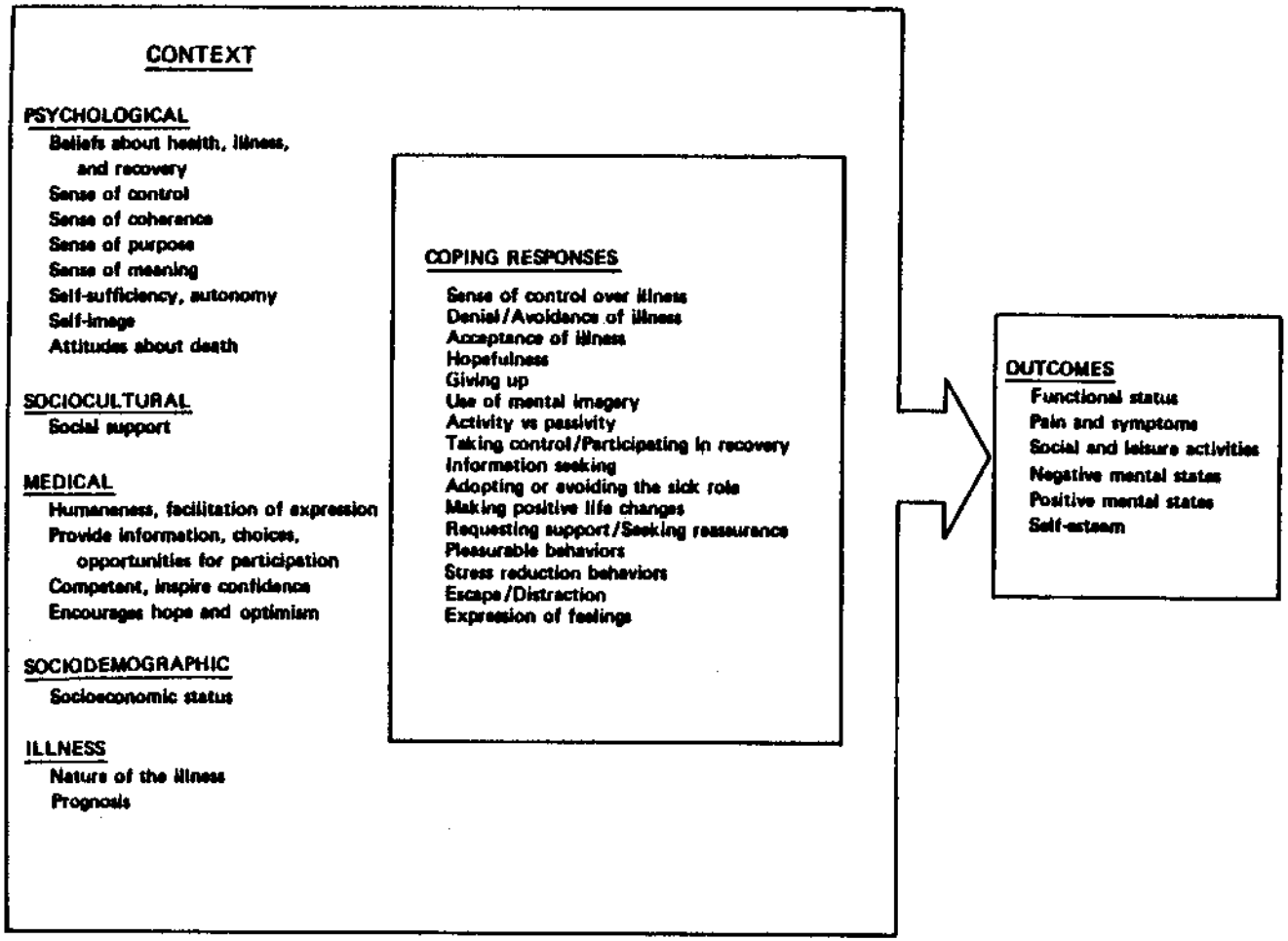

Fig. 1 -- A framework of coping with serious illness

Where empirical studies have been done using any of the context variables or coping responses in relation to health outcomes, they will be mentioned. Such studies will be referred to even if they did not specifically address coping with illness, as long as the findings illustrate that a particular contextual variable or coping response may relate to health outcomes.

The elements of coping defined here vary in terms of whether they represent specific responses or more global constructs. A construct is an abstraction, something that cannot be observed, but which is hypothesized to explain a set of observable events (Nunnally, 1978). For example, anxiety is a construct that is commonly hypothesized to explain such observables as wringing of hands, sweaty palms, and increased pulse. Constructs can be of increasingly higher order. For example, specific responses of reading about one's illness, asking questions of the doctor, and talking to a friend who had a similar illness may (if they all occur together) form a construct pertaining to information seeking. If information seeking, positive outlook, and having a sense of purpose in life occur together, they may define a higher order construct such as the will to live.

Most of the concepts in this Note are described either as observables or as lower order constructs. When a concept is difficult to define, it is often because it is a higher order construct. For example, control is a higher order construct and must be broken down into lower order constructs and observables before it can be adequately defined.

Contextual Variables

Knowledge about Health Matters. The degree of familiarity or cognitive complexity regarding health terminology, disease, and treatments should be taken into account in evaluating a person's coping responses. People who have had little experience with the medical system may not understand commonly used medical terms; even well-educated people may not have this understanding (Yager and Robinson, 1980, p. 90).

Beliefs about Health and Illness. A person's beliefs about what causes health and illness and what affects recovery from illness may strongly affect how that person copes. Health, illness, and recovery from illness may be attributed to: 1) the medical care system (e.g., medications); 2) one's own behavior (e.g., nutrition, exercise); 3) one's thoughts and emotions; 4) one's environment (e.g., stresses, cold weather, viruses); 5) fate or God (e.g., predetermination; retribution for certain behavior); and 6) chance.

A belief that the medical care system affects recovery from illness has been termed a belief in the efficacy of medical care (Lau and Ware, 1981).

A belief that one's own behavior can influence recovery from illness has been termed a belief in the efficacy of self-care (Lau and Ware, 1981).

That one's thoughts and emotions can affect health and illness is a relatively new concept in our culture (Simonton, Simonton, and Creighton, 1978).

Sense of Control. People may view the occurrence of life events in basically four ways: 1) as under their own personal control; 2) as under the control of powerful others; 3) as due to chance; 4) as up to fate--i.e., predetermined. How a person experiences life events depends on that person's interpretation of those events--i.e., a given event may be experienced as aversive or not depending on how the person appraises and interprets the event.

A sense of personal control has classically been referred to in terms of the occurrence of life events: an internal locus of control (believing one is in control of events) is opposed to having an external locus of control (believing events are due to chance, fate, or powerful others) (Lefcourt, 1976; Rotter, Seeman, and Liverant, 1962). Personal control can be viewed in terms of control over the events themselves. The "availability of a response that may directly influence the objective characteristics of a threatening event" has been labeled behavioral control by Averill (1973) and refers to this sense of personal control over the events themselves. One could also, however, consider personal control in terms of how one interprets life events. A

person could feel a sense of personal control if he or she was confident that potentially aversive events could be interpreted in a way so that the aversive experience was minimized. Thus, feeling in control of the experience of the events (e.g., one's feelings) may occur regardless of whether one felt in personal control of the occurrence of the event. Averill (1973) has labeled this latter aspect of personal control as cognitive control: "the processing of potentially threatening information so as to reduce the net long-term stress and/or the psychic cost of adaptation." Averill has also distinguished "decisional control" as the opportunity to choose among various courses of action. The existence of such opportunity may enhance one's sense of being in personal control, but is probably more indicative of the person's sociocultural context (e.g., socioeconomic status) than of the person's psychological sense of control. Having an internal locus of control (i.e., a sense of personal control) was associated with less illness in a sample of executives under high stress (Kobasa, 1979).

The extent to which people believe they can affect their own health and illness (i.e., through their behavior, thoughts, and emotions) determines the extent to which they feel a sense of personal control over their health. If they believe that medical care influences recovery, people can still have a sense of their health being under control, although the source of control is external in this case. The belief that health is up to chance, fate, or uncontrollable external influences (e.g., environment) all pertain to having no sense of health being controllable. These concepts have been referred to as health locus of control (Lau, 1982; Lau and Ware, 1981; Wallston et al., 1976). Lau and Ware (1981), using factor analysis, found three dimensions of health locus of control: 1) a belief in the efficacy of self-care (i.e., viewing one's health as a result of one's own behavior); 2) a belief in the efficacy of medical care (i.e., viewing one's health as a result of medical care); and 3) a belief that health was due to chance (i.e., that no one could do anything about it). They did not include items pertaining to health being due to environmental influences, being predetermined, or being up to fate.

Very little is known about the relationship between the various aspects of control and health. It would be interesting to determine the relationship of each aspect of control to health separately (e.g., belief in personal control, control by powerful others, fate, and chance), as well as how various profiles of these beliefs are related to health outcomes (e.g., it may be that nonextreme belief in all four aspects is associated with better health outcomes).

One study is known that tested the association between a belief in the efficacy of medical care and health. The belief that emergency room care would be effective for chest pain and heart attack was positively associated with relief from chest pain following such care (Linn, Ware, and Greenfield, 1980). However, questions regarding efficacy were asked after the emergency room visit, thus the direction of prediction is unclear.

Sense of Coherence. Returning to the basic concepts of control, another way of classifying these concepts is according to whether events are seen as occurring by chance or according to some overall scheme. Perceiving the world as coherent (i.e., predictable, lawful) has been referred to as having a sense of coherence (Antonovsky, 1979). This would include being able to find meaning in life events, being able to put things in long-term perspective, or interpreting life events into an ongoing life plan (Averill, 1973; Frankl, 1963; Kobasa, 1979; Moos, 1979a). A sense of coherence may derive from viewing events as being under one's personal control, under the control of powerful (legitimate) others (e.g., of society), under the control of fate or God (i.e., predetermined), or from a philosophical outlook on life. Viewing events as due to chance (i.e., as unpredictable, arbitrary) is the opposite of a sense of coherence.

This brings us back to Averill's (1973) concept of cognitive control--i.e., the way in which an event is interpreted, appraised, or incorporated into a cognitive plan. Actually, Averill considers such interpretation as "control" only when it reduces the net long-term stress. Thus, his concept of cognitive control includes the outcome. More simply, a sense of coherence is the extent to which a person perceives events as part of a meaningful scheme, and is thus independent of the outcomes.

With respect to illness, having a strong sense of coherence would be expected to facilitate coping to the extent that the person could fit the illness into the coherent scheme (e.g., the illness is the will of God, the illness is because the person smoked). Kobasa (1979) found that having the ability to find meaning in stressful life events was associated with less illness in a group of highly stressed executives. Conversely, believing recovery is up to chance may hinder coping. For example, if a person strongly believes that something will heal him or her (e.g., believes in the efficacy of self-care or the efficacy of medical care) as opposed to believing that healing is beyond anyone's control, that person may become better (Jourard, 1971, pp. 85-90).

Sense of Purpose. Having a sense of purpose refers to having an immediate purpose in one's life, a reason to live, e.g., feeling important and needed by friends and family, or having a mission or goal to fulfill (Visotsky et al., 1961; Hutschnecker, 1951; Moos, 1979a). In a group of patients with severe polio, those who felt a strong sense of being important and needed (e.g., mothers of small children) made more favorable adjustments than those who did not (Visotsky et al., 1961).

Sense of Meaning. Whether life holds any meaning or satisfaction for a person is closely related to having a sense of coherence and a sense of purpose, but may nevertheless be somewhat different from these concepts. Meaning in life may derive from religion or spiritual beliefs, love, work, family, or interesting experiences--i.e., what the person likes about living. Satisfaction with life and enjoyment in living probably indicate that life has meaning for a person. In one study, sudden death among coronary patients was predicted on the basis of an inability to find meaningful satisfaction in social and leisure activities and frustration in the person's job and family (Wolf, 1967; see Engel, 1971).

Self-Sufficiency or Autonomy. Self-sufficiency refers to a sense that one does not need to depend on others for help. It has been conceptualized as a tendency toward self-determination, or a tendency to resist external influences (Angyal, 1941; see Moos, 1976).

This concept can be considered as a continuum, the other end of which would be a tendency toward dependency on others for help in coping.

The concept of self-sufficiency may be quite useful in understanding the role of social supports. That is, a self-sufficient person may cope well with no social support, whereas a dependent person may need a large amount of social support.

Self-Image. Self-image (or self-esteem) refers to one's attitudes about oneself--i.e., the extent to which one is satisfied with and has respect for oneself (Pearlin and Schooler, 1978; Rosenberg, 1965).

Four separate but interactive components of self-image have been defined as: 1) body image, 2) the achieving self, 3) the interpersonal self; and 4) the identification self (Gates, 1974; see Taylor and Levin, 1976).

Body image is an important aspect of self-image because many serious illnesses (or treatments) result in disfigurement (see Schwab and Harmeling, 1968).

Self-denigration, or the tendency to hold negative attitudes toward oneself or to feel inferior or inadequate in comparison with other people may be the opposite end of a continuum or may be an independent factor (Derogatis and Cleary, 1977; Pearlin and Schooler, 1978; Rosenberg, 1965).

Closely related to this concept is one termed self-commitment. Self-commitment has been defined as having the ability to recognize one's distinctive values, goals, and priorities, and as having an appreciation of one's capacities to have purpose and to make decisions (Kobasa, 1979). Having such a commitment to oneself has been associated with lower illness in a group of highly stressed executives (Kobasa, 1979). Self-esteem was negatively related to the number of psychosomatic symptoms (e.g., insomnia, headache, dizziness) in a sample of soldiers (see Rosenberg, 1965).

Sense of Challenge. Having a basic sense of challenge with respect to life has been defined as feeling positively about changes in the environment, valuing a life filled with interesting and new experiences, being actively involved with one's environment, and having a sense of

responsibility toward life's demands (Kobasa, 1979). Having a sense of challenge in terms of being actively involved with one's environment and in terms of having a sense of responsibility was associated with less illness in a study of highly stressed executives (Kobasa, 1979).

If people have a sense of challenge with respect to life, they may respond to illness as a challenge--e.g., see the illness as a creative opportunity to learn more about themselves (Lipowski, 1970; Pelletier, 1977).

Sense of Humor. A sense of humor is not easily defined, as it has a number of meanings. It may be defined most conventionally as laughing fairly easily at the same kinds of things that other people find amusing and laughable. Another broader meaning refers to an ability to see oneself and others in a somewhat distant way; life is viewed from a perspective in which one can laugh at people and events, yet remain in contact with these same people and events (Moody, 1978).

Having a sense of humor can be contrasted to being resistant to humor and laughter. That is, for some people laughter evokes feelings of guilt.

Intelligence. A person's intelligence may be a resource when faced with a serious illness.

In a study of people with malignant melanoma, those who survived the longest had larger verbal intelligence scores than those who survived the shortest time (Krasnoff, 1959).

Social Support. A great bulk of literature has been concerned with the role of social supports as a mediator of stress. (See for example Cassel, 1976; Kaplan, Cassel, Gore, 1977; Lin et al., 1979; Porritt, 1979; Silver and Wortman, 1980; and Wortman and Dunkel-Schetter, 1979). Basically, the theory suggests that given a stressful situation, people with adequate social supports will experience less distress. Social supports can be described in terms of their quantity (e.g., number of friends), quality (e.g., having people one can trust), availability (e.g., likelihood of having someone there when needed), use (e.g., actually spending time with people), meaning (e.g., importance of friends), and satisfaction with these supports.

One important issue in considering the role of social supports in coping is that of individual needs for social supports. Some people are more self-sufficient and thus need a relatively small amount of support, whereas others may need greater amounts (Kaplan, 1977).

It has been noted that a person with a serious illness will have an unusually high need for affectionate regard by love objects and other persons on whom he/she is emotionally dependent (Janis, 1958, p. 200). Similarly, Visotsky et al. (1961) noted that polio patients have a high need for frequent contact with others, even if that contact is brief. He suggests that a sense of isolation is very threatening while hospitalized and ordinary loneliness can become more frightening than usual. It has also been suggested that seriously ill people have a particular need for support from other seriously ill patients--i.e., from others who have experienced the same problems and feelings (Kushner, 1977; Meyerowitz, 1980; Ryan and Ryan, 1979; Visotsky et al., 1961). Hamburg and Adams (1967) point out that people cope more effectively with disability when they have a firm sense of belonging in a highly valued group such as family or community.

This generally high need of ill people for increased social support comes at a time when these supports are often diminished. For example, people with serious illness (especially cancer) are often faced with isolation from friends because these friends fear contagion, fear the expression of intense emotions or don't wish to be reminded of their own vulnerability (Videka, 1979). In addition, the person's family may become more distant because of all the disruptions.

There is much literature on the association between social support and health. In a correlational study, patients with rheumatoid arthritis who were isolated and alienated from others had more functional incapacity (Moos and Solomon, 1965). Cancer patients who withdrew socially were more emotionally distressed than those who talked with others (Weisman and Worden, 1976). In men hospitalized with road injuries, the quality of social supports was more important than the quantity in determining a good outcome, where outcome was measured in terms of health, emotional distress, work adjustment, and life enjoyment. Being accompanied by someone to the emergency room was

positively associated with relief from chest pain in a sample of people who sought emergency room care for chest pain (Linn, Ware, and Greenfield, 1980). Polio patients in the acute phase who were visited frequently by warm, respectful relatives and friends were the best adjusted (as determined by a variety of subjective measures) (Visotsky et al., 1961). People who lacked social and community ties were more likely to die in a nine-year follow-up study of 6,928 adults (Berkman and Syme, 1979).

It has been suggested that the crucial distinction is between having no friends and having one or more (Langner and Michael, 1960; see Kaplan, 1977).

Porritt (1979) believes that supportive reactions of others can be "canceled out" by unsupportive reactions (i.e., unhelpful people become a coping hindrance instead of a resource).

One mechanism that has been proposed whereby social supports are viewed as facilitative is that social supports provide a sense of being important and needed, or of belonging (Visotsky et al., 1961). In this sense, having social supports is closely related to having a sense of meaning or purpose. Another mechanism suggested is that having social supports allows the expression of affiliative tendencies (i.e., provides a person with an outlet for emotional expression), which serve to reduce anxiety (Schacter, 1959, see Kaplan, 1977). Jourard (1971) eloquently described the benefits of social support: "being heard and touched by another who cares seems to reinforce identity, mobilize the spirit, and promote self-healing."

Social Opportunities for Control. The extent to which family, friends, or employers provide the ill person with opportunities for control will affect that person's coping responses. For example, a wife may consult her hospitalized husband regarding family decisions or ask when he would like her to visit, thus offering him an opportunity for control, or she could deny him these opportunities. Similarly, an employer may offer a person a choice of alternatives (e.g., work at home, work part-time), or instead fire that person.

Humaneness and Facilitation of Expression of Physicians. The emotional quality of the physician-patient relationship has been suggested as affecting the physiological condition of heart patients

(Lynch et al., 1974, see DiMatteo, 1979), their survival (Jarvinen, 1955; see DiMatteo, 1979), and their adjustment to having mastectomies (Jamison, Wellisch, Pasnau, 1978; see Meyerowitz, 1980).

Physicians Providing Information, Choices, and Opportunities for Participation. Medical personnel may provide information, choices, and opportunities for the patient to participate; whether these are beneficial depends on the patient and the particular circumstances.

Information can be provided on the nature of the illness, possible treatments, and probable effects and risks of each treatment, treatment procedures, and the amount of discomfort to be expected. Having such information has been termed informational control (Averill, 1973; Krantz and Schulz, 1979). There is some controversy over whether having such information is beneficial or harmful to the patients. Some suggest that patients who have information about the amount of discomfort to be expected from a noxious procedure are able to tolerate the discomfort more easily (Taylor, 1979). Johnson (1975) found that having information about the physical sensations to expect during a stressful medical procedure reduced the distress. Krantz and Schulz (1979) found that providing patients with information about what symptoms to expect reduced complications following heart attack. Surgical patients who were told about postoperative pain and what could be done for it required only half as much postoperative narcotics in a controlled study (Egbert et al., 1964). Uncertainty seems to be an important source of stress. People apparently prefer the predictable to the unpredictable, and having information allows this predictability (Yager and Robinson, 1980, p. 76). Terminally ill patients were found to resent not being kept fully informed and being excluded from decisions regarding their own treatment (Yalom and Greaves, 1977).

Whether information about what to expect during noxious medical procedures is beneficial may depend on whether the patient is a sensitizer (typically seeks information to prepare for things) or a repressor (prefers not to know). Shipley, Butt, and Horwitz (1979) found that having such information was beneficial for sensitizers but increased anxiety for repressors.

Adverse effects of providing information on possible treatment complications are that patients may be deterred from lifesaving treatments because of knowing the risks (Ravitch, 1974; see Cohen and Lazarus, 1979, p. 231), and that more of these complications may occur through the power of suggestion (as in the placebo effect) (Cohen and Lazarus, 1979). Similarly, telling a person a poor prognosis may lead to helpless, giving-up behavior, thus fulfilling that prognosis.

There is some evidence that most patients remain inadequately informed (i.e., forget substantial amounts of the information) regardless of the amount of information, the manner in which it is presented, and the type of medical procedure involved (Cassileth et al., 1980; Horwitz, 1976).

Choices and participation can be with respect to daily events (e.g., timing of baths in hospital), treatments (e.g., surgery or chemotherapy), or responsibility for self-treatment (e.g., take responsibility for injections). The hospital environment usually provides little opportunity for choices and participation. That is, scheduling of treatment, meals, visitors, baths, is nearly always done for the convenience of hospital staff.

It has been argued that allowing the patient more choices may improve that patient's physical and psychological health (Janis, 1958; Taylor, 1979). Langer and Rodin (1976) found that allowing patients to make choices about daily matters resulted in better health, a heightened sense of well-being, and longer survival. Mills and Krantz (1979) found that patients who were both provided with information about a blood test procedure and allowed to choose which arm to use experienced less anxiety and distress over the procedure.

Whether such opportunities for choices and participation are beneficial to the patient may depend on the patient's desire to be a participant. Some people prefer to place themselves in the hands of the medical system and would consider it a burden to become a participant in the decisions.

Providing information, choices, and opportunities for participation may or may not give the patient a sense of control; this probably depends on the person's usual sense of control.

Physicians Competent, Inspire Confidence. If medical personnel appear inexperienced, or incompetent, patients may lose confidence.

Physicians Allowing Hope and Optimism. A strong influence on the patient's coping responses will be the extent to which medical personnel, especially the physician, allow for hope and optimism regarding recovery.

Sociodemographic. Sociodemographic factors, such as socioeconomic status, clearly will have an effect on the coping responses of an individual (Antonovsky, 1979). For example, amount of income will affect whether a person will be able to seek expert advice, get second opinions, search out relevant information, or get household help or professional counseling.

Socioeconomic status was a consistent predictor of returning to work after a heart attack (Croog, 1968; Higgins and Pooler, 1968). Heart attack patients with higher socioeconomic status were more likely to receive counseling and education on their rehabilitation (Aday and Eichhorn, 1972).

Coping Responses

Coping responses can be classified into behaviors and cognitions (thoughts). Although this usually represents a useful distinction, a response can often be considered as both. For example, refusal to accept the prognosis may manifest itself in both thoughts and behaviors. Thus, for purposes of this Note, responses will not be classified.

Sense of Control. As a coping response, a sense of control can refer to: 1) one's sense of control over life in general now (i.e., in the presence of the illness); and 2) as one's sense of control over the outcomes of this illness.

The first way of describing control as a response (having a sense of control over one's daily life now) is the same as discussed earlier with respect to control as a psychological context variable. The distinction between one's usual (pre-illness) sense of control and one's current (in the presence of the illness) sense of control is important because the conditions of illness often reduce this sense of control--e.g., the person may be unable to work or be confined to bed. A

person's perceptions of control given the illness will depend on that person's usual sense of control. That is, for some people (e.g., those accustomed to a large amount of control), the reduction in control is severe, whereas for others it may not change much.

It would be interesting to test whether it is the absolute level of control or the degree of loss of control that is important in predicting outcomes.

The extent to which the person feels a sense of control over the outcomes of this particular illness is distinct from that person's sense of control over his/her health in general (as was discussed earlier as a context variable). Although there is undoubtedly some relationship, the first represents a more generalized attitude whereas the second pertains to a very salient current illness. A sense of control over the outcomes of this illness may derive from beliefs that one can personally control the outcomes (e.g., that one's behaviors, thoughts, or emotions will affect the outcomes) or from beliefs that one is in the hands of powerful others (e.g., that one's doctor is providing an effective treatment).

Denial/Avoidance. As a coping response, denial and avoidance are complex and somewhat difficult to conceptualize. Denial has been defined as the effort to negate a problem or situation; avoidance refers to acceptance of the reality of the threat, but there is deliberate effort not to think or talk about it (Cohen and Lazarus, 1979, p. 226).

In speaking of denial as a response to serious illness, one must first ask "denial of what"? There are three basic forms of denial: 1) of facts; 2) of the meaning of the facts; and 3) of one's emotional state (Lipowski, 1970).

To deny the facts is to deny the existence of the illness. However, one must be careful in defining "facts." Whereas a lump in the breast might be considered as a "fact," a first diagnosis of cancer may not be. In the latter case, the seeking of a second opinion may not properly be labeled as denial of the facts. This of course becomes more complicated as information accrues (i.e., do two opinions represent "fact"?). Denial of the facts may indicate a lack of or misunderstanding of information. For example, if a person has no pain and has not been informed of a poor prognosis, that person may not believe he or she is ill.

To deny the meaning of the facts is to minimize the personal significance or implications of having the illness (Hackett and Cassem, 1974; Janis, 1958; Lipowski, 1970; Moos, 1979a; Visotsky et al., 1961). This may take the form of denying that one may be dependent (Chodoff, 1962), minimizing the seriousness of the illness (Janis, 1958; Visotsky et al., 1961); maximizing one's ability to cope (Janis, 1958); or maximizing one's chance of receiving help (Janis, 1958). This form of denial is akin to maintaining hope, and may not necessarily be unrealistic. Given the shortcomings of medicine in predicting outcomes with certainty, denial of the meaning of the "facts" may represent adaptive coping behavior.

Finally, one may deny one's emotional state, as for example refusing to acknowledge that one is fearful, angry or hostile. Denying negative affect may take the form of displacing it (e.g., focusing on the family's negative affect, Katz, 1970), attributing it to other things (Janis, 1958, p. 198; Moos, 1979a) or displaying a hearty, jovial manner (Hackett and Cassem, 1974).

All of these types of denial need to be distinguished from avoidance. A person can avoid thinking about or talking about the illness (facts, meaning, or affect) yet not be denying it (Goldstein, 1973; Hackett and Cassem, 1974; Lazarus, 1979; Krantz and Schulz, 1979). Such avoidance may indicate a conscious unwillingness to discuss such an emotionally laden issue, (e.g., so as not to burden one's family), or may indicate an inability to do so (Krantz and Schulz, 1979).

The use of denial as a response varies both among people, and in the same person at different stages in the illness (Lipowski, 1970). It is especially likely to occur in the early phases of the illness (Visotsky et al., 1961) or when the threat of damage is great (Janis, 1958).

The extent of denial may vary from severe (e.g., delusional denial of the illness) to mild (e.g., selective misinterpretation of facts) (Lipowski, 1970). Hackett and Cassem classified people into three categories of the extent of denial based on the amount of fear expressed: 1) major deniers (felt no fear); 2) partial deniers (eventually admitted fear); and 3) minimal deniers (complained of

anxiety or readily admitted fright). This classification confounds denial with willingness to express negative affect.

Depending on the form and extent of denial, it may be adaptive (e.g., reduce fear to a point that allows the person to function; allow hope and optimism) or maladaptive (e.g., person does not seek treatment). The effectiveness of a particular denial response varies depending on the person, the situation, and the stage in the process of coping.

Denial and avoidance are sometimes related to positive outcomes and sometimes to negative outcomes. Denial and avoidance were positively associated with survival in patients in a coronary care unit (Hackett and Cassem, 1974). Breast cancer patients who initially used denial were more likely to survive than those who responded with stoic acceptance (Greer, Morris, and Pettingale, 1979). More postsurgical complications were observed in patients who used denial strongly (Janis, 1958; see Beisser, 1979).

In an experimental study in which subjects were threatened by possible electric shock, those who used avoidant thinking showed more stress (indicated by pulse rate and skin resistance) than those who did not (Houston and Holmes, 1974). These authors concluded that subjects who did not use avoidant thinking used the time to reappraise the threat as less serious, thus reducing their level of stress.

Acceptance. The opposite of denial is the acceptance of the illness. As in denial, one can distinguish the acceptance of facts, of the meaning of the facts, and of one's emotional state. Additional questions that need to be addressed regarding acceptance are whether it represents a positive acceptance in which the person continues to live as fully as possible, or a resignation and giving up. The term "insightful" acceptance has been used to refer to being able to accept dependency without bitterness or hostility, or to accept any loss without feelings of personal devaluation (Chodoff, 1962).

Breast cancer patients who responded with stoic acceptance did not survive as long as those who responded with a fighting spirit or denial (Greer, Morris, and Pettingale, 1979). In a sample of women with metastatic breast cancer, those who were better adjusted to their illness (in terms of overall psychological adjustment) did not survive

as long as those less well adjusted (Derogatis, Abeloff, and Melisaratos, 1979).

Hope. Maintaining hope or optimism refers to having a sense that there is a high probability that things will work out as reasonably as can be expected (Antonovsky, 1979; Simonton, Simonton, and Creighton, 1978). It has been suggested that maintaining hope has beneficial effects on other outcomes --i.e., that if one expects to get well and behaves as if one will get well, this expectation may increase one's chances of getting well (i.e., the self-fulfilling prophecy) (Cousins, 1979; Hutschnecker, 1951; Simonton, Simonton, and Creighton, 1978; Visotsky et al., 1961). Hope is strongly influenced by those in the patient's environment such as physicians and family (Visotsky et al., 1961).

The placebo effect is closely related to hope. It has been well documented that if the physician and the patient believe that a particular treatment or medication will work, it does work more often than would be expected by chance (see, for example Beecher, 1955; Benson and Epstein, 1975; or Rosenthal, 1966).

Hope may be difficult to measure because people may verbalize a positive expectancy but behave in ways that express negative expectancies (Simonton, Simonton, and Creighton, 1978).

Breast cancer patients who had a highly optimistic attitude (accompanied by a search for greater information) survived longer than those who responded with stoic acceptance or feelings of helplessness or hopelessness (Greer, Morris, and Pettingale, 1979).

Giving Up. A complex of responses has been identified and labeled as "giving up" (Engel, 1968; Sweeney, Tinling, and Schmale, 1970). Giving up refers to a sense of psychological impotence, a feeling of being unable to cope (Engel, 1968), or a loss of motivation (Schmale, 1972). Two affects of giving up have been labeled as helplessness and hopelessness (Engel, 1968). Each refers to the same unpleasant feeling, but they are distinguished on the basis of the attribution the person makes as to the cause of the impotence.

Helplessness refers to feelings of being powerless to cope because of environmental constraints (Engel, 1968; Seligman, 1975; Schmale, 1972). The person feels forced to wait for something in the environment

to change (Sweeney, Tinling, Schmale, 1970). Although this results in behavioral passivity (Taylor, 1979), the person nevertheless remains alert to environmental changes (Sweeney, Tinling, and Schmale, 1970).

Hopelessness occurs when the person assumes personal responsibility for the inability to cope--i.e., believes that there is nothing he or she or anyone can do (Sweeney, Tinling, and Schmale, 1970; Schmale, 1972; Engel, 1968). Hopelessness is thus more unpleasant than helplessness, because there is not even the hope that something external may change; i.e., hopelessness has a permanent, irreversible quality (Sweeney, Tinling, and Schmale, 1970). Hopelessness is associated with low self-esteem (Schmale and Iker, 1971). Both hopelessness and helplessness lead to feelings of depression (Schmale, 1972).

Breast cancer patients who responded with feelings of helplessness or hopelessness did not survive as long as those who responded with denial or a fighting spirit (Greer, Morris, and Pettingale, 1979).

Use of Mental Imagery. The mental images that a person uses with respect to the illness is a fairly new aspect of coping being discussed (see Strosahl and Ascough, 1981). For example, people can visualize themselves being well, visualize their white blood cells as being nonexistent, or the cancer can be visualized as a powerful thing against a weak treatment (Simonton and Simonton, 1975).

One way mental imagery has been suggested to be effective is in its effect on physiological responses. When a person thinks about stressful events, some of the physiological activities associated with those events occur; the more specific the image, the more specific the response (Jacobson, 1938). The use of mental imagery in healing is based on this finding--i.e., if a person envisions pleasurable events (either by recalling them or anticipating them), the physiological responses associated with pleasurable events will be evoked.

Another mechanism that has been suggested is that by repeatedly creating mental images of desired events, the person comes to expect that these events will happen. Such a positive expectation influences the way the person behaves and feels, creating a self-fulfilling prophecy (Simonton, Simonton, and Creighton, 1978).

To the extent that feelings influence the healing processes, such mental imagery may affect illness outcomes. This idea is the subject of much controversy, both on ethical and methodological grounds (Kolata, 1980; Scarf, 1980).

Nevertheless, it may be a valuable coping mechanism and should be subjected to a controlled study.

Setting Goals. One approach to the overwhelming number of tasks that must be dealt with in response to the illness is to set limited or intermediate goals--i.e., break the problems down into manageable bits and work on them one at a time (Caplan, 1964; see Moos, 1976; Moos, 1979a). Even when an intermediate goal is not directly related to recovery, such a response (if reinforced) may encourage future effort and provide a sense of accomplishment (Visotsky et al., 1961).

Setting goals can be viewed as a means for examining one's life and making desired changes. A suggestion has been made to set three three-month goals, three six-month goals and three one-year goals, where the latter are broken down into manageable parts (Simonton, Simonton, and Creighton, 1978). The process of setting goals that address a variety of needs (e.g. recreation, personal growth, exercise, time alone) may allow a look at whether one's needs in these areas are being met. Simonton, Simonton, and Creighton suggest that many people spend so much time meeting the expectations of others (e.g., employer, spouse, children) that they are not sure what they want for themselves. Goal-setting is thus viewed as a way of taking control and working to fill one's own needs.

Goal setting may also be viewed as a way of creating a future, as a statement that there are things to be accomplished, reasons for living, and a belief that one will live to accomplish them (Simonton, Simonton, and Creighton, 1978).

Activity Versus Passivity. Coping responses can be considered solely in terms of an active/passive dimension--i.e., doing something as opposed to not doing something, regardless of what is done. It has been suggested that relief and encouragement are provided when patients have a sense of being able to do something rather than waiting passively for whatever is to come (Visotsky et al., 1961).

It may be that the number of coping responses is important in effective coping--i.e., that diversity is more effective than excessive reliance on a small number of coping responses (Yager and Robinson, 1980, p. 97).

Taking Control/Participating in Recovery. The terms instrumental control (Schulz, 1976), behavioral control (Krantz and Schulz, 1979; Averill, 1973) and decisional control (Averill, 1973) all refer to acting on the environment to change the situation. In the context of coping with a serious illness, however, the situation (i.e., the illness) can rarely be changed directly. Thus, taking direct action takes on a slightly different meaning, that of becoming a participant in the process of recovery.

Becoming a participant in the healing process is increasingly being advocated (see, for example, Fiore, 1979; and Jaffe, 1980). Such participation may entail learning skills to cope with stress, maintaining a positive attitude, seeking the help and support of others, seeking information, using the self-healing power of the mind, or participating in decisions regarding types of treatment. Participating in medical decisions must be exercised with common sense--i.e., the person should not be making medical decisions that are beyond his or her realm of competence. The term informed participation has been used to characterize this; the patient is "neither a passive recipient of services nor fully in charge of medical decisions, but is rather an informed, active member of a team responsible for his or her health" (Taylor and Levin, 1976). Making such choices often leads to an increase in perceived control (Mills and Krantz, 1979).

Taking control through action is closely related to the concept of activity versus passivity. Simply "doing something" may provide the person with a sense of control (Visotsky et al., 1961). With respect to serious illness, the term "tackling" has been used, referring to a tendency to adopt an active attitude toward the challenges and tasks posed by the illness (Lipowski, 1970).

Information Seeking. One response to a serious illness is to seek information regarding the illness. This can be considered as one aspect of taking control or becoming a participant. Such information may

pertain to the nature of the illness, its etiology, the diagnostic and therapeutic procedures used, its natural progression, and its implications or prognosis. Several purposes of information seeking have been suggested, for example, to reduce the uncertainty or ambiguity about the illness (Lipowski, 1969; McIntosh, 1974; Taylor, 1979); to restore a sense of control (Moos, 1979a; Lazarus, 1979; Mills and Krantz, 1979), to give the person something to do (Moos, 1979a; Yager and Robinson, 1980) and to question the facts and continue searching for more acceptable answers (Silver and Wortman, 1980; Weisman and Worden, 1976). Depending on the purpose, different outcomes may be observed.

There is apparently considerable variation in people's inclination to obtain information. Lazarus (1979) classified surgery patients into two types: 1) avoiders (those who were not interested in listening to anything related to their illness or surgery) and 2) vigilant types (those who tried to get as much information as they could).

Based on a review of the literature, McIntosh (1974) concluded that most patients would rather have information, and reacted well to having it.

Failure to seek information may be due to not wanting to appear a nuisance, not wanting to expose one's ignorance, diffidence, or a reluctance of medical personnel to convey information (McIntosh, 1974).

Laughing. The idea that laughter can be therapeutic has been suggested as a well-known, but little discussed, fact (Cousins, 1979; McDougall, 1922; Moody, 1978). Its benefits have been noted as bringing about euphoria or general well-being (McDougall, 1922; Moody, 1978), reduction of pain (Cousins, 1979); relaxation (Walsh, 1928); stimulation of the internal organs (Moody, 1978), and reduction of muscular tension (Moody, 1978). It has been suggested that laughter provides a way of establishing communication between people (Moody, 1978).

Adopting or Avoiding the Sick Role. The sick role includes behaviors such as staying in bed, not performing one's usual activities, and other behaviors that are not sanctioned if one is healthy. The adoption of the sick role in response to the illness can be viewed negatively (i.e., as giving in, becoming dependent), or positively (i.e., as surrendering to the care of competent persons, complying with the physician's orders) (Kasl and Cobb, 1966; Lipowski, 1969). Thus,

adopting the sick role must be carefully distinguished from other concepts such as compliance and giving up.

Parsons (1951), viewed the sick role as one in which the person was exempt from his or her normal social obligations but in exchange for this privilege was obliged to cooperate to the fullest to get well. He viewed the sick role as socially disruptive, one that should be controlled to prevent its abuse (see Bloom and Wilson, 1979).

The sick role concept must be considered within the context of the nature and severity of the illness (Parsons, 1951) which determines the appropriateness of adopting or avoiding the sick role. Given an "appropriate" situation (e.g., following surgery) the ability to accept the sick role may represent "insightful acceptance" of the situation (Chodoff, 1962), and the inability to adopt the sick role (due to inability to be dependent, desire to maintain control) may be extremely detrimental. On the other hand, if the situation is inappropriate, adopting the sick role may indicate an attempt to escape an unpleasant situation, a clamoring for help, giving in to dependency needs, or a demand to be cared for (Chodoff, 1962).

One way to evaluate sick role behavior may be to determine what (if any) benefits the person derives from being ill. These might include increased attention and caring from other people, avoiding a troublesome situation such as work or family, an opportunity to think and perhaps gain a new perspective on life, a relief from having to meet the expectations of others, or making it acceptable to ask for love or express one's unhappiness (Hutschnecker, 1951; Lipowski, 1969; and Simonton, Simonton, and Creighton, 1978). If a person is deriving a number of benefits from being ill, it may be necessary to focus on ways of deriving these benefits in ways other than through the illness.

It may be difficult to assess many of these benefits of illness, because such benefits are probably recognized by patients as not socially acceptable. For example, people may like having the extra attention but would never admit that they like it.

Making Positive Life Changes. Some seriously ill people respond by making positive life changes. That is, on becoming ill, they take stock of what they want from life and make changes to come closer to their goals. It is as if on being faced with a shortened life span, they

realize they should use that time well. Such changes might include becoming emotionally closer to family or friends, quitting a high-pressure job, leaving an unsatisfying relationship or situation, becoming more religious or spiritual, doing things they always wanted to do, or becoming more sensitive to their own needs and feelings.

Requesting Support/Seeking Reassurance. People who are ill are socially and psychologically vulnerable, i.e., need special reassurance that they are worthy (Bloom and Wilson, 1979). Ways of requesting support from others may be to join special groups such as self-help groups (Jaffe, 1980; Yalom and Greaves, 1977; Moos, 1979a), or request reassurance or emotional support from family, friends, or medical staff (Moos, 1979a; Visotsky et al., 1961; Caplan, 1964; see Moos, 1976). For some people this may be difficult, as many of us have a culturally induced reluctance to seek help for emotional problems (Simonton, Simonton, and Creighton, 1978).

Pleasurable Behaviors. Behaviors may be adopted (or continued) that provide satisfaction or pleasure in and of themselves. For example, hobbies, meditation, exercise, or listening to music may be considered as responses that are designed to create pleasure (Lipowski, 1969; Pelletier, 1977).

As a coping response, the important point here is that the person spends time doing things that are enjoyable. Not at issue here is the nature of the activity (i.e., different activities are enjoyable for different people).

To the extent that positive emotions have a beneficial effect on the body, time spent doing pleasurable activities may affect outcomes of the illness.

Stress Reduction Behaviors. Many behaviors that are enjoyable to a person may also be considered as stress reducing. However, this may not always be the case (e.g., the person may run to reduce stress but not enjoy it). Thus, stress-reduction behaviors should be considered separately from pleasurable behaviors.

Some investigators suggest that only certain activities will adequately discharge the physical effects of stress (for example exercise, meditation, or progressive relaxation) whereas other activities that people commonly think of as "relaxing" (e.g. watching

TV, drinking) will not discharge stress effects (Simonton, Simonton, and Creighton, 1978).

Behaviors that are designed to reduce stress include progressive relaxation (Benson, 1975; Jacobson, 1938), meditation (Bloomfield, Cain, and Jaffe, 1975; LeShan, 1976), autogenic training (Schultz and Luthe, 1969, see Jaffe, 1980), biofeedback (Brown, 1977), exercise (Selye, 1956), hypnosis or self-hypnosis (Kroger, 1977), mental imagery (Simonton, Simonton, and Creighton, 1978), and relaxation exercises (Jaffe, 1980).

Escape/Distraction. Behaviors that are engaged in as a means of escaping or distracting oneself from the illness may constitute a category distinct from pleasurable behaviors or stress reduction behaviors. For example, some people may engage in "keeping busy" simply to distract themselves, not particularly enjoying the activities (e.g., housecleaning, working extra hours, going to social gatherings). Sleeping, watching TV, drinking, using drugs, or daydreaming might fall into this category of distracting behaviors.

Expression of Feelings. Expression to others of positive and negative feelings is probably an important coping response. Such expression is viewed as an outlet for discharging feelings (Monat and Lazarus, 1977, p. 151; Schmale and Iker, 1977), and as a way of resolving some of the problems (Weisman and Worden, 1976). However, such expression can alienate other people if it is excessive or tends toward "crying 'why me?'" (Weisman and Worden, 1976).

The nonexpression of emotion is believed to lead to increased physiological arousal (Tourangeau and Ellsworth, 1979) and to changes in patterns of cellular organizations (Schmale and Iker, 1971). People who were better at facially expressing emotion in response to emotionally loaded slides were found to have a lower skin conductance and heart rate (Buck, Miller, and Caul, 1974) and were less physiologically reactive to electric shock (Notarius and Levenson, 1979). Progression of cancer was faster in those lacking self-expression (e.g, those who were serious, over-cooperative, over-nice, passive, apologetic) (Blumberg, West, and Ellis, 1954). Women with metastatic breast cancer who were communicative about their distress survived longer than those who were not (Derogatis, Abeloff, and Melisaratos, 1979). Lung cancer patients

had fewer outlets for emotional discharge than a group of controls (Kissen, Brown, and Kissen, 1969).

The expression of emotion must be distinguished from the feelings of emotion. Many people choose not to express their feelings, but this does not indicate the extent of their feelings.

The Will to Live. Although the will to live is not a specific coping response, it nevertheless merits attention as a higher order construct that may explain patterns of coping responses. It has been described as a powerful drive to stay alive (i.e., the creative instinct) (Hutschnecker, 1951), as the belief that one is not going to die even though the prognosis is poor (Moody, 1978), and as having a reason to live or a feeling of being responsible to life for something (Frankl, 1963). Visotsky, et al. (1961) describe a similar concept, the "determination to improve," as a powerful attitude in which the person is eager to make progress, determined to do everything possible toward improving. Visotsky et al suggest that although this attitude seems to be a personality characteristic, it nevertheless can be significantly influenced by the behavior of friends, family, hospital staff, and community.

Outcomes

Whether the various coping responses described above are effective can be determined by looking at a variety of outcomes of these responses. These include medical outcomes (e.g., reduction of tumor), quality of life outcomes (reduction of pain, positive well-being), and length of life. These outcomes have been categorized here as follows: length of survival, physiological, physical, social, positive mental states, negative mental states, and self-concept.

Length of Survival. Length of survival is the most final outcome that can be used to evaluate the effectiveness of coping.

Physiological. Physiological outcomes refer to bodily processes and signs of illness that may or may not be symptomatic. These may be indicative of the course of the disease without the person's awareness. For example, tumor size, metastasis of cancer, blood counts, heart rate, and blood pressure may all be related to how a person copes. Physiological indicators of the immune response (e.g., amount of

steroids in the blood) may be especially important to evaluate as a function of coping responses, as these may clarify the mechanisms involved in the effect of coping on the course of illness.

Physical. Physical outcomes are those that pertain to the body and include symptoms, pain, and functional status (e.g., ability to walk or climb stairs).

Functional status refers to the performance of, or ability to perform, a variety of daily activities (Stewart, Ware, Brook, 1978). These include major role activities (job, school, or housework), physical activities (walking, climbing stairs), self-care activities (bathing, eating), and mobility (getting around the community, being able to drive). The advantage of functional status measures of health is that they are useful across a variety of illnesses, i.e., they are not illness-specific.

Sexual functioning has not traditionally been included in measures of functional status, but may be particularly relevant to people with serious illnesses. People who are ill may be especially likely to have sexual problems because of surgery, medications, or low energy. Role functioning may also be especially relevant to ill people. For many people, their work is not only a way to earn a living but is closely tied to their identity and self-concept. Problems in working may occur as a direct result of the illness (e.g., due to hospitalization or recuperation) or indirectly through discrimination by employers (e.g., people with cancer are often stigmatized).

Social. A person's ability to continue fulfilling social roles and to relate to other people are important in evaluating the effectiveness of various coping responses, to the extent that these outcomes are valued by the person. As an outcome, the focus should be on the person's satisfaction with his or her ability to function socially, rather than on the extent of social supports.

Negative Mental States. Both negative and positive feelings are important outcomes in terms of evaluating the effectiveness of coping. Negative feelings that are especially relevant to coping effectiveness are depression, anxiety, anger, and guilt. These may be used as outcomes to assess the effectiveness of various coping responses (e.g., does participating in the healing process reduce depression) or as

mediators of other illness outcomes (e.g., does the reduction of depression result in longer survival).

Depression generally refers to affective states such as feeling blue, downhearted, sad, or discouraged. Although there are also somatic symptoms of depression (e.g., insomnia, low energy, anorexia), these may reflect disease states in addition to depression. Thus, it is preferable to refer specifically to the affect (see Plumb and Holland, 1977; Silberfarb, Maurer, and Crouthamel, 1980; and Ware, Johnston, and Davies-Avery,1979).

Anxiety has also been defined in terms of affect as well as somatic complaints. As in depression, it is preferable to assess anxiety in terms of affect so as not to confound it with symptoms of illness. Affective components of anxiety include nervousness, restlessness, tension, and jumpiness. Serious illness offers many possibilities for experiencing anxiety, such as medical treatments and procedures, threat of recurrence, not knowing what to expect, unfamiliar hospital surroundings, and financial concerns.

Anger and resentment may be felt by seriously ill people toward the doctor, family, and toward the world in general. Such anger may be generalized (i.e., over being ill and others being healthy) or specific to a variety of situations (e.g., being angry because surgical reconstruction did not fulfill their expectations).

Seriously ill people experience considerable guilt about being ill and needing help, being unable to perform usual roles, for somehow bringing the illness on themselves (e.g., by smoking, not exercising), and for being a burden to their family and friends.

Positive Mental States. Positive mental states generally include satisfaction with life, being happy, cheerful, pleased, excited, interested in something, or on top of the world (Bradburn, 1969; Ware, Johnston, and Davies-Avery, 1979).

III. REVIEW OF LITERATURE ON MEASURES OF COPING AND COPING-RELATED CONCEPTS

This section will review: (1) existing measures of coping and coping-related concepts, (2) studies of the dimensions of coping, and (3) studies of relationships among these concepts.

MEASURES OF COPING AND COPING-RELATED CONCEPTS

Health Locus of Control

Lau and Ware (1981) developed four scales pertaining to health locus of control. These were as follows (internal-consistency reliability coefficients are presented in parentheses): (1) chance (0.71), (2) provider control (0.70), (3) self-care (0.65), and health threat (0.67).

A seven-item scale of personal control over illness was developed by Mechanic (1979) (items obtained by personal communication). The Chronbach's alpha was 0.70 for this scale.

Wallston and Wallston (1978) developed several measures of health locus of control, with 12 items each as follows (internal consistency reliabilities in parentheses): internal health locus of control (0.86), powerful others health locus of control (0.83), and chance health locus of control (0.84).

No measures of beliefs about recovery from an existing illness were found in the literature (i.e., these health locus of control measures were all developed for use in general populations).

Sense of Control

A seven-item summated ratings measure of mastery was developed by Pearlin and Schooler (1978). They did not report the reliability of the scale.

Powerlessness versus personal control was assessed by Kobasa (1979), but its reliability was not reported (items obtained by personal communication).

"Coping ability" was assessed by Antonovsky (1979, p. 162) using five items, but its reliability was not assessed. Items pertained to running into problems that you think can't be solved, success in solving problems, and being in unpleasant situations where you felt you were helpless to do anything; thus this appears to be a measure of control. This measure correlated 0.49 with health status.

Self-Esteem

Self-esteem has been assessed by Rosenberg (1965) and by Pearlin and Schooler (1978). Neither investigator reported the reliability of the scale.

Social Support

Social support has been conceptualized and measured extensively by other investigators (e.g., Porritt, 1979; Berkman and Syme, 1979; and Schaefer, Coyne, and Lazarus, 1981).

Social support was defined in terms of beliefs that the person is cared for, loved, esteemed, and valued, and beliefs that the person belongs to a network in which others can be counted on when needed (Turner, 1981).

Berkman and Syme (1979) identified marital status and the number of close friends and relatives as important aspects of social support.

Schaefer, Coyne, and Lazarus (1981) suggest that both social networks (e.g., the number of people involved) and perceived social support (how helpful these people are) are important dimensions of social support. They measured social networks, emotional support, informational support, and tangible support.

Porritt (1979) approached the measurement of social support in much the same way. Porritt listed all potential sources of support (e.g., spouse, mother, friends, doctor) and respondents were asked questions regarding the availability and nature of help available from each person.

Murawski, Penman, and Schmitt (1978) suggest that a measure of social support (for use in the study of illness and social support) include the following:

(1) an inventory of persons or institutions the person believes constitute his or her interpersonal support system, and some measure of the nature, strength, and availability of their support
(2) an assessment of the background characteristics that define the person's social roles within his or her primary support groups
(3) an assessment of the person's beliefs about available sources of support in meeting his and her role obligations during illness
(4) measure of person's pattern of social affiliation
(5) measure of person's need for affiliation.

Expression of Needs and Feelings

Lazarus (1966) has assessed several aspects of expression of needs and feelings (e.g., tried to keep others from knowing how bad I feel, talked to someone about how I was feeling)(items obtained by personal communication).

Keeping Busy

Lazarus (1966) and Sidle et al. (1969) assessed keeping busy and being involved in other activities to take your mind off things.

Pleasurable Activities

Lazarus (1966) and Sidle et al. (1969) assessed several pleasurable/escapist activities such as getting away for a while, or trying to rest or take a vacation.

Fantasize/Daydream

Lazarus (1966) assessed fantasizing responses such as daydreaming or imagining a better time or place.

Doctor-Patient Relationship

Several aspects of the doctor-patient relationship were assessed by Ware, Snyder, and Wright (1976). Those that were relevant to coping included satisfaction with the art of care (e.g., humaneness, caring) and the technical quality of care (e.g., competence).

Changes Resulting from Illness

Leta Adler (personal communication) assessed some aspects of changes resulting from the illness (e.g., I enjoy everyday experiences more than before I was ill).

Positive and Negative Feelings

Negative feelings have been assessed by a variety of investigators, and generally include anxiety (e.g., Ware, Johnston, and Davies-Avery, 1979; Turner, 1981), depression (e.g., Plumb and Holland, 1977; Ware, Johnston, and Davies-Avery, 1979; Turner, 1981), and anger (e.g., Turner, 1981).

Depressive symptoms, anger, and anxiety were all assessed by Derogatis, Lipman, and Covi (1973).

Positive feelings that have been assessed by other investigators include positive well-being and satisfaction with life (Ware, Johnston, Davies-Avery, 1979).

Functional Status

Functional status has been assessed in terms of personal functioning (self-care, mobility, and physical activity) and role functioning (major role activity) in the Rand Health Insurance Study (Stewart, Ware, and Brook, 1981a, b).

Symptoms of Illness

Twenty-seven acute physical symptoms were assessed in the Rand Health Insurance Study (Manning, Newhouse, and Ware, 1981). These included such things as backaches, headaches, and trouble falling asleep at night.

STUDIES OF THE DIMENSIONS OF COPING

The elements of coping defined in Fig. 1 vary in terms of whether they represent specific responses or more global constructs. A construct is an abstraction, something that cannot be observed but is hypothesized to explain a set of observable events (Nunnally, 1978). For example, anxiety is a construct that is commonly hypothesized to explain such observables as wringing of hands, sweaty palms, and increased pulse. Constructs can be of increasingly higher order. For example, specific responses of reading about one's illness, asking questions of the doctor, and talking to a friend who had a similar illness may (if they all occur together) form a construct pertaining to information seeking. If information seeking, positive outlook, and having a sense of purpose in life occur together, they may define a higher order construct such as the will to live.

Some researchers in coping with illness have attempted to organize coping responses according to higher order constructs. Weisman (1979) suggests 15 coping strategies for cancer patients. These are theoretical; no analyses were done to verify these empirically. The strategies are: seek information, share concerns and talk with others, make light of the situation, put it out of your mind, distraction, take firm action, find something favorable, passive acceptance, do anything to be doing something, negotiate alternatives, reduce tension, withdraw into isolation, blame someone or something, seek direction and follow it, and blame yourself. Penman (1979) developed the Coping Strategy Inventory. She identified 45 coping behaviors by interviewing women who had breast cancer. She categorized these 45 coping behaviors into five theoretical categories: tackling and mastering; rationalizing or reinterpreting; avoiding; capitulating or passively acquiescing; and tension-relieving behaviors.

Only two studies were found that empirically evaluated the dimensions of coping with serious illness. Based on the coping behaviors identified by Penman (1979), Adler and Penman (personal communication) wrote items to be administered by an interviewer. They conducted scaling analyses of items using data obtained from 295 cancer patients. Three factors were observed and scales were constructed

corresponding to the factors: active involvement, avoidance of the sick role, and reliance on religion. They wrote new items to test the hypothesis that the active involvement factor contained two coping strategies and administered the new battery to 160 cancer patients. Five factors were identified: reordering life priorities, mobilizing social support, positive outlook, avoidance of sick role, and reliance on religion. Another empirical study based on personal interviews is the Felton et al. (1980) study of 170 patients with chronic illness. They factor analyzed 57 items pertaining to coping responses. Only 86 of these patients had clearly life-threatening diseases (cancer and diabetes); the others had less serious diseases (hypertension and rheumatoid arthritis). They observed six factors: cognitive restructuring (efforts to find positive aspects of the illness experience), affective expression (emotional and behavioral expression of strain such as anger or retreat), wish-fulfilling fantasy (escape into fantasy), self-blaming denial, information seeking (active problem-solving orientation to the illness), and minimization of threat (refusal to think about it).

STUDIES OF RELATIONSHIPS AMONG COPING CONCEPTS

A variety of relationships among all of these measures have been studied and reported in the literature. These findings will provide the basis for some of the construct validity studies (to be reported later in this Note).

Health Locus of Control

Intercorrelations among four health locus of control scales (chance, provider control, self-care, and health threat) were reported by Lau and Ware (1981).

The correlations among the scales were $r=-0.04$ (chance and provider control), $r=-0.27$ (chance and self-care, $p<.01$), $r=0.12$ (chance and health threat, $p<.05$), $r=0.20$ (provider control and self-care, $p<.001$), $r=0.02$ (provider control and health threat), and $r=-0.10$ (self-care and health threat).

Sense of Control and Sociodemographic Characteristics

Product-moment correlations were reported between a 7-item mastery scale and sex (-0.11, where female is a high score), age (-0.17), education (0.28), and income (0.27) (Pearlin and Schooler, 1978).

Self-Esteem and Sociodemographic Characteristics

Product-moment correlations were reported between self-esteem and sex (-0.05, $p < .05$, where female is a high score), age (0.01), education (0.21, $p < .05$), and income (0.15, $p < .05$) (Pearlin and Schooler, 1978).

Self-Esteem and Negative Feelings

Self-esteem was negatively associated with both depression and anxiety using a x^2 statistic (Rosenberg, 1965).

Self-Esteem and Symptoms

Self-esteem was negatively associated with the number of psychosomatic symptoms (Rosenberg, 1965).

Negative Feelings

Anxiety, anger, and depression were all assessed separately by Turner (1981).

Product-moment correlations between anger and anxiety were 0.44, 0.55, and 0.53 in three study samples; correlations between anger and depression were 0.57, 0.53, and 0.52; and correlations between anxiety and depression were 0.57, 0.64, and 0.64 (see Turner, Table 4).

Anxiety and depression were positively associated (r=0.72) in the Rand Health Insurance Study (Ware, Davies-Avery, and Brook, 1980).

Social Support and Negative Feelings

Social support was assessed in relation to anger, anxiety, and depression in a study by Turner (1981) on three study samples. Social support was negatively associated with anxiety in two of the three study samples (r=-0.37 and -0.24); negatively associated with depression in all three study samples (r=-0.39, -0.33, -0.30); and negatively associated with anger in all three samples (r=-0.32, -0.36, -0.30).

Emotional support was positively related to positive morale ($r=0.22$, $p < .05$) and not related to negative feelings (Schaefer, Coyne, and Lazarus, 1981). Social networks were unrelated to any of the feeling states in the same study.

Functional Status and Positive and Negative Feelings

Role activity limitations were positively associated with anxiety and depression ($r=0.21$ and 0.19, respectively), and negatively associated with positive well-being and life satisfaction ($r=-0.24$ and -0.26, respectively) in the Rand Health Insurance Study (Ware, Davies-Avery, and Brook, 1980).

IV. METHODS

SUBJECTS

The population of interest is adults (18 years and older) who have a serious life-threatening illness.

Six sources of subjects were used:

(1) People with serious illnesses who attended the orientation meeting of "Live Today," a self-help program at the Learning for Health Center, 1314 Westwood Boulevard, Suite 107, Los Angeles, CA 90024.

(2) People with cancer who attended either (or both) an educational group or a self-help group at the Bresler Center for Allied Therapeutics, 12401 Wilshire Boulevard, Suite 280, Los Angeles, CA 90025.

(3) Patients of Dr. Michael Van Scoy-Mosher, an oncologist in private practice at 8631 West Third Street, Suite 600E, Los Angeles, CA 90048.

(4) Patients of Dr. Fred P. Rosenfelt and Dr. Barry E. Rosenbloom, oncologists in private practice at 8635 West Third Street, Los Angeles, CA 90048.

(5) Patients at the UCLA Bowyer Oncology Clinic, UCLA Hospital, 10833 LeConte, Los Angeles, CA 90024.

(6) People with first myocardial infarctions participating in a study by Kathleen Ell, Ph.D., of the USC School of Social Work. These people were patients at either the UCLA hospital or the Los Angeles County/USC hospital.

Recruitment and Consent to Participate Procedures

The "Live Today" subjects were recruited at monthly orientation meetings for an 8-week self-help program for people with serious illnesses. At these meetings, the self-help program was described (it was free of cost because it was a research project funded by the Holmes Foundation). Whether or not they chose to attend the self-help group, people were welcome to fill out the questionnaire.

Dr. Van Scoy-Mosher and Drs. Rosenfelt and Rosenbloom mailed their cancer patients a letter asking if they would like to participate in this research. Patients were asked to return a postcard indicating their consent to provide me with their name and address. I then contacted each patient and explained the research to them, at which time they were free to accept or decline participation.

In the Bowyer Oncology Clinic, I obtained permission of each physician to approach his or her patients as they waited for their appointment. The study was described and if the patient agreed to participate, he or she filled out a consent form at that time.

All participants in Dr. Ell's study were included, because she used the questionnaire as her primary instrument. Dr. Ell obtained a sequential sample of all people with a first myocardial infarction admitted to the coronary care unit at UCLA and Los Angeles County/USC hospitals. Excluded from her sample were people with psychoses or other life-threatening illnesses.

Patients at the Bresler Center were approached by Janet MacKenzie, R.N., C.R.N.A., who briefly explained the study. If they were interested, Ms. MacKenzie gave their names and addresses to me and I contacted them directly.

Consent to Contact Physician Procedures

All participants except those in Dr. Ell's study were asked their permission to have an evaluation completed by their physician.

Human Subjects Committee Approval

Approval to interview these subjects was obtained from the Human Subjects Committee, UCLA School of Medicine.

METHODS OF DATA COLLECTION

All participants completed a structured self-administered questionnaire containing about 300 items. Most did so at home in the intended self-administered manner. Some of the myocardial infarction patients required assistance in completing the questionnaire, which was provided by Lucy Solin, MSW. Ms. Solin is bilingual and was able to assist Spanish-speaking participants.

For about 20 participants, a personal open-ended interview was conducted in addition to the structured questionnaire.

For those participants who consented to have their physician contacted, an evaluation form was sent to their physician including a return stamped envelope and a cover letter explaining the study and asking the physician's cooperation. The signed consent form of the patient was included. (The evaluation form is described below.)

Item Construction: Coping Questionnaire

Several questionnaire items were written to assess each of the concepts based on the conceptual details presented in the literature review. Wherever possible, items were selected or adapted from measures that had been developed by others, to benefit from previous research. For most of the concepts, however, original items had to be written to be specific to coping with a serious illness. To evaluate the items, the principal investigator collaborated with three other researchers: Dennis T. Jaffe, Ph.D., a clinical psychologist who works primarily with seriously ill people; Joanne Mantell, Ph.D., MSSW, MSPH, a researcher and professor in social work; and Kouji Nakata, Ph.D., a researcher studying the effects of self-help groups in cancer patients. The final set of items was reviewed by a number of health clinicians and researchers.

Within each hypothesized concept, the researchers tried to achieve a balance of positively and negatively worded items. It is important to have both positively and negatively worded items in a scale to diminish the extent of acquiescent response set (ARS) in the scale. Because less-educated people are more likely to agree with items regardless of item content, if items in a scale are all worded in the same direction, the scale score for less-educated people may be spuriously increased or decreased because of ARS. This makes it hard to interpret group differences in scale scores.

A summary of the concepts for which items were constructed is presented in Table 2. The actual questionnaire is presented in Appendix C.

Table 2

SUMMARY OF CONCEPTS MEASURED

CONTEXT VARIABLES

I. BELIEFS ABOUT ILLNESS
- Belief that thoughts and emotions can affect healing
- Belief that health habits will facilitate healing
- Beliefs that recovery is up to chance
- Belief that recovery is up to medical care
- Belief that recovery is up to God
- Attribution of this illness
- Feelings and attitudes about death

II. GENERAL SENSE OF CONTROL, COPING
- Powerlessness
- Generalized sense of control, coping ability

III. SELF-ESTEEM
- General self-esteem
- Body image
- Change in body image as a result of illness

IV. SOCIAL SUPPORTS
- General quality of social supports and emotional support
- Availability of supports
- Perceived need of support
- Cognitive guidance . . . .
- Instrumental support
- Stigma of being ill
- Quantity of social supports

V. REASON TO LIVE/MEANING IN LIVING
- Reason to live
- Meaning in living
- Will to live

VI. BENEFITS OF ILLNESS

COPING RESPONSES

I. EXPRESSION OF NEEDS AND FEELINGS

II. MENTAL RESPONSES
- Active use of mind to facilitate the healing process
- Maintain positive outlook

Table 2--continued

III. BEHAVIORS
Perform health habits that will facilitate healing
Engage in pleasurable activities
Make positive life changes as a result of the illness
Diversions, time-out

IV. SEEK INFORMATION

V. MOBILIZE SOCIAL SUPPORTS

VI. AVOIDANCE/ACCEPTANCE OF ILLNESS
Avoidance
Acceptance
Rejection of sick role

DOCTOR-PATIENT RELATIONSHIP

I. CHARACTERISTICS OF DOCTORS
Humaneness of doctors
Doctor facilitates expression of feelings and concerns
Doctor encourages participation
Information imparted by doctors
Doctors believe mind affects body
Doctors encourage positive health habits
Doctor allows optimism and hope
Communication of diagnosis

II. SATISFACTION WITH DOCTORS
General Satisfaction
Confidence in doctors

OUTCOMES

I. POSITIVE FEELINGS
Optimism
Satisfaction with life
Positive well-being

II. NEGATIVE FEELINGS
Depression
Anxiety
Guilt
Anger

Table 2--continued

III. FUNCTIONAL STATUS
Role functioning
Leisure and social activities
Personal functioning
General health
IV. SYMPTOMS AND PAIN
Pain
Symptoms list

To determine if there were aspects of coping not identified by this procedure, several open-ended questions were included in the questionnaire. These asked the respondent to write in a response, for example, whether there were things that had made it particularly difficult to cope, or whether something they had done had been especially helpful.

Item Construction: Physician Evaluation Form

Items were developed to obtain information from the physician regarding diagnosis, any metastases present, current therapy, and a rating by the physician of the patient's current health status, prognosis, coping, compliance, and optimism.

QUESTIONNAIRE PRODUCTION

A self-administered questionnaire was designed to ease respondent burden to the extent possible (given the large number of items). Matrices of response choices facilitated this. Items were organized according to sections to give a sense of closure as the respondent proceeded through the questionnaire.

The questionnaire was designed by Sandra H. Berry of The Rand Corporation and was prepared by the Survey Production Group of The Rand Corporation.

METHODS OF CONSTRUCTION OF MEASURES

Multi-item measures have several advantages over single-item measures. Multi-item measures (1) reduce the number of scores necessary to define each variable; (2) increase score reliability by pooling the information that items have in common; (3) increase validity (if items are carefully selected to provide a more representative sample of information about the construct); (4) minimize bias caused by tendencies to endorse or negate items regardless of content (in cases where both favorably and unfavorably worded items are combined); and (5) provide the option, if item responses are missing, to estimate responses using other items in the measure, thus reducing missing scores on the multi-item scale.

The first step in constructing multi-item measures is to hypothesize groups of items that could be combined into a single score. Hypotheses are based on logical combinations of items appearing from their content to measure the same construct. Likert's (1932) Method of Summated Ratings and Guttman's (1944) Scalogram Analysis were used for these analyses.

Method of Summated Ratings

A modified version of Likert's Method of Summated Ratings was used to score the coping scales. Construction of summated ratings scales from item batteries followed five steps. These steps add several scaling criteria to those usually associated with Likert scaling. These steps are designed to determine whether:

(1) Each item in a hypothesized grouping is substantially linearly related to the total score computed from items in that group (traditional Likert criterion).
(2) Each item correlates higher with the construct it is hypothesized to measure than with other constructs (item discriminant validity criterion).
(3) Item groups not hypothesized a priori might be identified (factor analytic test).

(4) Items in the same scale contain the same proportion of information about the same constructs or should be given different weights (test for equal factor loadings).
(5) The score for each item requires standardization before combining it with other items in the same scale (equal variances criterion).

If items in each hypothesized grouping roughly satisfy these assumptions, responses to the items can be simply summed to derive a scale score for that construct. If numerous scaling errors are encountered in a priori hypothesized groupings, item groupings can be revised on the basis of empirical findings and reevaluated according to these criteria.

Multitrait Scaling. The first two steps used to construct summated ratings scales were based on multitrait scaling analyses, which involve examining a matrix of item-scale correlations.[1] Each row of the matrix contains correlations between scores for one item and all hypothesized item groupings (constructs defined by scales). Each column contains correlations between the scores for one scale and all items, including those hypothesized to be part of that scale and those hypothesized to be part of other scales. Correlations between each scale are corrected for overlap so that estimates of the item-construct relationships will not be spuriously inflated.

The first step in the analysis of these matrices involves examining the magnitude of item-scale correlations. Each item-scale correlation should be substantial (i.e., about 0.30 or higher, absolute magnitude). Any item not having a strong linear relationship (corrected for overlap) with the total score for the scale that included the item does not meet the Likert-type criterion and is usually eliminated from that scale.

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[1] All computations were performed using the ANLITH (Analysis of Item-Trait Homogeneity) program, which was written by Thomas Gronek at IBM and Thomas Tyler at the Academic Computing Center at Southern Illinois University. This program was modified for use at The Rand Corporation by Bill Rogers and John Ware.

For the second step, the highest correlation in a row should be the one between the item and the scale defining the construct it is hypothesized to measure. This step is a test of discriminant validity (following Campbell and Fiske, 1959). The item discriminant validity criterion is satisfied and a scaling "success" counted whenever the correlation between an item and its hypothesized scale is more than two standard errors higher than other correlations in the same row. When a correlation between an item and its hypothesized scale is more than two standard errors below another correlation in the same row, a "definite" scaling error is counted. When the correlation between the item and other scales in the same row is within two standard errors of its correlation with its hypothesized scale, a "probable" scaling error is counted.

Factor Analysis. For the next two steps in constructing summated ratings scales, factor analysis was used to test for unhypothesized item groupings and to evaluate factor loadings for items. In a factor analysis, the factors identified represent underlying dimensions of measurement defined by the items. The multitrait scaling tests are based on a particular hypothesized structure underlying the battery (i.e., constructs are defined by groups of items in advance). Factor analysis tests for unhypothesized factors that could account for scaling errors in the multitrait analyses. Factor analyses also test whether weights (factor loadings) are comparable across standardized items in the same scale. If so, each item can be given the same unit weight.

When the factors correspond to constructs defined in the a priori hypothesized item groupings, items defining each factor are examined to determine whether they are identical with those used to define hypothesized scales in the multitrait scaling tests. Only items that correlate substantially with the same factor are retained in the that item grouping.

The method of factor analysis was principal components analysis. Because the sample size is small relative to the number of items, factor analyses were performed using subsets of items (Comrey, 1973). Once multi-item scales were constructed from each subset of items, higher order factor analyses were performed using scales as the unit of analysis.

Five criteria were used to determine how many factors to rotate (see Ware, Brook, and Davies-Avery, 1980):

(1) Eigenvalues (sum of squared factor loadings) greater than or equal to 1.0.
(2) The Scree Test (Cattell, 1966), which involves interpreting the curve relating the factors to the proportion of total variance accounted for by each factor. The test is based on the assumption that when the decreasing negative slope of the curve begins to level off, random error factors have been encountered.
(3) The 5 percent guideline described by Guertin and Bailey (1970), which suggests that factors associated with 5 percent or more of the common variance warrant further study.
(4) Identification of true common factors, in which only unrotated factors having two or more loadings of 0.30 or greater (absolute magnitude) are selected for rotation and interpretation.
(5) Use of trial rotations when the decision as to the "best" number of factors for final rotation is ambiguous according to the preceding criteria. Trial rotations are evaluated in terms of interpretability and the meaningfulness and desirability of alterations in major factors when additional factors are rotated.

Missing Data

When summated ratings scales are scored, substitutions may need to be made for missing item responses. Several options are possible:

(1) Midpoint of the possible scale range.
(2) Sample central tendency statistics: mean, median, or modal score for the item in question.
(3) Respondent central tendency statistic: mean, median, or modal score for that respondent across either all items in the battery or other items in the same scale. When the range of

response values differs for items used (e.g., one item with four possible responses and another with five), responses would be prorated to estimate the missing response.

(4) Regression estimate.

The computer program ANLITH, which was used for summated ratings scales, uses option 3, assigning the mean. If a person is missing all items in an item grouping, a missing value is assigned on that scale.

Guttman Scalogram Analysis

Scalogram Analysis (Guttman, 1944), or Guttman scaling, was used to construct a multi-item measure from the personal functioning items. In addition to evaluating the extent to which items measure the same construct (are unidimensional), Scalogram Analysis evaluates whether items are correctly ordered by level (e.g., level of severity of limitation) and whether the hypothesized pattern of scores across items can be reproduced from the scale score (whether a cumulative scale is defined).

Two coefficients are generally used to evaluate whether items meet Guttman criteria (i.e., their scalability). First, the coefficient of reproducibility, CR = 1 - (observed errors/total possible errors), is computed. All deviations from hypothesized response patterns are initially counted as observed errors; the total possible number of errors is N (the number of observations) times the number of items being scaled. A high CR value indicates both reliability (in the internal-consistency sense) and reproducibility (see further discussion under "Reliability" below). Following guidelines suggested by Guttman (1944) and Edwards (1957), CR values of 0.90 or greater were accepted as evidence of the reliability and reproducibility of these items.

It is also necessary to evaluate the extent to which each observed CR represents an improvement over its minimum possible value, because CR can be large even when a truly cumulative scale is not achieved. For this reason, the extent to which the observed CR represents an improvement over the minimum possible CR was examined. This minimal marginal reproducibility (MMR) is the smallest possible value of CR given the distributions of item responses. CR and MMR are compared

using the coefficient of scalability, CS - (CR - MMR)/(1 - MMR), which indicates the proportion of possible improvement in MMR that is achieved by the scale. The recommended standard for CS of 0.60 was accepted as evidence of scalability (Nie et al., 1975).

To estimate missing responses for items in the Guttman scale, items were reviewed case by case. Inspection of the total pattern of responses across completed items in a given scale allows a "best guess" regarding the appropriate scale level to be assigned the respondent; substitute values were not assigned to individual items.

RELIABILITY STUDIES

Reliability of measurement refers to the extent to which measured variance reflects true score rather than random error. Reliability is a prerequisite to use of a score for any purpose. A reliability coefficient is an estimate of the proportion of total variance that is true score variance, as expressed in the following formula (from Kerlinger and Pedhazur, 1973):

$$\text{Reliability} = 1 - (V_e/V_t),$$

where V_e equals the error variance and V_t is the total measured variance. Two methods were used to study the reliability of the scales, depending on the method of scale construction: internal consistency and reproducibility.

Internal-Consistency Reliability

The internal-consistency method of estimating reliability applies to multi-item summated ratings scales. The reliability coefficient it yields is a function of two properties of scale items: (1) item homogeneity, or the extent to which the items share common variance; and (2) the number of items in the scale. The relationships among internal-consistency reliability, homogeneity, and scale length are shown in the

following formula (from Nunnally, 1978):

$$r_{tt} = (kr_{ii}/1 + (k - 1)r_{ii}),$$

where r_{tt} is the internal-consistency reliability of a score, k is the number of items used to compute the scale score, and r_{ii} is the average inter-item correlation (Fiske, 1966; Tyler and Fiske, 1968).

The internal-consistency approach was used to estimate reliability for all scales constructed using the Method of Summated Ratings. Internal-consistency estimates are considered acceptable to make group comparisons if they are 0.50 or above. Coefficients of 0.90 or greater would be acceptable for individual comparisons (Helmstadter, 1964).

Reproducibility

The concept of reproducibility--the degree to which a person's item responses can be predicted from knowledge of his total score--is closely related to reliability, and is thus an appropriate indicator of the reliability of Guttman scales. The coefficient of reproducibility (CR), discussed with respect to Guttman Scalogram Analysis above, defines a special case of internal-consistency reliability. The internal-consistency of a group of items represents the degree to which they measure the same construct. If CR is high, a Guttman scale is both reproducible and internally consistent. If CR is low, either the scale is not internally consistent or is not cumulative, or is neither. As noted above, CR values of 0.90 or greater were accepted as evidence of the reliability and reproducibility of Guttman scales, consistent with Guttman (1944) and Edwards (1957).

VALIDITY STUDIES

In addition to being reliable, the validity of a measure must be well understood before it can be used in testing hypotheses. Although reliability studies provide estimates of how much information (true score variance) is provided by a measure, validity studies are necessary

to determine what should be inferred about the meaning of scores. Unless a measure is judged valid, the scores it yields cannot be interpreted with confidence for purposes of hypothesis testing, and the measure cannot be used to advance theory (e.g., by studying relationships between the measure and other variables of interest).

Three types of validity are identified by the American Psychological Association (1974): content validity, criterion-related validity, and construct validity.

Content Validity

Content validity refers to how well a measurement battery covers important aspects of the dimensions to be measured. Content validity was essentially established by extensively reviewing the literature to identify all concepts relevant to coping, and by verifying this by talking with health professionals who work with seriously ill patients. Content validity at the item level was established when items were written; at least one item was written to assess important aspects of each concept.

Face validity, related to but distinct from content validity, refers to what an item appears to measure from its manifest content. To evaluate face validity, the words used in each item were reviewed to determine their relevance and adequacy as descriptors of the construct being measured.

Criterion-Related Validity

Criterion-related validity is assessed by using a person's score on one measure to predict his score on some other measure referred to as a "criterion" (Anastasi, 1968 and Cronbach, 1970). Because well-validated measures that would provide true score estimates are not available for the constructs of interest, criterion-related validity studies were not performed for these measures.

Construct Validity

Construct validity is assessed by examining the patterns of relationships between the measure being validated and measures of other variables theoretically related, or unrelated, to it. Validity is supported when the associations show the direction and magnitude of relationships hypothesized from theory. When exceptions to hypotheses are observed and theory is well founded, validity should be questioned. When there is reason to question both theory and measurement, drawing inferences about validity is more difficult.

Construct validation usually relies on correlation coefficients as evidence of hypothesized relationships. Because of the shortcomings of a single criterion variable or the absence of an agreed-upon criterion, a network of relationships is examined. In this method, hypotheses are usually stated regarding the strength and direction of relationships that might be expected, based on findings reported in the literature and on theory.

One must keep in mind that construct validations cannot be assessed in a single study. Rather, findings from several studies, using different study populations and different methods of measurement, must be synthesized. If a similar association is observed between two concepts in several studies, both the theory and the construct validation of the measures is supported.

Because coping with serious illness is such a new research area, many relationships of interest have not been previously tested, and theory is not clear on the expected direction and magnitude of associations. Construct validity studies were thus largely exploratory in nature. Nevertheless, a few tests can be devised based on the theory that does exist, and on findings of other investigators.

The construct validity studies conducted here are of three types: (1) tests based on existing theory (e.g., that people with better social supports have better outcomes), (2) tests based on logic (e.g., that optimism should be associated with a favorable prognosis), and (3) reports of findings not previously studied (i.e., with which subsequent study results can be compared). The goal of this third type of validation is to describe the associations among the various coping

measures, identify any higher order dimensions that describe coping, and describe the associations among these higher-order dimensions.

Two basic criteria were used in these studies: (1) measures of different concepts within a particular dimension (e.g., anxiety, depression) should be significantly related to each other, and (2) measures within a dimension should be more highly related to each other than to measures of other dimensions (e.g., physical health).

These criteria were assessed both visually (e.g., by examining matrices of intercorrelations among various measures) and by using factor analysis. Factor analysis can help determine the nature and number of dimensions that account for correlations among the measures. At this point, the unit of analysis was scales, not items.

V. SAMPLE CHARACTERISTICS

SAMPLE SIZE

The sample consisted of 158 subjects from the following sources:

CANCER PATIENTS	
Live Today	15
Bresler Center	6
Dr. Van Scoy-Mosher	32
Drs. Rosenfelt and Rosenbloom	7
UCLA Bowyer Clinic	35
Total Cancer Patients	95
MI PATIENTS	
UCLA	19
L.A. County/USC	44
Total MI Patients	63
TOTAL	158

Of those 136 cancer patients who agreed to complete the questionnaire, 95 returned it (overall return rate of 70 percent). This rate is broken down by source of subjects as follows:

Source	Number Who Initially Agreed	Return Rate (%)
Live Today	28	54
Bresler Center	7	86
Dr. Van Scoy-Mosher	38	84
Drs. Rosenfelt and Rosenbloom	10	70
UCLA	51	68

The return rate for physician evaluation forms was 100 percent for Dr. Van Scoy-Mosher and Drs. Rosenfelt and Rosenbloom. For the remaining sample, the return rate was about 48 percent.

SAMPLE CHARACTERISTICS

A summary of sample characteristics for the cancer sample, the MI sample, and the total (combined) sample are shown in Table 3.

The cancer sample is 75 percent female and 83 percent white, and the MI sample is 38 percent female and 49 percent white. The mean age of the cancer sample are about 50 and of the MI sample, 60. The mean years of education is about 14 for the cancer sample and 10 for the MI sample. About 37 percent of the cancer sample is working at a paid job, whereas about 78 percent of the MI sample are doing so. Religious or spiritual beliefs are at least somewhat important to about 75 percent of the cancer sample and 71 percent of the MI sample.

The two samples are thus quite different, with the MI sample being older, less educated, having less income, and more likely to be male and nonwhite than in the cancer sample.

Table 3

SUMMARY OF SAMPLE CHARACTERISTICS

Characteristic	Cancer Sample (N=95)		MI Sample (N=63)		Total Sample (N=158)	
	Number	Percent	Number	Percent	Number	Percent
Sex						
Female	71	74.7	24	38.1	95	60.1
Male	24	25.3	39	61.9	63	39.9
Total	95	100.0	63	100.0	158	100.0
Race						
White	78	83.0	30	49.2	108	70.1
Black	7	7.4	18	29.5	25	16.2
Hispanic	6	6.4	11	18.0	17	11.0
Asian	2	2.1	2	3.3	4	2.6
Missing	1	-	2	-	4	-
Total	95	100.0	63	100.0	158	100.0
Age						
Mean	49.58		59.69		53.60	
S.D.	14.28		12.34		14.39	
Range	20-87		26-87		20-87	
20-39	9	9.6	1	1.6	10	6.4
30-39	19	20.2	2	3.2	21	13.5
40-49	18	19.1	10	16.1	28	17.9
50-59	19	20.2	14	22.6	33	21.1
60-69	26	27.6	23	37.1	49	31.4
70+	3	3.2	12	19.4	15	9.6
Missing	1	-	1	-	2	-
Total	95	100.0	63	100.0	158	100.0
Years of Education						
Mean	14.36		10.21		12.74	
S.D.	2.95		4.49		4.15	
Range	6-23		2-20		2-23	
Less than 12 years	7	7.7	33	56.9	40	27.2
12 years	26	28.6	8	13.8	35	23.8
13 to 16 years	35	38.5	14	24.1	49	33.3
More than 16 years	23	25.3	3	5.2	26	17.7
Missing	4	-	5	-	9	-
Total	95	100.0	63	100.0	158	100.0

Table 3

Cont'd

Characteristic	Cancer Sample (N=95)		MI Sample (N=63)		Total Sample (N=158)	
	Number	Percent	Number	Percent	Number	Percent
Income						
Less than $10,000	21	23.6	46	75.4	67	44.7
$10,000 to $19,999	28	31.5	8	13.1	36	24.0
$20,000 to $29,999	15	16.8	0	0.0	15	10.0
$30,000 to $39,999	7	7.9	3	4.9	10	6.7
$40,000 or more	18	20.2	4	6.6	22	14.7
Missing	6	-	2	-	8	-
Total	95	100.0	63	100.0	158	100.0
Major Role Activity						
Working a paid job	35	36.8	49	77.8	84	53.2
Unemployed	8	8.4	3	4.8	11	7.0
Retired	16	16.8	16	2.5	32	20.2
Disabled	24	25.3	17	27.0	41	25.9
In school	1	1.0	1	1.6	2	1.3
Keeping house	10	10.5	7	11.1	17	10.8
Importance of Religious/ Spiritual Beliefs						
Very important	42	45.2	30	48.4	72	46.4
Somewhat important	28	30.1	14	22.6	42	27.1
Not very important	12	12.9	9	14.5	21	13.5
Not at all important	11	11.8	9	14.5	20	12.9
Missing	2	-	1	-	3	-
Total	95	100.0	63	100.0	158	100.0

VI. BELIEFS ABOUT RECOVERY

ITEM DESCRIPTION

Twenty items asked what people believed affected their recovery. Five item groupings were hypothesized:

(1) That thoughts and emotions can affect recovery
(2) Health habits can affect recovery
(3) Recovery is up to chance
(4) Recovery is up to medical care
(5) Recovery is up to religious faith or God

Items hypothesized to measure each grouping are shown in Table 4 for the cancer sample and Table 5 for the MI sample. Response choices for each item were: (1) strongly agree, (2) agree, (3) not sure, (4) disagree, and (5) strongly disagree.

SAMPLE DIFFERENCES

The MI sample consisted of 19 patients at UCLA who completed the questionnaire at home, and 44 patients at L.A. County/USC Medical Center who were assisted by an interviewer. Some of the beliefs about recovery items were worded differently for the USC portion of the MI sample. Because the UCLA patients filled out the questionnaire at home, they received the same questions as the cancer sample.

For these analyses, results will be presented separately for the cancer sample (N=95) and for the USC portion of the MI sample (N=44).

DESCRIPTIVE STATISTICS ON ITEMS

Means, standard deviations, and the number of missing responses for the 20 beliefs about recovery items are shown in Table 4 for the cancer sample and in Table 5 for the USC/MI sample. Frequency distributions for the items are shown in Table A.1 in Appendix A.

Table 4

BELIEFS ABOUT RECOVERY ITEMS AND SUMMARY STATISTICS: CANCER SAMPLE (N=95)

	Item Grouping/Item	Similarity to MI Sample[a]	Questionaire Item Number	Direction of Scoring[b]	Mean[c]	S.D.	Missing	(Percent)
	Belief That Thoughts and Emotions Can Affect Recovery							
1	The more I tell myself that I'm going to be be well, the more likely my body will heal.	D	V.8	R	1.96	1.06	2	(2)
2	Feeling happy will help my body heal.	S	V.14	R	1.77	0.86	3	(3)
3	When I feel good about myself, I'm more likely to get better.	S	V.18	R	1.89	0.89	4	(4)
4	Thinking a lot about how sick I am will slow my recovery.	D	V.22	R	2.20	1.11	5	(5)
5	I find it hard to believe that my feelings have any effect on my illness.	D	V.1	-	3.56	1.34	3	(3)
6	Telling myself I'm going to get better has nothing to do with whether I do.	S	V.38	-	3.82	1.04	4	(4)
	Belief That Health Habits Will Facilitate Recovery							
7	Taking good care of myself is important in getting well.	S	V.2	R	1.42	0.73	2	(2)
8	Well-balanced meals will help me get better.	S	V.31	R	1.90	0.95	3	(3)
9	Regular exercise (like walking and bicycling) is not very important in helping me recover from my illness.	S	V.12	-	3.56	1.25	2	(2)
10	Not getting enough sleep makes it harder for me to get better.	D	V.28	R	2.41	1.10	5	(5)
11	Relaxation techniques will help me get well.	D	V.36	R	2.28	1.04	3	(3)
12	There is not much I can do to help myself get well.	S	V.32	-	4.23	1.01	3	(3)
	Belief That Recovery Is Not Up to Chance							
13	My getting well has little or nothing to do with chance.	S	V.25	R	2.64	1.18	4	(4)
14	Whether I recover is pretty much up to chance.	SD	V.15	-	3.58	1.14	4	(4)
	Belief That Recovery Is Up to Medical Care							
15	Whether I get well depends on the help of doctors and medicines.	S	V.20	R	2.19	0.98	4	(4)
16	For diseases like mine, medical treatments can sometimes do as much harm as good.[d]	S	V.3	-	3.08	1.30	3	(3)
17	More than anything else, my recovery requires good medical care.[d]	D	V.10	R	1.98	1.08	4	(4)
	Belief That Recovery Is Up to God or Religious Faith							
18	Prayer and religious faith can help me get better.	S	V.5	R	2.60	1.35	2	(2)
19	My faith in God will help me recover.	S	V.26	R	2.56	1.39	3	(3)
20	It is up to God whether I get well.	S	V.35	R	3.12	1.41	5	(5)

[a] D = Different
S = Same or essentially the same
SD = Slightly different

[b] An 'R' indicates that items must be recoded so a high score indicates that something affects their recovery.

[c] Response choices were: 1 = Strongly agree
2 = Agree
3 = Not sure
4 = Disagree
5 = Strongly disagree

[d] Adapted from Lau and Ware, 1981.

Table 5

BELIEFS ABOUT RECOVERY ITEMS AND SUMMARY STATISTICS: MI/USC SAMPLE (N=44)

Item Grouping/Item	Similarity to Cancer Sample[a]	Questionnaire Item Number	Direction of Scoring[b]	Mean[c]	S.D.	Number Missing	(Percent)
Belief That Thoughts and Emotions Can Affect Recovery							
1 If I tell myself I'll get well, I will.	D	V.8	R	2.07	1.18	2	(4)
2 Feeling happy will help my body heal.	S	V.14	R	1.86	0.90	2	(4)
3 When I feel good about myself, I'm more likely to get better.	S	V.18	R	2.00	0.88	2	(4)
4 Thinking a lot about how sick I am keeps me from getting better.	D	V.22	R	2.73	1.34	3	(7)
5 I believe my feelings affect my illness.	D	V.1	R	3.62	1.65	2	(4)
6 Telling myself I'm not going to get better has nothing to do with whether I do.	S	V.38	-	3.78	1.52	2	(4)
Belief That Health Habits Will Facilitate Healing							
7 Taking good care of myself is important in getting well.	S	V.2	R	1.45	0.67	2	(4)
8 Well balanced meals will help me get better.	S	V.31	R	1.71	0.74	2	(4)
9 Regular exercise (like walking and bicycling) is not very important in helping me recover from my illness.	S	V.12	-	4.17	1.19	2	(4)
10 It's harder for me to get better if I don't get enough sleep.	D	V.28	R	2.70	1.18	7	(16)
11 If I try to relax when I'm nervous, it will help me get well.	D	V.36	R	2.02	0.83	3	(7)
12 There is not much I can do to help myself get well.	S	V.32	-	4.05	1.43	2	(4)
Belief That Recovery Is Not Up to Chance							
13 My getting well has little or nothing to do with chance.[d]	S	V.25	R	2.64	1.48	2	(4)
14 Whether I recover is pretty much up to luck.	S	V.15	-	3.64	1.36	2	(4)
Belief That Recovery Is Up to Medical Care							
15 Whether I get well depends on the help of of doctors and medicines.	S	V.20	R	2.05	0.89	3	(7)
16 For illnesses like mine, medical treatments can sometimes do as much harm as good.[d]	S	V.3	-	3.50	1.45	2	(4)
17 The most important thing in my recovery is good medical care.	D	V.10	R	1.83	0.93	2	(4)
Belief That Recovery Is Up to God							
18 Prayer and religious faith can help me get better.	S	V.5	R	2.57	1.56	2	(4)
19 My faith in God will help me recover.	S	V.26	R	2.33	1.56	2	(4)
20 It is up to God whether I get well.	S	V.35	R	2.45	1.70	2	(4)

[a] D = Different
S = Same or essentially the same
SD = Slightly different

[b] Items with an 'R' must be recoded so that a high score indicates beliefs that something affects their recovery.

[c] Response choices were: 1 = Strongly agree
2 = Agree
3 = Not sure
4 = Disagree
5 = Strongly disagree

[d] Adapted from Lau and Ware, 1981.

For the cancer and MI samples, all but two items were skewed indicating that people tend to believe that these various things affect their recovery and that it is not up to chance. One exception in the cancer sample was item 20, which was skewed in the direction of believing that it is not up to God whether they get well. One exception in the MI sample was item 5, which was skewed indicating that they believe their feelings do not affect their illness.

Standard deviations in the cancer sample ranged from 0.73 to 1.41 (median of 1.10) and in the MI sample from 0.67 to 1.70 (median of 1.36).

An evaluation of the item frequency distributions (see Table A.1) revealed that several items were quite skewed. Item 7 had more than 90 percent of responses in the extreme two response choices in both samples. In the MI sample, items 15 and 17 had more than 85 percent in the extreme two choices, and item 8 had more than 90 percent.

The percent of missing values per item ranged from 2 to 5 in the cancer sample (median of 3 percent) and from 4 to 16 in the MI sample (median of 4 percent).[1] The number of missing items per person ranged from 0 to 20 in both samples. Ninety-two percent of the cancer sample and 93 percent of the MI sample had one or zero missing responses.

A count of the number of agree and strongly agree responses (see Table 6) ranged from 0 to 16 in the cancer sample and 0 to 18 in the MI sample. A count of 13 in the cancer sample and 15 in the MI sample would be expected if people believed all these things affected their recovery. There appears to be no strong indication of acquiescent response set.

[1] There were a large number of missing responses on item 10 in the MI sample; many people wrote in beside this item "I do get enough sleep." This item thus needs revision to clarify its hypothetical intention.

Table 6

FREQUENCY DISTRIBUTION OF A COUNT OF AGREE AND STRONGLY AGREE RESPONSES TO BELIEFS ABOUT RECOVERY ITEMS

	Cancer Sample (N=95)			MI Sample (N=44)		
Count	Number	Percent	Cumulative Percent	Number	Percent	Cumulative Percent
0	1	1.0	1.0	2	4.5	4.5
1	0	0.0	1.0			
2	3	3.2	4.2	0	0.0	4.5
3	2	2.1	6.3	0	0.0	4.5
4	2	2.1	8.4	0	0.0	4.5
5	4	4.2	12.6	1	2.3	6.8
6	5	5.3	17.9	0	0.0	6.8
7	6	6.3	24.2	1	2.3	9.1
8	3	3.2	27.4	0	0.0	9.1
9	8	8.4	35.8	1	2.3	11.4
10	9	9.5	45.3	4	9.1	20.4
11	12	12.6	57.9	1	2.3	22.7
12	15	15.8	73.7	8	18.2	40.9
13	11	11.6	85.3	8	18.2	72.7
14	8	8.4	93.7	4	9.1	81.8
15	5	5.3	98.9	4	9.1	90.9
16	1	1.0	100.0	2	4.5	95.4
17	0	0.0	100.0	0	0.0	95.4
18	0	0.0	100.0	2	4.5	100.0
19	0	0.0	100.0	0	0.0	100.0
20	0	0.0	100.0	0	0.0	100.0
Total	95	100.0		44	100.0	

MULTITRAIT SCALING ANALYSES

Cancer Sample

A multitrait scaling analysis was performed on all 20 items, according to the item groupings hypothesized in Table 4. Items were recoded as specified in Table 4. In the cancer sample, items 5 and 16 correlated .21 and .19 with their respective scales. These two items were excluded, and the analyses rerun. Results are shown in Table 7, and reliability coefficients are summarized in Table 8.

All item-total correlations in all scales equal or exceed 0.30, and all reliability coefficients exceed 0.50.

In the thoughts and emotions scale, all items correlate highest with this scale than with any other scale. All items are probable successes.

In the health habits scale, three of the six items correlate higher with this scale than with any other scale. Items 9, 11, and 12 correlate as high or higher with the thoughts and emotions scale. There are three probable successes and three probable failures in this scale.

In the recovery not up to chance scale, one of the two items (item 14, recovery up to chance) correlates higher with the health habits scale. There is thus one probable success and one probable failure.

In the recovery up to medical care scale, both items correlate highest with this scale and any other scale. Both items are scaling successes.

In the recovery up to God or religious faith scale, all items correlate highest with this scale than any other, and all items are scaling successes.

These results suggest that although one can reliably assess the belief that thoughts and emotions can affect recovery, and that health habits affect recovery, the two are closely related and may form one scale pertaining to the belief that the person can do things toward their recovery.

Table 7

ITEM-SCALE CORRELATION MATRIX OF BELIEFS ABOUT RECOVERY ITEMS: CANCER SAMPLE (N=91)

Item Grouping/Item[a] (abbreviated item content)	EMOT	HH	CHANCE	MED	GOD/REL	TOTAL
Thoughts and Emotions Affect Recovery (EMOT)						
1 Telling myself going to be well helps	.70*	.63	.35	.25	.34	.69*
2 Feeling happy helps	.74*	.73	.52	.09	.45	.79*
3 Feeling good about self helps	.81*	.71	.42	.22	.34	.76*
4 Thinking how sick I am slows recovery	.59*	.53	.37	.26	.18	.57*
6 Telling myself I'll be better doesn't help	.45*	.47	.26	-.01	.27	.46*
Health Habits Will Facilitate Recovery (HH)						
7 Taking care of self important	.67	.72*	.47	.23	.37	.75*
8 Well-balanced meals help	.68	.81*	.44	.19	.36	.76*
9 Regular exercise not important	.40	.40*	.23	-.01	.07	.34*
10 Not enough sleep makes it hard	.40	.51*	.16	.09	.17	.42*
11 Relaxation helps	.75	.65*	.45	.01	.32	.69*
12 Not much I can do to help myself	.53	.47*	.48	.21	.08	.50*
Recovery Not Up to Chance (CHANCE)						
13 Getting well nothing to do with chance	.39	.36	.40*	.09	.28	.44*
14 Recovery up to chance	.42	.47	.40*	-.05	.19	.44*
Recovery Up to Medical Care (MED)						
15 Recovery depends on doctors and medicines	.13	.10	.03	.70*	.05	.17*
17 Recovery requires good medical care	.25	.18	.03	.70*	.19	.29*
Recovery Up to God/Religious Faith (GOD/REL)						
18 Prayer, religious faith can help	.40	.36	.37	.06	.82*	.58*
19 My faith in God will help	.45	.34	.34	.14	.83*	.59*
20 It's up to God whether I get well	.22	.11	.07	.14	.72*	.33*

*Indicates coefficient corrected for overlap.

[a]Item number from Table 4.

Note: Standard error is 0.10.

Table 8

RELIABILITY (R_{TT}) AND HOMOGENEITY (R_{II}) COEFFICIENTS FOR BELIEFS ABOUT RECOVERY SCALES: CANCER SAMPLE (N=91)

Scale	Number of Items	r_{tt}	r_{ii}
Thoughts and emotions affect recovery	5	.84	.52
Health habits affect recovery	6	.81	.41
Recovery not up to chance	2	.57	.40
Recovery up to medical care	2	.82	.70
Recovery up to God/religious faith	3	.89	.74
Total	18	.88	.30

MI Sample

A multitrait scaling analysis was performed on all 20 items, according to the item groupings hypothesized in Table 5. Items 5, 7, 8, 10, 13, and 14 correlated -0.14, 0.11, 0.13, 0.00, -0.01, and -0.01 with their respective scales. These were eliminated and the analyses rerun. (This meant eliminating the chance scale entirely.)

Results are shown in Table 9, and the reliability coefficients are summarized in Table 10. All reliability coefficients equaled or exceeded 0.50.

For the thoughts and emotions scale, all but one item-total correlation equaled or exceeded 0.30, and all but one item correlated highest with this scale than with any other scale. Item 4 (thinking how sick I am keeps me from getting better) correlated higher with the health habits scale. There are five probable successes and one probable failure for this scale.

For the health habits scale, two of the three item-total correlations equaled or exceeded 0.30, and these same two items correlated highest with this scale than any other scale. Item 11 (relaxing when nervous will help) correlated higher with the thoughts and emotions scale. There is one scaling success, one probable success, and one probable failure in this scale.

Table 9

ITEM-SCALE CORRELATION MATRIX OF BELIEFS ABOUT RECOVERY ITEMS:
MI SAMPLE (N=42)

Item Grouping Item[a] (abbreviated item content)	EMOT	HH	MED	GOD/REL	TOTAL
THOUGHTS AND EMOTIONS AFFECT RECOVERY (EMOT)					
1 I tell myself I'll get well I will	.43*	-.03	.16	.31	.39*
2 Feeling happy will help	.62*	.39	.04	.36	.59*
3 Feeling good about myself helps	.49*	.27	.18	.33	.53*
4 Thinking how sick I am doesn't help	.27*	.30	.15	-.05	.22*
6 Telling myself going to get better doesn't help	.44*	.24	.14	.40	.53*
HEALTH HABITS AFFECT RECOVERY (HH)					
9 Regular exercise not important	.05	.35*	.01	.09	.15*
11 Relaxing will help	.40	.27*	-.12	.11	.28*
12 Not much I can do to help	.32	.38*	.11	.04	.28*
RECOVERY UP TO MEDICAL CARE (MED)					
15 Recovery depends on doctors and medicines	.20	.06	.61*	-.04	.23*
16 Medical treatment can do harm	.06	-.04	.36*	-.16	.00*
17 Recovery depends on good medical care	.26	.08	.39*	.00	.24*
RECOVERY UP TO GOD/RELIGIOUS FAITH (GOD/REL)					
18 Prayer, religious faith helps	.30	.08	-.12	.83*	.48*
19 Faith in God helps	.43	.14	-.13	.93*	.61*
20 It's up to God whether I get well	.39	.07	-.06	.89*	.56*

NOTE: Standard error is 0.13.

*Indicates coefficient corrected for overlap.

[a]Item number from Table 2.

Table 10

RELIABILITY (R_{TT}) AND HOMOGENEITY (R_{II}) COEFFICIENTS FOR BELIEFS ABOUT RECOVERY SCALES: MI SAMPLE (N=41)

Scale	Number of Items	r_{tt}	r_{ii}
Thoughts and emotions affect recovery	5	.67	.29
Health habits affect recovery	3	.50	.25
Recovery up to medical care	3	.61	.34
Recovery up to God/religious faith	3	.94	.85
Total	14	.74	.17

For the recovery up to medical care scale, all item-total correlations equal or exceed 0.30, and all items correlate higher with this scale than any other scale. There are one scaling success and two probable successes in this scale.

For the recovery up to God or religious faith scale, all item-total correlations exceed 0.30, and all items correlate highest with this scale than any other. All three items are scaling successes.

PRINCIPAL COMPONENTS ANALYSES

Cancer Sample

The product-moment correlations among the (unrecoded) beliefs about recovery items are shown in Table B.1 in Appendix B for the cancer sample. A principal components analysis was performed on all 20 items, using a varimax rotation. Five factors had eigenvalues greater than one, and each predicted more than 5 percent of the variance. A scree test confirmed that five factors should be rotated. In this solution, the first factor pertained to a belief that thoughts, emotions, and health habits facilitate healing. However, item 5 did not have its highest loading on this factor. The third factor pertained to recovery up to medical care, except item 16 did not load on this factor. Because items 5 and 16 were eliminated from their hypothesized scales in the multitrait scaling analyses, they were eliminated from this analysis, and it was rerun.

A principal components analysis was performed on the remaining 18 items. Four factors had eigenvalues greater than one, each explaining more than 5 percent of the variance. A scree test confirmed that four factors should be rotated. Results are shown in Table 11. Sixty-seven percent of the variance was explained.

Factor one is a belief that thoughts, emotions, and health habits can facilitate recovery. It essentially is a combination of all items in the thoughts and emotions and health habits scales.

The second and third factors correspond exactly to the recovery up to God or religious faith and the recovery up to medical care scales.

Factor four is a recovery not up to chance factor, but item 12 (not much I can do to help myself) is added to this factor, whereas in the multitrait scaling analysis it is included in the health habits scale. It does have a moderate secondary loading on the first factor.

Essentially, these results confirm the scales derived during the multitrait scaling analyses, although they suggest that the thoughts and emotions and health habits scales might be combined.

MI Sample

The product-moment correlations among the (unrecoded) beliefs about recovery items are shown in Table B.2 in Appendix B for the MI sample. A principal components analysis was performed on all 20 items and seven factors had eigenvalues greater than one, each explaining 5 percent or more of the variance. A scree test confirmed that seven factors should be rotated. Factor five consisted of items 1 and 6, which are direct opposites of each other. These were therefore combined into a single variable "telling myself," scored so that a high score indicates a belief that telling myself I'll get better will help.

Because the two chance items (items 13 and 14) did not load on the same factor, and because these were eliminated from the multitrait scaling analysis, it was decided to exclude them from the principal components analysis. The analysis was rerun excluding items 13 and 14, and combining items 1 and 6.

Table 11

CORRELATIONS OF BELIEFS ABOUT RECOVERY ITEMS
WITH ROTATED PRINCIPAL COMPONENTS:
CANCER SAMPLE (N=95)

Item Grouping/Item[a] (abbreviated item content)	Component I	II	III	IV	h^2
THOUGHTS, EMOTIONS, HEALTH HABITS AFFECT RECOVERY					
8 Well-balanced meals help	.79			.25	.73
3 Feeling good about self helps	.74			.34	.73
11 Relaxation helps	.72			.36	.69
10 Not enough sleep makes it hard	.70				.51
2 Feeling happy helps	.68	.31		.46	.77
7 Taking care of self important	.67		.24	.35	.67
1 Telling myself going to be well helps	.67			.28	.61
9 Regular exercise not important	-.61				.39
6 Telling myself I'll be better doesn't help	-.58				.40
4 Thinking how sick I am slows recovery	.55		.29	.36	.52
RECOVERY UP TO GOD, RELIGIOUS FAITH					
20 It's up to God whether I get well		.89			.83
19 My faith in God will help		.88			.87
18 Prayer, religious faith can help		.87			.84
RECOVERY UP TO MEDICAL CARE					
15 Recovery depends on doctors and medicines			.91		.82
17 Recovery requires good medical care			.88		.82
RECOVERY NOT UP TO CHANCE					
13 Getting well nothing to do with chance				.75	.62
14 Recovery up to chance				-.74	.62
12 Not much I can do to help myself	-.42		-.25	-.59	.60
Percent of variance explained	27	15	11	14	

NOTE: Only coefficients above |0.23| are reported.

[a]Item number from Table 2.

Six factors had eigenvalues greater than one, each explaining more than 5 percent of the variance. A scree test confirmed that six factors were appropriate, so six were rotated.

In this solution, the first and third factor corresponded to the recovery up to God/religious faith and the recovery up to medical care scales. However, the remaining items were scattered about on the other four factors. It was was therefore decided to perform a principal components analysis on the items retained in the multitrait scaling analysis. Results are shown in Table 12. Four factors had eigenvalues greater than one, each explaining more than 5 percent of the variance. A scree test confirmed that four factors should be rotated. These four factors explained 68 percent of the variance.

The first factor corresponds to the recovery up to God, religious faith scale except that items 1 and 6 (telling myself I'll get well helps) loaded on this factor.

The second factor includes three of the four thoughts and emotions items, but has in addition item 11 pertaining to relaxing.

The third factor corresponds exactly to the recovery up to medical care scale.

The fourth factor includes two of the three health habits items.

DESCRIPTION OF SCALES

Cancer Sample

All scales derived during the multitrait scaling analyses were retained. Although the principal components analysis suggested that thoughts and emotions and health habits should be combined, this can be done during the higher-order analyses.

Summary statistics for the five scales and for the total scale are shown in Table 13. Product-moment correlations among the scales are shown in Table 14. An evaluation of the frequency distributions of the scales (not presented) revealed that the recovery up to medical care scale is very skewed (42 percent of responses are in the highest two scores); the thoughts and emotions scale is moderately skewed (25 percent of responses are in the highest two scores); the recovery up to God or religious faith is moderately skewed (23 percent are in the

Table 12

CORRELATIONS OF BELIEFS ABOUT RECOVERY ITEMS
WITH ROTATED PRINCIPAL COMPONENTS:
MI SAMPLE (N=44)

Item Grouping/Item[a] (abbreviated item content)	Component I	II	III	IV	h^2
RECOVERY UP TO GOD, RELIGIOUS FAITH					
19 Faith in God helps	.96				.93
20 It's up to God whether I get well	.92				.86
18 Prayer, religious faith helps	.89				.82
1+6 Telling myself I'll get well helps	.55	.30	.26		.46
THOUGHTS AND EMOTIONS AFFECT RECOVERY					
4 Thinking how sick I am doesn't help		.71			.57
3 Feeling good about myself helps	.34	.69			.62
2 Feeling happy will help	.40	.68			.66
11 Relaxing will help		.68			.56
RECOVERY UP TO MEDICAL CARE					
15 Recovery depends on doctors and medicines			.88		.78
16 Medical treatments can do harm		.24	-.74		.63
17 Recovery depends on good medical care		.42	.65		.62
HEALTH HABITS AFFECT RECOVERY					
9 Regular exercise not important				.87	.76
12 Not much I can do to help		-.33		.68	.60
Percent of variance explained	24	18	15	10	

NOTE: Only coefficients above |0.23| are reported.

[a]Item number from Table 1.

Table 13

SUMMARY STATISTICS FOR BELIEFS ABOUT RECOVERY SCALES: CANCER SAMPLE (N=91)

Scale	Number of Items	Means	S.D.
Thoughts and emotions affect recovery	5	19.98	3.86
Health habits affect recovery	6	23.72	4.38
Recovery not up to chance	2	6.99	1.91
Recovery up to medical care	2	7.86	1.87
Recovery up to God, religious faith	3	9.70	3.74
Total	18	68.25	11.36

Table 14

PRODUCT-MOMENT CORRELATIONS AMONG BELIEFS ABOUT RECOVERY SCALES: CANCER SAMPLE (N=91)

Scale	1	2	3	4	5	6
Thoughts and emotions affect recovery	(.84)[a]					
Health habits affect recovery	.77	(.81)				
Recovery not up to chance	.48	.49	(.57)			
Recovery up to medical care	.21	.15	.03	(.82)		
Recovery up to God, religious faith	.39	.30	.28	.13	(.89)	
Total	.88	.85	.62	.34	.64	.88

[a]Reliability coefficients are on the diagonal.

highest two scores); and the recovery not up to chance is skewed (14 percent of people have the lowest score). In other words, only the health habits affect recovery scale is normally distributed.

MI Sample

All scales derived during the multitrait scaling analyses were retained. Summary statistics for the scales are shown in Table 15 and product-moment correlations among the scales are shown in Table 16.

Evaluation of frequency distribution of the scales (not shown) revealed that the recovery up to God or religious faith scale was very skewed (40 percent of people had the highest two scores) and the recovery up to medical care and health habits scales were slightly negatively skewed with people tending to get high scores.

Table 15

SUMMARY STATISTICS FOR BELIEFS ABOUT RECOVERY SCALES:
MI SAMPLE (N=42)

Scale	Number of Items	Means	S.D.
Thoughts and emotions affect recovery	5	19.11	3.85
Health habits affect recovery	3	12.21	2.48
Recovery up to medical care	3	11.62	2.49
Recovery up to God, religious faith	3	10.64	4.52
Total	14	53.58	8.47

Table 16

PRODUCT-MOMENT CORRELATIONS AMONG BELIEFS ABOUT RECOVERY SCALES:
MI SAMPLE (N=42)

Scale	1	2	3	4	5
Thoughts and emotions affect recovery	(.67)[a]				
Health habits affect recovery	.34	(.50)			
Recovery up to medical care	.20	.02	(.61)		
Recovery up to God, religious faith	.39	.10	-.11	(.94)	
Total	.82	.51	.33	.71	(.74)

[a]Reliability coefficients are on the diagonal.

VII. ATTRIBUTION OF CAUSES OF ILLNESS

Eleven items assessed a variety of attributions regarding the cause of the illness. These items are shown in Table 17, along with means and standard deviations and the number missing in each item. (Frequency distributions for the items are shown in Table A.2 in Appendix A).

All but one item were skewed in the same direction in the two samples, indicating that all these people tended to attribute their illness to pollutants and stresses, or they indicated they did not know. Respondents tended to disagree with most items. In the MI sample, people tended to believe they might have brought the illness on themselves, whereas in the cancer sample, people tended to disagree with this statement.

Information on these items is summarized in Table 18 according to the percent of people who agreed (strongly agree or agree responses), were not sure, or disagreed (strongly disagree or disagree responses).

Seventy-one percent of the total sample (77 percent of the cancer sample and 61 percent of the MI sample) agree that they don't really know why they got this illness.

Ninety-five percent of the total sample (94 and 98 percent of the cancer and MI samples, respectively) disagree that they caught the illness from someone else.

The three highest percentages of "agree" responses in the cancer sample (other than the "don't really know" item) were: (1) stresses in my life (34 percent), (2) pollutants (34 percent), and (3) brought the illness on myself (22 percent).

The four highest percentages of "agree" responses in the MI sample were: (1) brought the illness on myself (53 percent), (2) stresses in my life (52 percent), (3) God's will (44 percent), and (4) pollutants (40 percent).

People in the MI sample were more willing to make attributions of all kinds. For nearly all items, percentages of "agree" responses were greater for the MI sample than for the cancer sample.

No further scaling studies were performed on these items.

Table 17

ATTRIBUTION OF ILLNESS ITEMS AND SUMMARY STATISTICS

Item	Questionnaire Item Number	Cancer Sample (N=95)				MI Sample (N=63)				Total Sample (N=158)			
		Mean	S.D.	Number Missing	(Percent)	Mean	S.D.	Number Missing	(Percent)	Mean	S.D.	Number Missing	(Percent)
1 Getting this illness was due to bad luck	V.6	4.01	1.21	2	(2)	3.85	1.47	3	(5)	3.95	1.32	5	(3)
2 I may have brought this illness on myself	V.11	3.53	1.23	3	(3)	2.73	1.46	3	(5)	3.22	1.38	6	(4)
3 Some pollutant such as smog, chemicals, or food additives contributed to my illness	V.17	2.83	0.93	3	(3)	2.95	1.33	2	(3)	2.88	1.11	5	(3)
4 My illness was brought on by the stresses in my life	V.21	2.96	1.17	4	(4)	2.69	1.25	4	(6)	2.85	1.21	8	(5)
5 My illness is mostly hereditary (inherited)	V.24	3.85	1.12	4	(4)	4.03	1.22	3	(5)	3.92	1.16	7	(4)
6 My illness may be a punishment for something I've done	V.29	4.44	0.86	4	(4)	3.83	1.34	4	(6)	4.20	1.11	8	(5)
7 My illness is God's will	V.40	3.76	1.26	6	(6)	3.24	1.64	4	(6)	3.55	1.44	10	(6)
8 I caught my illness from someone else	V.33	4.67	0.76	3	(3)	4.88	0.45	3	(5)	4.76	0.66	6	(4)
9 My illness may have been caused by something I ate	V.41	4.21	1.00	3	(3)	4.12	1.33	4	(6)	4.17	1.14	7	(4)
10 I don't really know why I got this illness	V.42	2.01	1.06	4	(4)	2.52	1.52	4	(6)	2.21	1.28	8	(5)
11 My illness may have been caused by drugs or medications	V.44	3.94	1.05	4	(4)	4.43	1.09	3	(5)	4.14	1.09	7	(4)

Note: Response choices were:

1 = Strongly agree
2 = Agree
3 = Not sure
4 = Disagree
5 = Strongly disagree

Table 18

SUMMARY OF RESPONSES TO ATTRIBUTION OF ILLNESS ITEMS

	Item	Cancer Sample (N=95)						MI Sample (N=63)						Total Sample (N=158)					
		Agree		Not Sure		Disagree		Agree		Not Sure		Disagree		Agree		Not Sure		Disagree	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1	Getting this illness was due to bad luck	14	15.0	10	10.8	69	74.2	15	25.0	3	5.0	42	70.0	29	19.0	13	8.5	111	72.5
2	I may have brought this illness on myself	20	21.7	25	27.2	47	51.1	32	53.3	8	13.3	20	33.3	52	34.2	33	21.7	67	44.1
3	Some pollutant such as smog, chemicals, or food additives contributed to my illness	31	33.7	46	50.0	15	16.3	24	39.3	20	32.8	17	27.9	55	35.9	66	43.1	32	20.9
4	My illness was brought on by the stresses in my life	31	34.1	33	36.3	27	29.7	31	52.5	14	23.7	14	27.7	62	41.3	47	31.3	41	27.3
5	My illness is mostly hereditary (inherited)	10	11.0	26	28.6	55	60.4	9	15.0	7	11.7	44	73.3	19	12.6	33	21.8	99	65.6
6	My illness may be a punishment for something I've done	2	2.2	10	11.0	79	86.8	14	23.7	7	11.9	38	64.4	16	10.7	17	11.3	117	78.0
7	My illness is God's will	15	16.8	23	25.8	51	57.3	26	44.1	4	6.8	29	49.2	41	27.7	27	18.2	80	54.0
8	I caught my illness from someone else	2	2.2	4	4.3	86	93.5	1	1.7	0	0.0	59	98.3	3	2.0	4	2.6	145	95.4
9	My illness may have been caused by something I ate	5	5.4	23	25.0	64	69.6	11	18.6	6	10.2	42	71.2	16	10.6	29	19.2	106	70.2
10	I don't really know why I got this illness	70	76.9	9	9.9	12	13.2	36	61.0	4	6.8	19	32.2	106	70.7	13	8.7	31	20.7
11	My illness may have been caused by drugs or medications	8	8.8	28	30.8	55	60.4	7	11.7	1	1.7	52	86.7	15	9.9	29	19.2	107	70.9

Note: Percentages based on number of those who responded to each item.

VIII. ATTITUDES ABOUT DEATH

ITEM DESCRIPTION

Thirteen items assessed attitudes about death. Five item groupings were hypothesized: acceptance of death, thinking about death, religious/spiritual perspective on death, right to die, and thinking of dying changed living. The items and item groupings are shown in Table 19. Response choices for all 13 items were: (1) strongly agree, (2) agree, (3) not sure, (4) disagree, and (5) strongly disagree.

DESCRIPTIVE STATISTICS ON ITEMS

The mean, standard deviation, and number of missing responses for the 13 items are shown in Table 19 for both the cancer and the MI samples as well as for the total sample. The frequency distributions for these items are shown in Appendix A, Table A.3.

The five acceptance of death items are nearly all skewed--i.e. mean responses are to the side of the response scale midpoint indicating an accepting attitude toward death. This is true for both samples, but the skewness is more pronounced in the MI sample. The three thinking about death items are skewed in the MI sample indicating these people avoid thinking about their death. In the cancer sample, items 6 and 7 are similarly skewed, but item 8 is skewed in the other direction indicating they tend to think about their death. Both items assessing a religious/spiritual perspective on death are skewed. The skewness indicates (for both samples) that these people tend to believe in life after death and they also tend to have a religious or spiritual perspective on death. The two right to die items are skewed indicating that people tend to believe in a person's right to decide to die. The one item on thinking about dying has changed views about living is skewed in opposite directions: The cancer sample tends to agree whereas the MI sample tends to disagree with this item.

A count of the number of "agree" and "strongly agree" responses made by each respondent indicated no tendency toward acquiescent response set--i.e., 98 percent of each sample had a count of 9 or less

Table 19

ATTITUDES ABOUT DEATH ITEMS AND SUMMARY STATISTICS

Item Grouping/Item	Direction of Scoring[a]	Questionnaire Item Number	Cancer Sample (N=95)				MI Sample (N=63)				Total Sample (N=158)			
			Mean[b]	S.D.	Number Missing	(Percent)[c]	Mean[b]	S.D.	Number Missing	(Percent)[d]	Mean[b]	S.D.	Number Missing	(Percent)
Acceptance of Death														
1 It is difficult for me to accept the fact that I may die from this illness.	-	V.4	3.08	1.40	4	(4)	3.65	1.45	3	(5)	3.31	1.44	7	(4)
2 When I think about my own death I get very angry.	-	V.19	3.77	1.15	5	(5)	4.50	0.95	3	(5)	4.00	1.15	8	(5)
3 Thinking about dying makes me depressed.	-	V.34	3.05	1.26	3	(3)	4.00	1.41	4	(6)	3.42	1.40	7	(4)
4 I have a calm and accepting attitude toward my own death.	R	V.39	2.71	1.14	4	(4)	2.03	0.91	4	(6)	2.45	1.10	8	(5)
5 The fear of dying is very much with me.	-	V.43	3.56	1.21	3	(3)	4.52	1.03	3	(5)	3.94	1.23	6	(4)
Thinking About Death														
6 I find it best not to think too much about dying.	-	V.7	2.24	1.16	3	(3)	2.31	1.46	5	(8)	2.67	1.28	8	(5)
7 I avoid thinking about my own death.	-	V.27	2.98	1.21	4	(4)	2.65	1.46	3	(5)	2.85	1.32	7	(4)
8 I have thought a lot about my own death.	R	V.37	2.70	1.21	4	(4)	3.80	1.19	3	(5)	3.14	1.31	7	(4)
Religious/Spiritual Perspective on Death														
9 In some form I believe that there is life after death.	R	V.9	2.33	1.41	4	(4)	2.82	1.52	3	(5)	2.52	1.47	7	(4)
10 I have a religious or spiritual perspective on death.	R	V.13	2.40	1.29	4	(4)	2.59	1.62	4	(6)	2.47	1.43	8	(5)
Right to Die														
11 A person should have the right to decide to die.	R	V.16	2.04	1.15	4	(4)	2.17	1.24	3	(5)	2.09	1.18	7	(4)
12 We should prolong life at any cost.	-	V.30	3.66	1.28	4	(4)	3.53	1.57	3	(5)	3.61	1.40	7	(4)
Thinking of Dying Changed Views of Living														
13 Thinking more about dying has changed my views about how I live.	R	V.23	2.38	1.20	5	(5)	3.42	1.33	4	(6)	2.79	1.35	9	(6)

[a] Items with an 'R' must be recorded so that a high score indicates more acceptance, thinking, religious perspective, belief in right to die, or changed views.

[b] Response choices: 1 = Strongly agree
2 = Agree
3 = Not sure
4 = Disagree
5 = Strongly disagree

[c] One person did not complete any of these items.

[d] Three people did not complete any of these items.

of the 13 items, and the maximum number of agree/strongly agree responses was 11 in the cancer sample and 10 in the MI sample. The frequency distribution of these counts is shown in Table 20.

Standard deviation for the 13 items are summarized as follows:

Sample	Lowest Value	Highest Value	Median	Number 1±0.2
Cancer	1.1	1.4	1.2	8
MI	0.9	1.6	1.4	5
Total	1.1	1.5	1.3	4

In an evaluation of the item frequency distributions (see Table A.3, Appendix A) three items in the MI sample were quite skewed, one (item 4) with 85 percent of responses in the extreme two choices, and two (items 2 and 5) with 90 percent or more in the extreme two choices. None of the items in the cancer sample were skewed to this extent. These findings suggest that data for the cancer sample are more normally distributed than those for the MI sample.

The number of missing responses per item ranged from 3 to 5 percent in the cancer sample (median of 4 percent) and from 5 to 8 percent (median of 5 percent) in the MI sample. A count of the number of missing items per person revealed that three people in the MI sample and one person in the cancer sample did not complete any of these items.

A count of the number of "not sure" responses made by each respondent did not indicate a tendency to check this midpoint response. The maximum number of "not sure" responses made by anyone was 4 in the cancer sample and 7 in the MI sample.

MULTITRAIT SCALING ANALYSES

Multitrait scaling analyses were performed on the 13 items recoded as indicated in Table 19. The item-scale correlation matrix for the 13 items and the hypothesized item groupings is shown in Table 21 for both samples and for the total sample.

Table 20

FREQUENCY DISTRIBUTION OF A COUNT OF THE NUMBER OF AGREE AND STRONGLY AGREE RESPONSES TO THE ATTITUDES ABOUT DEATH ITEMS

	Cancer Sample (N=95)			MI Sample (N=63)		
Count	Number	Percent	Cumulative Percent	Number	Percent	Cumulative Percent
0	1	1.0	1.0	3	4.8	4.8
1	0	0.0	1.0	0	0.0	4.8
2	3	3.2	4.2	3	4.8	9.5
3	7	7.4	11.6	9	14.3	23.8
4	10	10.5	22.1	5	7.9	31.7
5	13	13.7	35.8	17	27.0	58.7
6	19	20.0	55.8	11	17.5	76.2
7	20	21.0	76.8	6	9.5	85.7
8	16	16.8	93.7	5	7.9	93.6
9	4	4.2	97.9	2	3.2	96.8
10	1	1.0	98.9	2	3.2	100.0
11	1	1.0	100.0	0	0.0	100.0
12	0	0.0	100.0	0	0.0	100.0
13	0	0.0	100.0	0	0.0	100.0

Table 21

ITEM-SCALE CORRELATION MATRIX OF ATTITUDES ABOUT DEATH ITEMS

Item Grouping/Item[a] (abbreviated item content)	Cancer Sample (N=94)				MI Sample (N=60)				Total Sample (N=154)			
	ACCEPT	THINK	RELIG	RIGHT	ACCEPT	THINK	RELIG	RIGHT	ACCEPT	THINK	RELIG	RIGHT
Acceptance of Death (ACCEPT)												
1 Difficult to accept I may die	.42*	.34	-.05	.18	.53*	.38	.05	.26	.48*	.30	.03	.20
2 When think of own death get angry	.62*	.08	.05	.03	.56*	.03	.17	.18	.65*	-.03	.05	.06
3 Thinking of dying makes me depressed	.61*	.09	.01	.06	.65*	.26	.10	.24	.67*	.07	.01	.11
4 Calm accepting attitude of death	.56*	.09	-.01	.04	.56*	.25	.32	.23	.60*	.07	.07	.09
5 Fear of dying	.47*	-.20	.17	.03	.45*	-.08	.13	.04	.54*	-.23	.09	.01
Thinking About Death (THINK)												
6 Don't think about dying	.22	.48*	.04	.09	.26	.58*	.02	.28	.22	.49*	.03	.17
7 Avoid thinking about death	.10	.60*	.07	.29	.34	.56*	-.10	.38	.13	.59*	.01	.33
8 Thought a lot about death	-.04	.45*	.09	.26	-.06	.24*	.00	.02	-.21	.35*	.09	.17
Religious/Spiritual Perspective on Death (RELIG)												
9 Believe in life after death	.05	.04	.78*	-.27	.12	-.05	.65*	-.19	.01	.04	.72*	-.23
10 Have religious/spiritual perspective	.04	.12	.78*	-.26	.23	-.02	.65*	-.25	.08	.07	.72*	-.25
Right to Die (RIGHT)												
11 Person has right to die	.10	.15	-.36	.47*	.11	.05	-.15	.19*	.08	.11	-.26	.34*
12 Should prolong life at any cost	.07	.31	-.14	.47*	.29	.39	-.22	.19*	.14	.35	-.17	.34*
Thinking About Dying Changed Views of Living												
13 Thinking about dying changed views of living	-.27	.21	-.34	-.08	-.27	-.19	-.15	-.26	-.38	.12	-.28	.04

*Indicates coefficient is corrected for overlap.

[a]Item number from Table 1.

Note: Standard errors are 0.10 (Cancer Sample), 0.13 (MI Sample), and 0.08 (Total Sample).

For the acceptance of death scale, all item-total correlations in all samples equaled or exceeded 0.30; all items in all samples correlate higher with this scale than with any other scale. Thus the first two muiltitrait scaling criteria are satisfied. In this scale, all five items were scaling successes in the total sample (i.e., correlations of the items with the scale score were more than two standard errors - different from the correlation of the item with any other scale).

For the thinking about death scale, all item-total correlations equaled or exceeded 0.30 in the cancer sample and the total sample, but only two items did so in the MI sample (item 8 correlates only 0.24 with this scale). All items in all samples correlate higher with this scale than with any other scale. There were two scaling successes and one probable success in the total sample for this scale (see Table 21).

For the two-item right to die scale, only the item-total correlations in the cancer sample and the total sample equal or exceed 0.30. There are no scaling successes in this scale; in fact, there are two scaling errors for item 12 (one in the MI sample and one in the total sample) (see Table 21).

For Item 13, which was hypothesized as a single item, an inconsistent pattern of item-total correlations was observed. It is somewhat evenly associated across the four scales, but the direction and magnitude of association is not consistent across samples. These results support the decision to score this item separately.

The reliability and homogeneity coefficient for the four scales are shown in Table 22. The reliability coefficients are above 0.50 for all scales in all samples except the right to die scale, thus these three scales are reliable enough for group comparisons. The right to die scale is not reliable in the MI sample, although it is in the cancer sample and in the total sample.

PRINCIPAL COMPONENTS ANALYSES

The correlation matrix of the 13 (unrecoded) attitudes about death items is presented in Appendix B; Table B.3 is the cancer sample, Table B.4 is the MI sample, and Table B.5 is the total sample. All matrices are calculated using pairwise deletion of missing data.

Table 22

RELIABILITY (r_{tt}) AND HOMOGENEITY (r_{ii}) COEFFICIENTS FOR ATTITUDES ABOUT DEATH SCALES

Scale	Number of Items	Cancer Sample (N=92)		MI Sample (N=60)		Total Sample (N=152)	
		r_{tt}	r_{ii}	r_{tt}	r_{ii}	r_{tt}	r_{ii}
Acceptance of Death	5	.76	.39	.76	.39	.80	.44
Thinking About Death	3	.69	.43	.64	.37	.66	.39
Religious/Spiritual Perspective on Death	2	.88	.78	.79	.65	.84	.72
Right to Die	2	.64	.47	.31	.18	.51	.34

A principal components analysis of the correlations among the 13 unrecoded items in the cancer sample resulted in four factors with eigenvalues greater than one. Each of these factors explained at least 5 percent of the variance, and a scree test indicated that four factors should be rotated. Thus, these four factors, which explain 66 percent of the variance, were rotated (see Table 23). The four factors correspond to the four scales constructed in the multitrait scaling analyses. Item 13 (see Table 19), which was excluded from the multitrait scaling analyses, has loadings on three scales, religious/spiritual perspective, acceptance of death, and right to die.

When the principal components analysis was performed on the MI sample, the results were difficult to interpret. Three factors were rotated, roughly corresponding to thinking about death (items 7, 6, 1, and 12), acceptance of death (items 2, 5, 3, 4, and 8), and religious/spiritual perspective (items 10, 9, 11, and 13). Because of the low sample size (N=60) relative to the number of items (13) it was decided not to consider this analysis.

A principal components analysis of the correlations among the 13 items in the total sample resulted in three components with eigenvalues greater than one. Each explained at least 5 percent of the variance, and a scree test confirmed that three factors should be rotated. These factors explained 59 percent of the variance (see Table 24). The three factors correspond to the first three scales constructed in the multitrait scaling analysis. The two right to die items load on both the thinking of death and the religious/spiritual perspective on death factors. Item 13 (thinking of dying has changed views of living) loaded on the acceptance of death factor.

Because item 13 was not hypothesized to measure any of the four item groupings, another principal components analysis of the 12 items (excluding item 13) was performed. These results are shown in Table 25 for the cancer sample and Table 26 for the total sample. For the cancer sample, four factors met all criteria for rotation; these explained 68 percent of the variance. The four factors and the items loading on each factor correspond exactly to the hypothesized item groupings. For the total sample, three factors were rotated, accounting for 49 percent of

Table 23

CORRELATIONS BETWEEN 13 ATTITUDES ABOUT DEATH ITEMS AND ROTATED PRINCIPAL COMPONENTS: CANCER SAMPLE (N=91)

Item Grouping/Item[a]	Component I	II	III	IV	h^2
Acceptance of Death					
3 Thinking of dying makes me depressed	77				64
2 If think of own death, get angry	74				56
4 Calm accepting attitudes	-73				54
5 Fear of dying	73	-33			69
Thinking of Death					
6 Don't think about dying		78			66
7 Avoid thinking about death		76			65
8 Thought a lot about death		-67		-33	62
1 Difficult to accept I may die	48	53			54
Religious/Spiritual Perspective					
10 Have religious/spiritual perspective			89		84
9 Believe in life after death			89		82
13 Thinking of dying changed views	41		55	-27	59
Right to Die					
12 Should prolong life at any cost				86	75
11 Person has right to die			-36	-74	68
Percent of Variance Explained	21	16	16	12	

[a]Item number from Table 19.

Note: Only coefficients above |0.23| are reported.

Table 24

CORRELATIONS BETWEEN 13 ATTITUDES ABOUT DEATH ITEMS AND ROTATED PRINCIPAL COMPONENTS: TOTAL SAMPLE (N=151)

	Item Grouping/Item[a]	Component I	Component II	Component III	h^2
Acceptance of Death					
3	Thinking of dying makes me depressed	79			67
2	If think of own death, get angry	77			60
5	Fear of dying	76			62
4	Calm accepting attitude	-73			56
13	Thinking of dying changed views	54		41	48
1	Difficult to accept I may die	54	48		53
Thinking of Death					
7	Avoid thinking about death		83		69
6	Don't think about dying		70		52
8	Thought a lot about death	40	-62		58
12	Should prolong life at any cost		55	31	41
Religious/Spiritual Perspective					
10	Have religious/spiritual perspective			89	80
9	Believe in life after death			86	73
11	Person has right to die		-31	-48	33
	Percent of Variance Explained	24	18	16	

[a]Item number from Table 19.

Note: Only coefficients above $|0.23|$ are reported.

Table 25

CORRELATIONS BETWEEN 12 ATTITUDES ABOUT DEATH ITEMS AND ROTATED PRINCIPAL COMPONENTS: CANCER SAMPLE (N=91)

Item Grouping/Item[a]	Component I	II	III	IV	h^2
Acceptance of Death					
3 Thinking of dying makes me depressed	77				61
4 Calm accepting attitude	-75				56
2 If think of own death, get angry	75				56
5 Fear of dying	70	-35	-26		69
1 Difficult to accept I may die	54	50			58
Thinking of Death					
7 Avoid thinking about death		78		26	68
6 Don't think about dying		77			64
8 Thought a lot about death		-70		-30	61
Religious/Spiritual Perspective					
9 Believe in life after death			92		87
10 Have religious/spiritual perspective			90		84
Right to Die					
12 Should prolong life at any cost				89	81
11 Person has right to die			-40	-70	67
Percent of Variance Explained	21	18	16	12	

[a]Item number from Table 19.

Note: Only coefficients above |0.23| are reported.

Table 26

CORRELATIONS BETWEEN 12 ATTITUDES ABOUT DEATH ITEMS AND ROTATED PRINCIPAL COMPONENTS: TOTAL SAMPLE (N=151)

	Item Grouping/Item[a]	Component I	Component II	Component III	h^2
Acceptance of Death					
2	If think of own death, get angry	79			63
3	Thinking of dying makes me depressed	78			65
5	Fear of dying	76	-24		64
4	Calm accepting attitude	-75			58
1	Difficult to accept I may die	57	44		54
Thinking of Death					
7	Avoid thinking about death		84		71
6	Don't think about dying		70		53
8	Thought a lot about death	37	-64		57
12	Should prolong life at any cost		52	36	41
Religious/Spiritual Perspective					
10	Have religious/spiritual perspective			88	79
9	Believe in life after death			86	75
11	Person has right to die		-26	-54	36
	Percent of Variance Explained	24	19	16	

[a]Item number from Table 19.

Note: Only coefficients above |0.23| are reported.

the variance. Again, as when item 13 was included, the right to die items are loading on the two factors thinking of death and religious/spiritual perspective.

DESCRIPTION OF SCALES

Three scales met scaling criteria in both the cancer sample and the MI sample and will be retained: acceptance of death, thinking about death, and religious/spiritual perspective on death. The fourth hypothesized scale, right to die, did not meet scaling criteria in the MI sample. Further, the principal components analysis did not differentiate this scale in the total sample. Therefore, it will not be retained.

A summary of means and standard deviations for the three scales is presented in Table 27. The cancer sample has lower scores on the acceptance of death scale ($t=-3.9$, $p<.01$) and higher scores on the thinking about death scale ($t=2.83$, $p<.01$) than the MI sample. No significant differences were observed on the religious/spiritual perspective on death scale.

An evaluation of the frequency distributions of the scales in the total sample (not shown) revealed that the acceptance of death scale was slightly negatively skewed with people tending to have high scores. The religious spiritual perspective on death scale was skewed (36 percent of people had the highest two scores), and the right to die scale was skewed with people tending to get high scores. The thinking about death scale was roughly normally distributed.

A summary of product-moment correlations among the three scales is shown in Table 28. The coefficients are all small in relation to their reliabilities, indicating that the scales are fairly independent.

Table 27

SUMMARY STATISTICS FOR THE ATTITUDES ABOUT DEATH SCALES

Scale	Number of Items	Cancer Sample (N=92)		MI Sample (N=60)		Total Sample (N=152)	
		Mean[a]	S.D.	Mean[b]	S.D.	Mean[c]	S.D.
Acceptance of Death	5	16.67	4.40	20.60	4.17	18.22	4.72
Thinking about Death	3	8.55	2.82	7.13	3.10	7.99	3.02
Religious/Spiritual Perspective on Death	2	7.24	2.54	6.58	2.82	6.98	2.67

[a] A high score indicates greater acceptance.

[b] A high score indicates more thinking about death.

[c] A high score indicates a more religious or spiritual perspective.

Table 28

PRODUCT-MOMENT CORRELATIONS AMONG ATTITUDES ABOUT DEATH SCALES

Scale	Cancer Sample (N=92)			MI Sample (N=60)			Total Sample (N=152)		
	1	2	3	1	2	3	1	2	3
1 Acceptance of Death	(.76)			(.76)			(.80)		
2 Thinking About Death	.12	(.69)		.26	(.64)		.06	(.66)	
3 Religious/Spiritual Perspective on Death	.05	.09	(.88)	.19	-.04	(.79)	.05	.06	(.84)

[a]Reliability coefficients are on the diagonal.

IX. SENSE OF CONTROL

ITEM DESCRIPTION

Seven items assessed a sense of control in terms of ability to solve problems and influence others (see Table 29).

DESCRIPTIVE STATISTICS ON ITEMS

The mean, standard deviation, and number of not applicable and missing responses are shown in Table 29 for all samples. The frequency distributions for these items are shown in Appendix A, Table A.4.

All items are skewed in both samples, indicating that these people tend to feel in control.

Standard deviations for the seven items are summarized as follows:

Sample	Lowest Value	Highest Value	Median	Number 1±0.2
Cancer	0.78	1.26	0.88	5
MI	0.60	1.17	1.05	6
Total	0.74	1.23	0.93	5

The item frequency distributions (See Table A.4, Appendix A) indicate that two items (5 and 7) are quite skewed with 85-90 percent of responses in the extreme two choices in the total sample. In the MI sample, over 90 percent were in the extreme two choices of item 5.

The number of missing responses per item ranged from 1 to 3 percent in the cancer sample (median of 2 percent) and ranged from 2 to 8 percent in the MI sample (median of 5 percent). A count of the number of missing responses per person ranged from 0 to 6 in the cancer sample and from 0 to 7 in the MI sample.

Table 29

SENSE OF CONTROL ITEMS AND SUMMARY STATISTICS

Item	Questionnaire Item Number	Response Choices[a]	Direction of Scoring[b]	Cancer Sample (N=95)				MI Sample (N=63)				Total Sample N=158)			
				Mean	S.D.	Number N/A (Percent)	Number Missing (Percent)	Mean	S.D.	Number N/A (Percent)	Number Missing (Percent)	Mean	S.D.	Number N/A (Percent)	Number Missing (Percent)
1 If I work at it, I can usually get what I want.[c]	VI.1F	A	R	2.23	0.89	1 (1)	2 (2)	2.23	0.88	0 (0)	3 (5)	2.23	0.88	1 (1)	5 (3)
2 How much of what you do is determined by what other people want you to do?[c]	VI.5	E	-	3.30	0.95	0 (0)	1 (1)	3.97	1.17	0 (0)	2 (3)	3.56	1.09	0 (0)	3 (2)
3 I am usually able to influence others.	VI.1W	A	R	2.34	0.83	0 (0)	3 (3)	2.65	1.05	0 (0)	3 (5)	2.46	0.93	6 (4)	6 (4)
4 How often do you run into problems that you can't solve?[d]	VI.4[e]	O	-	3.66	1.02	0 (0)	1 (1)	4.10	1.07	0 (0)	3 (5)	3.83	1.06	0 (0)	4 (2)
5 I feel that I usually succeed in solving my problems.[d]	VI.1P	A	R	1.99	0.81	0 (0)	2 (2)	1.87	0.60	0 (0)	3 (5)	1.94	0.74	0 (0)	5 (3)
6 During the past month, how often have you been unpleasant situations that you felt helpless to do anything about?[d]	VI.7	O	-	3.80	1.26	0 (0)	2 (2)	4.21	1.15	0 (0)	1 (2)	3.96	1.23	0 (0)	3 (2)
7 I am usually able to give what I like to the people closest to me.[d]	IV.7K	T	R	1.68	0.78	0 (0)	3 (3)	2.04	0.85	2 (3)	5 (8)	1.82	0.82	2 (1)	8 (5)

[a]
A: 1 = Strongly agree; 2 = Agree; 3 = Not sure; 4 = Disagree; 5 = Strongly disagree
E: 1 = Almost everything; 2 = Most things; 3 = Some things; 4 = A few things; 5 = Almost nothing
O: 1 = Very often; 2 = Often; 3 = Sometimes; 4 = Occasionally; 5 = Almost never
T: 1 = Definitely true; 2 = Mostly true; 3 = Don't know; 4 = Mostly false; 5 = Definitely false; 6 = Does not apply

[b] An 'R' indicates the item must be recoded so that a high score indicates more control.

[c] From Kobasa.

[d] From Antonusky, 1979, p. 162.

MULTITRAIT SCALING ANALYSES

The item-scale correlation matrix for the seven items is shown in Table 30. Items were recoded as shown in Table 9. Only one scale was hypothesized. The correlation between item 7 and this scale was very low in the cancer sample and in the total sample. Therefore, the analysis was rerun excluding item 7 (see Table 31). All but one of the item-total correlations equal or exceed 0.30; item 3 (able to influence others) does not meet this criterion in the MI sample in the total sample. The reliability coefficients for this six-item scale are 0.74 (cancer sample), 0.72 (MI sample), and 0.72 (total sample).

PRINCIPAL COMPONENTS ANALYSES

The correlation matrix of the seven (unrecoded) sense of control items is presented in Appendix B: Table B.6 is the cancer sample, Table B.7 the MI sample, and Table B.8 the total sample.

A principal components analysis of the seven unrecoded items yielded two factors with eigenvalues greater than one, each explaining

Table 30

ITEM-SCALE CORRELATIONS FOR SENSE OF CONTROL SCALE: SEVEN ITEMS

Item[a]	Cancer Sample[b] (N=95)	MI Sample[c] (N=62)	Total Sample[d] (N=157)
1	.45*	.57*	.50*
2	.35*	.29*	.32*
3	.39*	.35*	.33*
4	.50*	.63*	.56*
5	.59*	.40*	.52*
6	.52*	.54*	.53*
7	.07*	.30*	.12*

*Coefficient corrected for overlap.

[a]Item number from Table 29.

NOTE: Standard errors are 0.10 (cancer sample), 0.13 (MI sample), and 0.08 (total sample).

Table 31

ITEM-SCALE CORRELATIONS FOR SENSE OF CONTROL SCALE: SIX ITEMS

Item[a]	Cancer Sample (N=94)	MI Sample (N=62)	Total Sample (N=156)
1	.48*	.60*	.52*
2	.36*	.36*	.37*
3	.42*	.25*	.29*
4	.50*	.65*	.57*
5	.59*	.33*	.50*
6	.52*	.56*	.55*

*Coefficient corrected for overlap.

[a]Item number from Table 29.

NOTE: Standard errors are 0.10 (cancer sample), 0.13 (MI sample), and 0.08 (total sample).

more than 5 percent of the variance in all samples. However, these appeared to be methods factors (i.e., positively worded items tended to load on one factor and negatively worded items on the other). Therefore, only the first unrotated component was evaluated.

The correlations of the seven sense of control items with the first principal component are shown in Table 32. As in the scaling analysis, item 7 appears to measure something else, especially in the cancer sample. Item 7 was excluded and the analysis rerun.

The correlations of the six sense of control items with the first principal component are shown in Table 33. All correlations are |0.40| or greater in all samples, and about 42 percent of the variance is explained.

Table 32

CORRELATIONS OF SEVEN SENSE OF CONTROL ITEMS WITH FIRST PRINCIPAL COMPONENT

Item[a]	Cancer Sample (N=92)	MI Sample (N=60)	Total Sample (N=152)
1	.66	.76	.70
2	-.51	-.40	-.51
3	.62	.52	.50
4	-.69	-.76	-.74
5	.76	.61	.69
6	-.68	-.70	-.72
7	.07	.45	.16
Percent of Variance Explained	37	38	36

[a]Item number from Table 29.

Table 33

CORRELATIONS OF SIX SENSE OF CONTROL ITEMS WITH FIRST PRINCIPAL COMPONENT

Item[a]	Cancer Sample (N=92)	MI Sample (N=60)	Total Sample (N=152)
1	.66	-.80	-.70
2	-.51	.50	.52
3	.62	-.43	-.48
4	-.69	.78	.74
5	.76	-.54	-.68
6	-.67	.74	.72
Percent of Variance Explained	43	42	42

[a]Item number from Table 29.

DESCRIPTION OF SCALE

Because of the correspondence between the scaling analysis and the principal components analysis, the six-item scale was deemed appropriate. Reliabilities and summary statistics for this scale are shown in Table 34. Reliability coefficients are well above 0.50, thus are adequate for group comparisons. The scale was normally distributed.

The MI sample has a slightly greater sense of control than the cancer sample ($t=-2.07$, $p < .05$).

Table 34

SENSE OF CONTROL SCALE RELIABILITY AND SUMMARY STATISTICS

Information	Cancer Sample (N=94)	MI Sample (N=62)	Total Sample (N=156)
Reliability (r_{tt})	.74	.72	.72
Homogeneity (r_{ii})	.32	.30	.30
Mean	22.15	23.45	22.67
Standard deviation	3.81	3.85	3.88
Number of items	6	6	6

X. SELF ESTEEM/BODY IMAGE

ITEM DESCRIPTION

Thirteen items assessed self-esteem, body image, and changes in body image as a result of illness. These items are shown in Table 35. Two types of response choices were used for these items (see Table 35, footnote a).

SAMPLE

The self-esteem items were asked of all respondents. The body image and change in body image items were asked only of the cancer sample. Therefore, analyses were performed separately for the cancer and MI samples.

DESCRIPTIVE STATISTICS ON ITEMS

Cancer Sample

The mean, standard deviation, and number of missing responses for the 13 items are shown in Table 35, along with the response choices for each item and an indication of whether the item should be reversed (so that a high score indicates high esteem or body image).

All six of the self-esteem items are skewed (i.e., mean responses are to the side of the response scale midpoint), indicating favorable esteem. Of the seven body image and change in body image items, three (8,11,12) are similarly skewed (indicating a favorable image), three (9,10,13) are skewed to the opposite side (indicating a poor image), and one is not skewed (item 7).

Frequency distributions for the unrecoded items are presented in Table A.5 in Appendix A. One item (item 3) is quite skewed, in both samples, with over 90 percent of responses in the extreme two response choices.

A count of the number of "agree" and "strongly agree" responses (of the 10 items with this response choice) indicated no tendency toward acquiescent response set. A frequency distribution of this count is shown in Table 36. A count of six would be expected if a person had

Table 35

SELF-ESTEEM/BODY IMAGE ITEMS AND SUMMARY STATISTICS

Item Grouping/Item	Response Choices[a]	Direction of Scoring[b]	Questionnaire Item Number	Cancer Sample (N=95) Mean	S.D.	Number Missing	(Percent)	MI Sample (N=63) Mean	S.D.	Number Missing	(Percent)
Self-Esteem											
1 During the past month, how often have you felt that you deserved very little from other people?	T	-	VI.9C	4.33	0.91	5	(5)	3.93	1.35	4	(6)
2 During the past month, how often have you felt down on yourself?	T	-	VI.9A	3.76	1.05	4	(4)	3.97	1.03	2	(3)
3 There are a lot of things I like about myself.	A	R	VI.1A	1.80	0.70	2	(2)	1.81	0.73	4	(6)
4 During the past month, how often have you felt good about yourself?	T	R	VI.2A	2.50	0.96	3	(3)	2.27	1.03	3	(5)
5 I feel that I am an attractive person.	A	R	VI.1U	2.49	1.10	4	(4)	2.48	1.03	3	(5)
6 I am usually satisfied with the way I am.	A	R	VI.1V	2.47	1.02	3	(3)	2.23	0.79	3	(5)
Body Image											
7 I like my looks just the way they are	A	R	VI.1Q	2.97	1.18	2	(2)			na[c]	
8 I feel good about my body.	A	R	VI.1B	2.45	1.13	2	(2)			na	
9 I would like to change some parts of my body.	A	-	VI.1H	2.67	1.29	5	(5)			na	
Change in Body Image as a Result of Illness											
10 I feel less physically attractive because of my illness.	A	-	VI.1E	2.82	1.37	2	(2)			na	
11 I feel less sexually desirable now than before my illness.	A	-	VI.1M	3.08	1.42	2	(2)			na	
12 My illness has made me feel ashamed of my body.	A	-	VI.1O	3.94	1.11	2	(2)			na	
13 My body looks as good as it did before my illness.	A	R	VI.1S	3.34	1.29	2	(2)			na	

[a] T = 1 = All of the time; 2 = Most of the time; 3 = Some of the time; 4 = A little of the time; 5 = None of the time
A = 1 = Strongly agree; 2 = Agree; 3 = Not sure; 4 = Disagree; 5 = Strongly disagree

[b] Items with an 'R' must be recoded so that a high score indicates more esteem or a more positive body image.

[c] Not asked.

Table 36

COUNT OF AGREE AND STRONGLY AGREE RESPONSES TO TEN SELF-ESTEEM/BODY IMAGE ITEMS: CANCER SAMPLE (N=95)

Count[a]	Number	Percent	Cumulative Percent
0	2	2.1	2.1
1	1	1.0	3.2
2	7	7.4	10.5
3	4	4.2	14.7
4	15	15.8	30.5
5	18	18.9	49.5
6	31	32.6	82.1
7	16	16.8	98.9
8	1	1.0	100.0
9	0	0.0	100.0
10	0	0.0	100.0

[a]This is a count of items 3, 5, 6, 7, 8, 9, 10, 11, 12, and 13. Items 1, 2, and 4 had different response choices (see Table 35).

Note: A count of 6 would be expected if a person had high self-esteem and answered accordingly.

high self-esteem and good body image and answered accordingly.

Standard deviations ranged from 0.7 to 1.4 with a median of 1.1 of the 13 items. Twelve of the 13 standard deviations were within 0.2 points of 1.0.

The number of missing items ranged from two to five with a median of 2 (2 percent) of the 13 items. One person did not complete any of the items and 84 (88 percent) had no missing data.

Of the ten items in which "not sure" was the midpoint response, 89 people (94 percent) used this response three times or less. The maximum number of "not sure" responses was six.

MI Sample

The mean, standard deviation, and number of missing responses for the six self-esteem items are shown in Table 35. All of the items are skewed, indicating favorable esteem. Standard deviations ranged from 0.7 to 1.4 with a median of 1.0 of the six items. Four of the six standard deviations were within 0.2 points of 1.0.

The number of missing items ranged from two to four with a median of 3.5 (6 percent) of the six items. One person did not complete any of the items and 56 (89 percent) had no missing data.

MULTITRAIT SCALING ANALYSES

Cancer Sample

The item-scale correlation matrix for the 13 recoded items and the three hypothesized item groupings (see Table 35) are shown in Table 37. For each item grouping, all items correlate at least 0.30 with their hypothesized scale. Thus items in these scales satisfied the first multitrait scaling criterion.

Of the six items in the self-esteem scale, five correlated higher with this scale than with either of the other two scales. Only one of the three body image items met this item discriminant validity criterion. All four items in the change in body image grouping met this criterion. The reliability and homogeneity coefficients for these three scales are as follows:

Table 37

ITEM-SCALE CORRELATIONS MATRIX OF SELF-ESTEEM/BODY IMAGE ITEMS WITH THREE ITEM GROUPINGS: CANCER SAMPLE (N=93)

Item Grouping/Item[a]	Body Image	Change in Body Image	Self-Esteem	Total
Body Image				
7	.68*	.63	.50	.70*
8	.55*	.64	.57	.72*
9	.49*	.49	.21	.45*
Change in Body Image				
10	.70	.76*	.49	.76*
11	.58	.78*	.44	.70*
12	.53	.60*	.46	.63*
13	.59	.69*	.35	.63*
Self-Esteem				
1	.19	.20	.39*	.30*
2	.28	.35	.33*	.38*
3	.35	.33	.45*	.44*
4	.59	.50	.63*	.67*
5	.15	.25	.34*	.29*
6	.43	.38	.57*	.53*

*Indicates coefficient is corrected for overlap.

[a]Item number from Table 35.

Note: Standard error = 0.10.

Scale	Number of Items	r_{tt}	r_{ii}
Self-esteem	6	.71	.29
Body Image	3	.74	.49
Change in body image	4	.86	.60

The two items causing the scaling errors in the body image scale (items 8 and 9) correlated higher or equally with the change in body image scale. In fact, the items in the change in body image grouping correlate highly with the body image scale. This suggests that the body image and change in body image items are measuring one construct. The analysis was rerun hypothesizing two item groupings: self-esteem and body image.

The item-scale correlation matrix for these two groupings is shown in Table 38. All items correlate 0.30 or greater with their hypothesized scale. All seven body image items correlate higher with the body image scale than the self-esteem scale. Four of these seven body image items are scaling successes (correlations two standard errors or greater different from the correlations with the self-esteem scale) and the other three items are probable successes (i.e. correlations within two standard errors).

Five of the six self-esteem items correlate higher with this scale than the body image scale. All five are probable successes, i.e. the correlations with self-esteem are within two standard errors of the correlations with body image.

Table 38

ITEM SCALE CORRELATION MATRIX OF SELF-ESTEEM/BODY IMAGE ITEMS WITH TWO SCALES: CANCER SAMPLE (N=93)

Item Grouping/Item[a]	Body Image	Self-Esteem	Total
Body Image			
7	.70*	.50	.70*
8	.66*	.57	.72*
9	.52*	.20	.44*
10	.80*	.49	.76*
11	.74*	.44	.70*
12	.61*	.46	.63*
13	.70*	.35	.63*
Self-Esteem			
1	.21	.39*	.30*
2	.35	.33*	.38*
3	.36	.45*	.44*
4	.58	.63*	.67*
5	.22	.34*	.29*
6	.43	.57*	.53*

*Indicates corrected for overlap.

[a]Item number from Table 35.

Note: Standard error = 0.10.

The reliability and homogeneity coefficients for these two scales are:

Scale	Number of Items	r_{tt}	r_{ii}
Self-esteem	6	.71	.29
Body Image	7	.88	.52

It appears that a total scale is appropriate for these items, as evidenced by the correlations of the items with the total scale score. All but one (item 5) of these correlations are above 0.30. The reliability coefficient for the total scale is 0.88 and the homogeneity coefficient is 0.35.

MI Sample

Because only the six self-esteem items were asked of the MI sample, a multitrait scaling analysis could not be performed. Instead, the item-scale correlation and reliability coefficients were calculated for a self-esteem scale using all six items. The following item-scale coefficents were observed (all are corrected for overlap):

Item Number	Correlation with Scale Score
1	.37
2	.47
3	.39
4	.55
5	.22
6	.46

All but one item correlated 0.30 or greater with the scale. The reliability coefficient (r_{tt}) is 0.66 and the homogeneity coefficient (r_{ii}) is 0.25.

PRINCIPAL COMPONENTS ANALYSES

Cancer Sample

The correlation matrix of the 13 (unrecoded) Self-Esteem/Body Image items is presented in Appendix B, Table B.9 for the cancer sample. The matrix is calculated using pairwise deletion of missing data (N ranged from 86 to 93).

A principal components analysis of the correlation among all 13 unrecoded items resulted in three factors with eigenvalues greater than one. In the rotated solution, the body image and change in the body image items all loaded on the first factor. The self-esteem items were divided between the other two factors according to whether the item was positively or negatively worded. This appeared to be a split according to method (factor analysis is sensitive to such method differences). A scree test of the eigenvalues indicated that only two factors should be rotated.

When two factors were rotated, 53 percent of the variance was explained. The rotated factor pattern is shown in Table 39. As seen in Table 39, the first factor is a body image factor. All body image and change in body image items load highest on this factor. All self-esteem items load highest on the second factor except item 2 ("During the past month, how often have you felt down on yourself?"), which correlates higher on the body image factor and very poorly with the self-esteem factor. In fact, item 2 has very low communality (0.21) with the other items.

This analysis suggests that all the body image items are measuring one construct, supporting the multitrait scaling results when two item groupings were hypothesized.

To help determine the feasability of scoring a total scale, the first unrotated factor (see Table 40) was examined. All items correlate in the expected direction when direction of scoring is taken into account (see Table 35). Correlations are all above 0.30 (absolute value). These findings suggest that these items measure a general Self-Esteem/Body Image Construct.

Table 39

CORRELATIONS BETWEEN SELF-ESTEEM/BODY IMAGE ITEMS AND ROTATED PRINCIPAL COMPONENTS: CANCER SAMPLE (N=90)

Item Grouping/Item[a]		Component I	Component II	h^2
Body Image				
10	Less physically attractive	84[b]		75
13	Body looks as good as before	-80		65
11	Less sexually desirable now	74	-27	62
9	Would like to change parts of body	74		58
7	Like my looks	-72	33	62
12	Illness made me ashamed of body	62	-35	51
8	Feel good about my body	-60	54	65
2	Felt down on self	38	-25	21
Self-Esteem				
3	Lot of things I like about self		73	55
6	Satisfied with way I am	-26	69	54
5	Attractive person		63	40
4	Felt good about self	-47	63	62
1	Felt deserved little from others		-48	24
	Percent of Variance Explained	32	21	

[a]Item number from Table 35.

[b]Only coefficients above |0.23| are presented.

Table 40

UNROTATED PRINCIPAL COMPONENTS OF ALL 13 SELF-ESTEEM/ BODY IMAGE ITEMS: CANCER SAMPLE (N=90)

Item[a]	I	II
1	-38	-32
2	-45	01
3	53	52
4	75	25
5	34	54
6	60	42
7	78	-14
8	80	10
9	-51	57
10	-82	29
11	-76	20
12	-71	06
13	71	-37
Percent of Variance Explained	41	12

[a]Item number from Table 35.

MI Sample

The correlation matrix of the six unrecoded self-esteem items for the MI sample is presented in Appendix B in Table B.10.

A principal components analysis of the six unrecoded items assessed in the MI sample resulted in two factors with eigenvalues greater than one. However, each factor represented one type of response choice (i.e., items 1,2, and 4 loaded on one factor and 3,5, and 6 on the other). When one factor was specified, 40 percent of the variance was explained. The following correlations (and communalities) were observed:

Item	Correlation	h^2
1	-.57	.33
2	-.70	.49
3	.57	.32
4	.78	.61
5	.40	.16
6	.69	.47

All correlations are 0.40 or above, supporting the construction of a single self-esteem scale using these six items.

COMPARISON OF RESULTS IN THE TWO SAMPLES

The six self-esteem items were identical in both samples and results on these items can thus be compared. The item distributions were extremely similar in the two samples. When the self-esteem scale was constructed, the pattern of item-scale correlations was similar in the two samples, and the reliability and homogeneity coefficients were nearly identical.

DESCRIPTION OF SCALES

Three scales were constructed based on the 13 self-esteem/body image items: Self-Esteem, Body Image, and a total Self-Esteem/Body Image scale. The homogeneity and reliability of these scales is summarized in Table 41 for both samples. Reliability coefficients are all well above 0.50, thus are reliable for purpose of group comparisons.

Summary statistics for the scales are shown in Table 42 for the two samples. The difference between the cancer and the MI samples on the self-esteem scale is not significant. All scales are normally distributed (not shown).

The correlation between the Self-Esteem and Body Image scales in the cancer sample is .55 ($p < .01$).

Table 41

RELIABILITY (r_{tt}) AND HOMOGENEITY (r_{ii}) COEFFICIENTS FOR THE SELF-ESTEEM AND BODY IMAGE SCALES

Scale	Number of Items	Cancer Sample (N=93)		MI Sample (N=60)	
		r_{tt}	r_{ii}	r_{tt}	r_{ii}
Self-Esteem	6	.71	.29	.66	.25
Body Image	7	.88	.52	-	-[a]
Self-Esteem/Body Image	13	.88	.35	-	-

[a]Not measured in this sample.

Table 42

SUMMARY STATISTICS FOR THE SELF-ESTEEM AND BODY IMAGE SCALES

Scale	Number of Items	Cancer Sample (N=93)		MI Sample (N=60)	
		Mean[a]	S.D.	Mean[a]	S.D.
Self-Esteem	6	22.85	3.64	23.08	3.65
Body Image	7	21.76	6.74	-[b]	-
Self-Esteem/Body Image	13	44.61	9.26	-	-

[a]A high score indicates higher self-esteem or body image.

[b]Not measured in this sample.

XI. SOCIAL NETWORK

ITEM DESCRIPTION

Several items assessed various aspects of the social network. Other social support items are evaluated in Sec. XII. Thirteen of these asked how helpful or unhelpful a variety of people had been in coping with the stresses of illness. This approach was adapted from Porritt (1979). The items are shown in Table 43. A response choice of "does not apply" was provided to indicate if no such person was in the person's network. Several items in part one of the questionnaire (descriptive information) assessed marital status, whether other people shared the person's household, and the number of people in the household.

DESCRIPTIVE STATISTICS ON ITEMS

The mean, standard deviation, number of not applicable, and number of missing responses for each of the help from others items are shown in Table 43. Summary statistics on the other social network items are presented in Table 44. Frequency distributions for the help from others items are shown in Table A.6 in Appendix A.

Nearly all items are skewed indicating that when a particular person is available, they tend to be helpful. The only exception is that coworkers tend to be unhelpful in the MI sample.

About half the respondents in the total sample are married, with slightly more being married in the cancer sample (54 percent) than in the MI sample (48 percent).

DESCRIPTION OF MEASURES

Several measures were constructed from these items to indicate a variety of aspects of the social network. For all measures pertaining to the help from others items, a missing value was assigned if the person was missing all 12 items.

Table 43

HELP FROM OTHERS ITEMS AND SUMMARY STATISTICS

Item	Questionnaire Item Number	Cancer Sample (N=95)				MI Sample (N=63)				Total Sample (N=158)			
		Mean	S.D.	Number N/A[a] (Percent)	Number Missing (Percent)	Mean	S.D.	Number N/A[a] (Percent)	Number Missing (Percent)	Mean	S.D.	Number N/A[a] (Percent)	Number Missing (Percent)
How helpful or unhelpful have each of the following people been since you've been coping with the stresses of your illness? If you've had contact with several people in one category (for example, several doctors), try to give us your overall impression.													
A My spouse or mate	IV.1A	1.69	1.16	27 (28)	1 (1)	2.00	1.21	24 (38)	5 (8)	1.79	1.18	51 (32)	6 (4)
B My doctors	IV.1B	1.86	1.06	2 (2)	1 (1)	2.00	0.89	0 (0)	2 (3)	1.90	1.00	2 (1)	3 (2)
C My nurses	IV.1C	2.05	0.94	16 (17)	3 (3)	2.23	0.90	6 (10)	4 (6)	2.12	0.92	22 (14)	7 (4)
D My neighbors	IV.1D	2.55	1.15	20 (21)	1 (1)	2.72	0.93	16 (25)	4 (6)	2.62	1.07	36 (23)	5 (3)
E My coworkers	IV.1E	2.82	1.37	0 (0)	2 (2)	3.68	1.39	0 (0)	41 (65)	2.98	1.41	0 (0)	43 (27)
F My friends	IV.1F	1.90	0.94	7 (7)	0 (0)	2.32	0.85	7 (11)	3 (5)	2.06	0.92	14 (9)	3 (2)
G My counselor, social worker, or other professional	IV.1G	2.11	1.04	45 (47)	6 (6)	2.53	1.31	39 (62)	5 (8)	2.24	1.13	84 (53)	11 (7)
H My children	IV.1H	2.03	1.07	27 (28)	6 (6)	2.07	1.07	19 (30)	2 (3)	2.05	1.06	46 (29)	8 (5)
I Other people with a similar illness	IV.1I	2.21	0.95	32 (34)	7 (7)	2.81	0.96	26 (41)	5 (8)	2.43	0.99	58 (37)	12 (8)
J My mother	IV.1J	2.22	1.36	37 (39)	8 (8)	2.33	1.12	46 (73)	8 (13)	2.24	1.32	83 (52)	16 (10)
K My father	IV.1K	2.32	1.28	56 (59)	11 (12)	3.00	1.00	52 (82)	8 (13)	2.39	1.26	108 (68)	19 (12)
L My brother(s) or sister(s)	IV.1L	2.28	1.22	20 (21)	4 (4)	2.38	1.01	33 (52)	6 (10)	2.30	1.17	53 (34)	10 (6)
M My minister, priest, or other religious leader	IV.1M	2.17	1.32	45 (47)	8 (8)	2.39	0.89	35 (56)	5 (8)	2.25	1.19	80 (51)	13 (8)

[a]Not applicable (response of 6).

Note: Response choices were:

1 = Extremely helpful
2 = Very helpful
3 = Moderately helpful
4 = Not very helpful
5 = Extremely unhelpful
6 = Does not apply

Table 44

SOCIAL NETWORK ITEMS AND SUMMARY STATISTICS

Item/Response Choices	Cancer Sample (N=95) Number	Percent	MI Sample (N=63) Number	Percent	Total Sample (N=158) Number	Percent
1 Marital Status						
Married	51	54.2	30	47.6	81	51.6
Separated	3	3.2	2	3.2	5	3.2
Divorced	24	25.5	14	22.2	38	24.2
Widowed	4	4.2	12	19.0	16	10.2
Never married	12	12.8	5	7.9	17	10.8
Missing	1	-	0	-	1	-
Total	95	100.0	63	100.0	158	100.0
2 Others in Household						
Spouse or mate	54	56.8	29	46.0	83	52.5
Relatives	6	6.3	10	15.9	16	10.1
Friends	5	5.3	4	6.3	9	5.7
Preschool children (age 1-5)	3	3.2	2	3.2	5	3.2
School-age children (age 6-12)	10	10.5	9	14.3	20	12.6
Teenage children (age 13-19)	14	14.7	9	14.3	23	14.6
Older children (age 20+)	8	8.4	11	17.5	19	12.0
3 Number of People in Household						
Mean	2.65		2.68		2.66	
S.D.	1.31		1.84		1.56	
Range	1 to 9		1 to 8		1 to 9	

The number of helpful people is a count of the number of people whom the respondent reported as being helpful (response choices of 1, 2, or 3).

The number of extremely helpful people is a similar count but only of those who were reported to be extremely helpful (response of 1).

The number of unhelpful people is a count of the number of people reported to be unhelpful (response choice of 4 or 5).

The number of extremely unhelpful people is a similar count but only of those reported to be extremely unhelpful (response of 5).

At least one extremely helpful person was scored as a dichotomous variable based on whether there were one or more extremely helpful people.

The total amount of helpfulness was scored by summing "helpful" responses. "Helpful" responses were first recoded as follows:

0 = not helpful or does not apply or missing

1 = moderately helpful

2 = very helpful

3 = extremely helpful

These were then summed across all items.

The average amount of helpfulness was scored by dividing the total amount of helpfulness by the number of people who were available and helpful (i.e., the number of people for whom a response choice of 1, 2, or 3 was made).

The total amount of unhelpfulness was scored by summing "unhelpful" responses. These responses were first recoded as follows:

0 = helpful or does not apply or missing

1 = not very helpful

2 = extremely unhelpful

These were then summed across all items.

The average amount of unhelpfulness was scored by dividing the total amount of unhelpfulness by the number of people who were available and unhelpful.

Whether the person lives alone was scored as a dichotomous variable. A zero was assigned if the respondent reported living with others or had children at home.

The number of people in the network was scored by counting the number of categories of people who were available (either helpful or unhelpful).

The number of people in the family network was scored by counting the number of available people in the categories spouse or mate, children, mother, father, and brother(s) or sister(s).

The number of people in the professional network was scored by counting the number of available people in the categories doctor; nurse; counselor, social worker, or other professional; and minister, priest, or other religious leader.

The number of people in the peripheral network was scored by counting the number of available people in the categories neighbors, coworkers, and other people with a similar illness.

Whether the person has friends was scored based on the availability of someone in the category of friends.

Whether the person has a spouse or mate was scored based on the availability of someone in the category of spouse or mate.

The number of people in the household was asked as a single item.

Whether there are any dependent children living at home was scored based on whether the respondent reported any preschool, school-age, or teen-age children living at home.

Whether the respondent is married was scored based on responses to the marital status item.

The number of children living at home was based on a single item asking this question.

SUMMARY STATISTICS ON MEASURES

Summary statistics on these measures are presented in Table 45 for the continuous measures and in Table 46 for the dichotomous measures. Essentially, as seen in Table 45, the cancer sample has larger means on all measures except the number of people in the household and the number of children at home. (Statistical tests for differences between the measures are presented in a later section.)

As seen in the total sample, there are about seven helpful people, about three extremely helpful people, and about one unhelpful person available to each person in this sample. The number of people in the network averages eight.

As seen in Table 46, about half the people are married (54 percent in the cancer sample and 48 percent in the MI sample), but more have a spouse or mate (70 and 54 percent in the cancer and MI samples, respectively).

People in the cancer sample tend to have more network according to these measures: A higher percentage of those in the cancer sample report all of these types of network, although the same percentage (24 percent) of both samples live alone.

Table 45

SUMMARY STATISTICS FOR SOCIAL NETWORK CONTINUOUS MEASURES

Measure	Cancer Sample (N=95)					MI Sample (N=63)					Total Sample (N=158)				
	Mean	S.D.	Range	Maximum Possible	Number Missing	Mean	S.D.	Range	Maximum Possible	Number Missing	Mean	S.D.	Range	Maximum Possible	Number Missing
Number of helpful people	7.42	2.46	2-13	13	0	5.88	2.22	2-10	13	2	6.82	2.48	2-13	13	2
Number of extremely helpful people	3.35	2.57	0-9	13	0	1.46	2.02	0-7	13	2	2.61	2.54	0-9	13	2
Number of unhelpful people	1.05	1.62	0-9	13	0	0.85	1.06	0-6	13	2	0.97	1.43	0-9	13	2
Number of extremely unhelpful people	0.32	0.88	0-6	13	0	0.16	0.42	0-2	13	2	0.26	0.74	0-6	13	2
Total amount of helpfulness	16.33	7.16	2-33	39	0	11.56	5.70	2-25	39	2	14.46	7.01	2-33	39	2
Total amount of unhelpfulness	1.37	2.36	0-15	26	0	1.02	1.27	0-6	26	2	1.23	2.01	0-15	26	2
Average amount of helpful-helpfulness	2.16	0.49	0-3	3	0	1.92	0.49	0-3	3	2	2.06	0.50	1-3	3	2
Average amount of unhelpfulness	1.23	0.34	0-2	2	52	1.19	0.35	0-2	2	30	1.21	0.34	1-2	2	82
Number of people in network	8.47	2.47	2-13	13	0	6.74	2.03	3-11	13	2	7.79	2.45	2-13	13	2
Number of people in family network	2.93	1.15	0-5	5	0	1.84	1.24	0-5	5	2	2.50	1.30	0-5	5	2
Number of people in professional network	2.67	0.96	0-4	4	0	2.56	0.74	1-4	4	2	2.63	0.88	2-4	4	2
Number of people in peripheral network	1.95	0.97	0-3	3	0	1.48	0.90	0-3	3	2	1.76	0.97	0-3	3	2
Number of people in household	2.65	1.31	1-9	-	21	2.68	1.84	1-8	-	3	2.66	1.56	1-9	-	24
Number of children at home	0.73	1.00	0-4	-	24	0.76	1.42	0-6	-	0	0.75	1.21	0-6	-	24

Table 46

SUMMARY STATISTICS FOR SOCIAL NETWORK DICHOTOMOUS MEASURES

Measure	Cancer Sample (N=95)		MI Sample (N=63)		Total Sample (N=158)	
	Number	Percent	Number	Percent	Number	Percent
At least one extremely helpful person	82	86.3	32	50.8	114	72.2
Live alone	23	24.2	15	24.2	38	24.2
Any friends	88	92.6	53	84.1	141	89.2
Mate or spouse	67	70.5	34	54.0	101	63.9
Any dependent children at home	24	25.3	13	20.6	37	23.4
Married	51	53.7	30	47.6	81	51.3

XII. SOCIAL SUPPORT/EXPRESSIVENESS

ITEM DESCRIPTION

Thirty-six items assessing social support and expressiveness are evaluated in this section. Other social support items were evaluated in Section XI. Eleven item groupings were initially hypothesized:

1) Expression of feelings
2) Expression of needs
3) People who understand
4) Stigma of illness
5) Availability of social support
6) Desire for support
7) Attachment to others
8) Instrumental support
9) Cognitive guidance, advice
10) Frequency of contact
11) Able to give support.

The items and item groupings are shown in Table 47. Six different sets of response choices were offered and are shown in footnote a.

DESCRIPTIVE STATISTICS ON ITEMS

The mean standard deviation, number of not applicable responses, and the number of missing values are presented in Table 47 for all samples, along with the response choice and whether the item needs recoding so that a high score indicates greater expression or support. The frequency distributions for these 36 items are shown in Appendix A, Table A.7.

Most items were skewed, i.e., had scores to the side of the response scale midpoint. The direction of skewness was similar for the two samples, indicating a tendency to experience nonexpression of feelings and needs, understanding from people when feelings were expressed, no stigma of illness, availability of social support, desire

Table 47

SOCIAL SUPPORT/EXPRESSIVENESS ITEMS AND SUMMARY STATISTICS

Item Grouping/Item	Questionnaire Item Number	Response Choices[a]	Direction of Scoring[b]	Cancer Sample (N=95) Mean	S.D.	Number N/A[c] (Percent)	Number Missing (Percent)	MI Sample (N=63) Mean	S.D.	Number N/A[c] (Percent)	Number Missing (Percent)	Total Sample (N=158) Mean	S.D.	Number N/A[c] (Percent)	Number Missing (Percent)
Expression of Feelings															
1 During the past month, I kept my feelings to myself.	IV.9E	T	-	3.00	1.07	0 (0)	2 (2)	2.73	1.22	1 (2)	2 (3)	2.89	1.14	1 (1)	4 (2)
2 During the past month, I showed my anger.	IV.9C	T	R	3.31	1.03	6 (6)	1 (1)	3.00	1.15	12 (19)	2 (3)	3.20	1.08	18 (11)	3 (2)
3 During the past month, I let the people around me know what I was feeling.	IV.9A	T	R	2.56	1.01	2 (2)	2 (2)	2.88	1.32	1 (2)	2 (3)	2.69	1.15	3 (2)	4 (2)
4 During the past month, how much did you talk to someone about how you were feeling?[d]	IV.6	M	R	1.65	0.82	-	3 (3)	2.32	1.08	-	3 (5)	1.91	0.98	-	6 (4)
5 When I felt like crying during the past month, it was hard to cry in front of people close to me.	IV.8D	TF	-	3.35	1.57	22 (23)	0 (0)	2.40	1.48	22 (35)	1 (2)	2.88	1.57	44 (28)	1 (1)
Expression of Needs															
6 During the past month, I usually didn't bother my family with my problems.	IV.7A	TF	-	2.78	1.46	1 (1)	3 (3)	1.98	1.12	1 (2)	3 (5)	2.47	1.38	2 (1)	6 (4)
7 During the past month, I placed the needs of other people above my own.	IV.9B	T	-	2.70	0.99	1 (1)	1 (1)	2.93	1.11	5 (8)	2 (3)	2.78	1.04	6 (4)	3 (2)
8 During the past month, I asked people around me for help.	IV.9H	T	R	3.17	1.10	6 (6)	8 (8)	3.79	1.30	4 (6)	2 (3)	3.41	1.22	10 (6)	2 (1)
9 During the past month when I haven't felt well, what I wanted most was to be left alone.	IV.8B	TF	-	2.92	1.36	1 (1)	1 (1)	2.37	1.53	0 (0)	1 (2)	2.70	1.45	1 (1)	2 (1)
10 Since I became ill, I have been able to take care of my own problems without friends or family getting involved.	III.5C	TF	-	3.09	1.34	0 (0)	1 (1)	2.39	1.34	0 (0)	2 (3)	2.82	1.38	0 (0)	3 (2)
People who Understand															
11 In the past month, when you talked with this person about how you felt, how much of the time did he or she seem to understand your feelings?[e]	IV.3A	T	R	1.73	0.70	1 (1)	1 (1)	1.70	0.97	5 (8)	2 (3)	1.73	0.81	6 (4)	3 (2)
12 In the past month, how much of the time did this person seem not to accept your feelings?[e]	IV.3B	T	-	4.19	0.99	0 (0)	2 (2)	4.22	1.06	5 (8)	4 (6)	4.20	1.01	5 (3)	6 (4)
13 I sometimes withdraw from people because they don't understand my problems.	IV.8A	TF	-	3.35	1.26	0 (0)	2 (2)	3.16	1.42	1 (2)	1 (2)	3.28	1.32	1 (1)	3 (2)
14 In my family, we often keep our feelings to ourselves.[f]	IV.7H	TF	-	3.53	1.44	1 (1)	4 (4)	2.76	1.49	4 (6)	4 (6)	3.24	1.50	5 (3)	8 (5)
15 Where I live, it's hard to "blow off steam" without upsetting somebody.[f]	IV.7D	TF	-	3.14	1.46	8 (8)	3 (3)	3.45	1.56	15 (24)	4 (6)	3.25	1.50	23 (14)	7 (4)
No Stigma of Illness															
16 I am hesitant to tell friends the real nature of my illness.	IV.7F	TF	-	4.22	1.32	1 (1)	2 (2)	3.70	1.56	3 (5)	4 (6)	4.02	1.43	4 (2)	6 (4)
17 People treat me differently when they find out about my illness.[g]	IV.10B	A	-	3.78	1.09	4 (4)	1 (1)	3.65	1.20	2 (3)	1 (2)	3.69	1.14	6 (4)	2 (1)
18 When people find out about my illness, some of them tend to avoid me.	IV.10A	A	-	3.79	0.98	3 (3)	1 (1)	4.36	0.94	3 (5)	1 (2)	4.01	1.00	6 (4)	2 (1)
19 I tend to hide my illness from others.	IV.8C	TF	-	3.63	1.28	0 (0)	1 (1)	3.27	1.55	0 (0)	1 (2)	3.49	1.40	0 (0)	2 (1)
Availability of Social Support															
20 During the past month, there has been someone available when I wanted to talk.	IV.9G	T	R	1.98	1.03	1 (1)	0 (0)	2.05	1.18	2 (3)	2 (3)	2.01	1.08	3 (2)	2 (1)
Desire for Support															
21 It is helpful to talk with other people who have an illness like mine.	IV.7J	TF	R	2.13	1.24	7 (7)	2 (2)	2.67	1.26	11 (17)	4 (6)	2.32	1.27	18 (11)	6 (4)
22 I often turn to my friends and family for information and advice about my illness.	III.1C	TF	R	3.76	1.41	0 (0)	2 (2)	3.77	1.38	0 (0)	1 (2)	3.77	1.39	0 (0)	3 (2)
23 I tended to seek the company and support of other people during the past month.	III.3H	TF	R	2.49	1.28	0 (0)	1 (1)	3.03	1.36	0 (0)	3 (5)	2.70	1.34	0 (0)	4 (2)

Table 47 (continued)

Item Grouping/Item	Questionnaire Item Number	Response Choices[a]	Direction of Scoring[b]	Cancer Sample (N=95) Mean	S.D.	Number N/A[c] (Percent)	Number Missing (Percent)	MI Sample (N=63) Mean	S.D.	Number N/A[c] (Percent)	Number Missing (Percent)	Total Sample (N=158) Mean	S.D.	Number N/A[c] (Percent)	Number Missing (Percent)
Close Attachment to Others															
24 During the past month, how often have you felt loved?	VI.2F	T[d]	R	1.92	1.08	-	2 (2)	2.34	1.29	-	5 (8)	2.09	1.18	-	7 (4)
25 In the past month, I usually felt close to my family.	IV.7C	TF	R	1.93	1.28	1 (1)	2 (2)	2.40	1.42	4 (6)	4 (6)	2.11	1.35	5 (3)	6 (4)
26 I felt close to at least one friend during the past month.	IV.7G	TF	R	1.69	1.17	1 (1)	3 (3)	2.22	1.32	4 (6)	4 (6)	1.89	1.25	5 (3)	7 (4)
27 During the past month, how often have you felt lonely?	VI.2L	T[d]	-	3.81	1.13	-	2 (2)	3.70	1.37	-	2 (3)	3.77	1.23	-	4 (2)
Instrumental Support															
28 During the past month when I was unable to get to the doctor on my own, there was someone to help me.	IV.9D	T	R	1.54	1.06	34 (36)	0 (0)	1.79	1.23	15 (24)	1 (2)	1.65	1.14	49 (31)	1 (1)
29 During the past month when I didn't feel well, I could count on my family or friends to do the things I usually did.	IV.9F	T	R	2.04	1.25	11 (12)	0 (0)	2.34	1.50	8 (13)	2 (3)	2.15	1.36	19 (12)	2 (1)
Cognitive Guidance, Advice															
30 How much advice do you get from friends and family about what to do for your illness?	IV.4	L	R	2.34	1.01	-	1 (1)	2.52	1.24	-	3 (5)	2.41	1.11	-	4 (2)
31 My friends and family keep me informed about the latest medical treatments for my illness.	IV.7B	TF	R	2.67	1.47	11 (12)	3 (3)	3.56	1.56	5 (8)	4 (6)	3.02	1.56	16 (10)	7 (4)
32 The people I'm close to encourage me to be hopeful.	IV.7L	TF	R	1.39	0.74	0 (0)	3 (3)	1.71	0.71	4 (6)	4 (6)	1.51	0.74	4 (2)	7 (4)
33 People often tell me they think I can lick this disease.	IV.7I	TF	R	1.76	1.14	10 (10)	2 (2)	2.38	1.20	11 (17)	4 (6)	1.98	1.20	21 (13)	6 (4)
34 In the past month, how much of the time did this person encourage you to cope better? (refers to person respondent feels closest to)	IV.3C	T[d]	R	1.91	1.21	0 (0)	3 (3)	1.80	1.26	5 (8)	4 (6)	1.87	1.23	5 (3)	7 (4)
Frequency of Contact															
35 During the past month, about how often did you get together with friends or relatives, like going out together or visiting in each other's homes?[h]	IV.5	D[f]	R	2.94	1.17	-	3 (3)	3.30	1.64	-	4 (6)	3.09	1.38	-	7 (4)
Gives Support															
36 I give as much support to the people around me as I receive.	IV.7E	TF	R	2.06	1.03	3 (3)	3 (3)	1.95	0.87	0 (0)	6 (10)	2.01	0.97	3 (2)	9 (6)

[a]
T: 1 = All of the time; 2 = Most of the time; 3 = Some of the time; 4 = A little of the time; 5 = None of the time; 6 = Does not apply

TF: 1 = Definitely true; 2 = Mostly true; 3 = Don't know; 4 = Mostly false; 5 = Definitely false; 6 = Does not apply

O: 1 = Every day; 2 = Several days a week; 3 = About once a week; 4 = 2 or 3 times in the month; 5 = About once

L: 1 = A lot; 2 = Some; 3 = A little; 4 = None

M: 1 = Many times; 2 = A few times; 3 = Once or twice; 4 = Never

A: 1 = Always; 2 = Very often; 3 = Sometimes; 4 = Almost never; 5 = Never

[d] T*: Same as T but no category of 6

[f] D†: Some respondents wrote in 'never'; these people were assigned a score of six.

[b] An '*' indicates the item must be recoded so that a high score means greater expression, greater acceptance of expression by other, less stigma, more availability, more desire for support, more attachment, more advice, more frequent contact, i.e., in general, greater support.

[c] Not applicable, i.e., responded "does not apply."

[d] From Ways of Coping (Lazarus and coworkers, personal communication, e.g., Folkman and Lazarus, 1980).

[e] From Porritt, 1979.

[f] From Family Environment Scale, Moos, 1979.

[g] From Videka, 1979.

[h] From Bonald et al., 1970.

for social support, feelings of attachment to others, availability of instrumental support, people offering cognitive guidance and advice, and being able to give support to others. The cancer sample tends to have contact with others more than once a week whereas the MI sample tends to have contact with others less than once a week.

Standard deviations of the 36 items are summarized as follows:

Sample	Lowest Value	Highest Value	Median	Number 1±0.2
Cancer	0.70	1.57	1.15	18
MI	0.71	1.64	1.29	11
Total	0.74	1.57	1.23	16

In evaluating the item frequency distributions (see Table A.7 in Appendix A), six items were quite skewed. Item 32 had more than 90 percent of responses in the extreme two choices in both samples. Items 4, 11, 26, 28, and 33 had more than 85 percent of responses in the extreme two choices in the cancer sample. However, only item 28 was this skewed in the MI sample. These findings suggest that distributions are more spread out and more normally distributed in the MI sample than in the cancer sample.

A number of items had a high percentage of nonapplicable responses. These were:

Item	Percent Cancer Sample	Percent MI Sample
2	6	19
5	23	35
15	8	24
21	7	17
28	36	24
29	12	13
31	12	8
33	10	17

Not counting these nonapplicable responses as missing, the percent of missing responses ranged from 0 to 8 in the cancer sample (median of 2 percent) and from 2 to 10 in the MI sample (median of 4 percent).

MULTITRAIT SCALING ANALYSES

Items 5 and 28 were not included in any of the multitrait and scaling analyses because of the extremely high percentage of missing and/or nonapplicable responses. For purposes of these analyses, nonapplicable responses were recoded as missing.

Analysis 1

The remaining 34 items were included in the first analysis. Items 20, 29, 35, and 36 were included as separate items. The remaining items were included in scales corresponding to the item groupings hypothesized in Table 47, and recoded as specified in Table 47. It was immediately apparent that expression of needs and expression of feelings should be combined into one scale (e.g., in the total sample, four of these nine items correlated with the other of these two scales). Therefore these items were included in one scale and the analysis rerun.

Analysis 2

The item-scale correlation matrix for the 34 items and six hypothesized item groupings is shown in Table 48. Results indicated that several changes were needed. Items 2, 7, and 10 all had correlations of less than 0.10 with their hypothesized scale in the MI sample and were excluded from further analyses.

In the cancer sample, none of the three desire for support items correlated the highest with this scale; items 21 and 22 correlated highest with the cognitive advice scale, and item 23 with the expressiveness scale.

The same was true for items 21 and 23 in the total sample. Therefore, this hypothesized item grouping was dropped from consideration. Item 23 was moved to the expressiveness grouping because it correlated highest with the grouping, and because the item content was compatible with that grouping. Item 21 was not moved to the

Table 48

ITEM-SCALE CORRELATION MATRIX OF SOCIAL SUPPORT/EXPRESSIVENESS ITEMS: ANALYSIS TWO

Item Grouping/Item[a] (abbreviated item content)	Cancer Sample (N=95)						MI Sample (N=62)						Total Sample (N=157)					
	EXPRESS	STIGMA	PEOPLE	DESIRE	ATTACH	ADVICE	EXPRESS	STIGMA	PEOPLE	DESIRE	ATTACH	ADVICE	EXPRESS	STIGMA	PEOPLE	DESIRE	ATTACH	ADVICE
20 Has been someone available to talk to	.45	.41	.42	.22	.78	.42	.32	.38	.52	.03	.38	.38	.47	.39	.46	.14	.60	.39
29 Could count on others to do things	.30	.38	.36	.24	.60	.38	.30	.25	.40	.04	.46	.30	.40	.32	.38	.18	.55	.36
35 Frequency get together, friends, relatives	.31	.16	.24	.22	.29	.21	.42	.02	.16	.21	.27	.23	.36	.09	.21	.23	.29	.24
36 Give as much support as receive	.03	.08	.38	.11	.32	.19	-.04	-.11	.10	.14	.18	.13	-.01	.01	.27	.11	.25	.15
Expressiveness (EXPRESS)																		
1 Kept feelings to self	.60*	.25	.43	.29	.44	.17	.32*	.44	.46	.01	.37	.18	.57*	.33	.45	.20	.42	.20
2 Showed my anger	.35*	-.08	-.09	.15	.21	.06	-.06*	-.09	-.20	.14	-.08	.15	.15*	-.08	-.14	.13	.07	.08
3 Let people know feelings	.53*	.38	.31	.38	.51	.26	.50*	.17	.29	.40	.57	.38	.52*	.28	.31	.40	.54	.34
4 Talked to someone about feelings	.56*	.24	.23	.41	.57	.44	.44*	.05	.26	.34	.41	.37	.54*	.15	.26	.41	.52	.45
6 Didn't bother family with problems	.38*	.20	.24	.33	.28	.26	.23*	.09	.31	-.02	.03	.24	.38*	.16	.28	.19	.23	.29
7 Placed needs of others above own	.28*	-.12	-.01	.01	.14	.06	-.06*	-.09	-.01	-.30	.13	-.13	.11*	-.10	-.02	-.05	.12	-.05
8 Asked people for help	.50*	.08	.23	.46	.45	.41	.35*	-.02	.14	.23	.16	.34	.47*	.04	.21	.39	.35	.41
9 Wanted to be alone when not well	.27*	.21	.24	.29	.25	.10	.35*	.42	.38	-.03	.20	.08	.33*	.30	.31	.18	.25	.13
10 Able to take care of own problems	.36*	.09	.10	.30	.26	.07	.07*	-.03	.09	-.26	.04	.16	.30*	.04	.12	.01	.21	.17
No Stigma of Illness (STIGMA)																		
16 Hesitant to tell friends of illness	.17	.65*	.35	.18	.30	.22	.06	.61*	.30	-.06	-.03	-.02	.17	.61*	.34	.11	.18	.14
17 People treat me differently	.08	.55*	.34	.25	.31	.18	.06	.26*	.04	-.06	.01	-.12	.03	.41*	.20	.10	.15	.00
18 People avoid me	.14	.63*	.34	.26	.35	.22	.26	.47*	.22	-.01	-.04	.10	.11	.51*	.26	.10	.14	.10
19 Hide illness from others	.38	.54*	.41	.21	.29	.26	.34	.43*	.28	.08	.10	.24	.37	.48*	.36	.17	.22	.22
People who Understand (PEOPLE)																		
11 Person close to understand feelings	.15	.34	.53*	-.01	.29	.22	.42	.14	.36*	.13	.52	.36	.28	.24	.44*	.06	.40	.29
12 Person close to didn't accept feelings	.06	.34	.48*	-.09	.35	.19	.19	.10	.44*	-.08	.27	.11	.12	.24	.47*	-.08	.31	.15
13 Withdraw because people don't understand	.35	.31	.51*	.13	.47	.23	.23	.31	.38*	-.17	.11	.02	.31	.42	.46*	.02	.32	.14
14 Family keeps feelings to ourselves	.34	.29	.52*	.12	.32	.09	.31	.28	.30*	-.05	.36	.25	.37	.28	.42*	.10	.38	.22
15 Hard to blow off steam	.21	.19	.51*	-.04	.27	.02	.21	.12	.46*	.00	.19	.08	.17	.16	.47*	-.04	.21	.02
Desire for Support (DESIRE)																		
21 Helpful to talk with others who are ill	.20	.25	-.13	.38*	.22	.53	.05	.19	.02	.44*	.24	.40	.20	.22	-.05	.42*	.21	.49
22 Turn to others for advice	.26	.14	.08	.33*	.17	.35	.10	-.17	-.12	.33*	.13	.28	.20	.02	.01	.32*	.16	.31
23 Sought company and support	.49	.23	.14	.34*	.33	.39	.20	-.02	-.04	.35*	.18	.05	.41	.13	.09	.36*	.29	.27
Close Attachments (ATTACH)																		
24 Felt loved	.39	.27	.52	.16	.64*	.35	.33	-.07	.30	.30	.63*	.28	.39	.13	.43	.24	.65*	.34
25 Felt close to family	.51	.28	.31	.22	.56*	.34	.42	.16	.41	.31	.53*	.53	.50	.23	.36	.28	.58*	.46
26 Felt close to one friend	.53	.42	.35	.45	.41*	.34	.12	-.06	.33	.09	.32*	.28	.41	.21	.16	.33	.39*	.35
27 Felt lonely	.32	.25	.49	.04	.59*	.18	.40	.01	.46	.03	.53*	.24	.34	.14	.47	.04	.55*	.21
Cognitive Guidance/Advice (ADVICE)																		
30 Amount of advice about illness	.32	.18	.02	.42	.28	.34*	.28	-.06	.20	.40	.41	.51*	.30	.07	.20	.43	.34	.42*
31 People keep me informed	.32	.18	.17	.52	.26	.53*	.17	-.05	.09	.17	.41	.52*	.31	.08	.16	.40	.36	.54*
32 People encourage hopefulness	.25	.19	.22	.42	.44	.49*	.37	.11	.12	.29	.23	.66*	.33	.15	.19	.39	.37	.60*
33 People tell me can lick this disease	.21	.21	-.01	.38	.27	.37*	.26	.03	.29	.24	.22	.65*	.29	.13	.13	.36	.39	.53*
34 Person close to encouraged better coping	.03	.15	.23	.16	.12	.31*	.52	.14	.25	.19	.43	.69*	.22	.14	.24	.17	.25	.48*

[a] Indicates coefficient corrected for overlap.

[b] Item number from Table 47.

Note: Standard errors are 0.10 (Cancer Sample), 0.13 (MI Sample), and 0.08 (Total Sample).

cognitive guidance grouping because, even though it correlated highest with this grouping, the item content did not refer to the amount of advice received.

The multitrait analysis was thus rerun excluding now items 5, 28 (for missing values) and items 2, 7, 10, 21, and 22.

Analysis 3

The item-scale correlation matrix for the remaining 29 items and five hypothesized item groupings (i.e. excluding desire for support) is not shown. Essentially, the expressiveness and close attachments scales appear to be assessing the same construct. For example, in the total sample, of the 11 items assessing these two scales, three were correlated more than 0.50 with the other scale, and eight of the 11 items correlated above 0.30 with the other scale. Further, items 20 and 29 each had the highest correlations with the expressiveness and the attachment scales in the total sample.

Therefore, analyses were rerun with the expressiveness and attachment to others items combined into one hypothesized item grouping, which now also included items 20 and 29.

Analysis 4

The item-total correlation matrix still included 29 items, but only four item groupings were hypothesized:

close attachments (1, 3, 4, 6, 8, 9, 23, 24, 25, 26, 27, 20, 29)
no stigma of illness (16, 17, 18, 19)
people who understand (11, 12, 13, 14, 15)
cognitive guidance/advice (30, 31, 32, 33, 34)

A problem still existed in the MI sample where two items correlated higher with another scale than with the hypothesized scale. Item 6 correlated higher with the cognitive guidance/advice scale and item 9 with the stigma of illness scale as well as the people who understand scale. Therefore, these two items were dropped and the analysis rerun.

Analysis 5: Final Analysis

The item-total correlation matrix for the remaining 27 items and the four hypothesized item groupings is shown in Table 49.

For the close attachments/expressiveness scale, all but one item-total correlation equaled or exceeded 0.30 in all samples. That item (item 23) equaled or exceeded 0.30 in the cancer sample and the total sample. All items in all samples correlate higher with this scale than with any other scale. In the total sample, five items were scaling successes and six items were probable successes.

For the no stigma of illness scale, all but one item-total correlation equaled or exceeded 0.30 (item 17 did not in the MI sample). All items correlated higher with this scale than with any other scale in all three samples. There were three scaling successes and one probable success in the total sample.

For the people who understand scale, all but one item-total correlation equaled or exceeded 0.30 (item 14 did not in the MI sample). In the total sample, all items correlate higher with this scale than with any other scale. In the cancer sample, item 13 correlates equally high with the close attachments and the stigma of illness scales. In the MI sample, items 11 and 14 correlate higher with the close attachments scale. Because these problems were not consistent across samples, and because this criterion was met in the total sample, these items were scaling successes and three were probable successes in the total sample.

For the cognitive guidance/advice scale, all item-total correlations in all samples equaled or exceeded 0.30. All items correlated higher with this scale than any other scale in all samples with one exception (item 30 correlated equally with the close attachments scale in the cancer sample). There were four scaling successes and one probable success in the total sample.

The reliability and homogeneity coefficient for these four scales as well as the total scale are shown in Table 50. The reliability coefficients are all above 0.50 for all scales in all samples.

Table 49

ITEM--SCALE CORRELATION MATRIX OF SOCIAL SUPPORT/EXPRESSIVENESS ITEMS: FINAL ANALYSIS

Item Grouping/Item[a] (abbreviated item content)	Cancer Sample (N=95)					MI Sample (N=62)					Total Sample (N=157)				
	ATTACH	STIGMA	PEOPLE	ADVICE	TOTAL	ATTACH	STIGMA	PEOPLE	ADVICE	TOTAL	ATTACH	STIGMA	PEOPLE	ADVICE	TOTAL
35 Frequency get together, friends, relatives	.40	.15	.25	.20	.30*	.47	.02	.18	.23	.30*	.45	.09	.22	.24	.32*
36 Give as much support as receive	.28	.08	.39	.18	.26*	.16	-.11	.11	.15	.09*	.22	.01	.29	.15	.18*
Close Attachments/Expressiveness (ATTACH)															
1 Kept feelings to self	.51*	.25	.41	.17	.49*	.50*	.44	.46	.15	.56*	.52*	.33	.44	.18	.53*
3 Let people know feelings	.58*	.39	.30	.27	.56*	.70*	.17	.29	.36	.62*	.65*	.29	.30	.34	.60*
4 Talked to someone about feelings	.62*	.24	.23	.43	.52*	.51*	.05	.29	.38	.49*	.60*	.15	.27	.45	.56*
8 Asked people for help	.54*	.12	.26	.39	.48*	.44*	-.02	.14	.34	.38*	.52*	.06	.22	.40	.47*
23 Sought company and support	.43*	.23	.14	.39	.42*	.28*	-.02	-.01	.07	.17*	.40*	.13	.10	.27	.35*
24 Felt loved	.61*	.27	.52	.34	.62*	.57*	-.07	.30	.27	.46*	.61*	.12	.43	.34	.57*
25 Felt close to family	.65*	.28	.29	.37	.58*	.66*	.15	.40	.53	.69*	.67*	.22	.35	.48	.64*
26 Felt close to one friend	.59*	.40	.14	.37	.54*	.37*	-.08	.12	.28	.31*	.52*	.19	.15	.37	.47*
27 Felt lonely	.53*	.23	.48	.16	.51*	.55*	.01	.46	.24	.50*	.52*	.13	.47	.20	.50*
20 Has been someone available to talk to	.76*	.42	.42	.42	.72*	.58*	.35	.52	.38	.68*	.66*	.39	.46	.40	.69*
29 Could count on others to do things usually did	.57*	.39	.37	.37	.59*	.64*	.21	.42	.29	.61*	.61*	.30	.39	.35	.61*
No Stigma of Illness (STIGMA)															
16 Hesitant to tell friends of illness	.35	.65*	.35	.22	.48*	.04	.62*	.30	-.02	.21*	.25	.61*	.34	.14	.38*
17 People treat me differently	.31	.55*	.34	.18	.42*	-.04	.25*	.03	-.13	.00*	.12	.40*	.20	.00	.20*
18 People avoid me	.38	.63*	.34	.22	.49*	.14	.47*	.21	.09	.27*	.20	.52*	.26	.09	.31*
19 Hide illness from others	.33	.54*	.41	.26	.48*	.32	.40*	.29	.15	.40*	.35	.47*	.36	.22	.46*
People who Understand (PEOPLE)															
11 Person close to understood feelings	.31	.34	.53*	.22	.44*	.48	.14	.34*	.35	.52*	.38	.24	.43*	.29	.46*
12 Person close to didn't accept feelings	.24	.34	.48*	.19	.38*	.27	.10	.45*	.12	.32*	.25	.24	.47*	.16	.35*
13 Withdraw because people don't understand	.51	.51	.51*	.23	.60*	.30	.30	.37*	.03	.34*	.42	.42	.46*	.14	.49*
14 Family keeps feelings to ourselves	.37	.29	.52*	.09	.43*	.30	.28	.29*	.25	.40*	.38	.28	.42*	.22	.45*
15 Hard to blow off steam	.27	.19	.51*	.02	.32*	.25	.12	.46*	.09	.30*	.23	.16	.47*	.02	.28*
Cognitive Guidance/Advice (ADVICE)															
30 Amount of advice about illness	.34	.18	.02	.34*	.31*	.45	-.06	.21	.50*	.45*	.39	.07	.11	.42*	.37*
31 People keep me informed	.38	.18	.17	.53*	.41*	.31	-.05	.09	.51*	.33*	.39	.08	.16	.54*	.41*
32 People encourage hopefulness	.44	.19	.22	.49*	.46*	.35	.11	.13	.66*	.45*	.44	.15	.20	.60*	.49*
33 People tell me can lick this disease	.34	.21	-.01	.37*	.32*	.26	.03	.29	.65*	.41*	.36	.13	.14	.53*	.40*
34 Person close to encouraged better coping	.17	.15	.23	.31*	.26*	.43	.14	.24	.67*	.54*	.28	.14	.23	.47*	.27*

*Indicates coefficient is corrected for overlap.

[a]Item number from Table 47.

Note: Standard errors are 0.10 (Cancer Sample), 0.13 (MI Sample), and 0.08 (Total Sample).

Table 50

RELIABILITY (r_{tt}) AND HOMOGENEITY (r_{ii}) COEFFICIENTS
FOR SOCIAL SUPPORT/EXPRESSIVENESS SCALES

Scale	Number of Items	Cancer Sample (N=95)		MI Sample (N=62)		Total Sample (N=157)	
		r_{tt}	r_{ii}	r_{tt}	r_{ii}	r_{tt}	r_{ii}
Close Attachments/ Expressiveness	11	.87	.38	.84	.33	.87	.37
No Stigma of Illness	4	.78	.47	.64	.31	.71	.38
People who Understand	5	.73	.35	.62	.25	.68	.30
Cognitive Guidance/Advice	5	.64	.27	.80	.45	.74	.36
Total	25	.88	.21	.84	.16	.87	.20

PRINCIPAL COMPONENTS ANALYSES

The correlation matrix of the 36 (unrecoded) social support/expressiveness items is shown in Table B.11, B.12, and B.13 in Appendix B for the cancer sample, MI sample, and total sample, respectively. All matrices are calculated based on pairwise deletion of missing data.

The principal components analysis was performed only on the total sample because of the large number of items. Before performing this analysis, pairs of highly correlated oppositely worded items were combined. These were: (1) items 1 and 3 (r=-.0.52) into a variable labeled FEELINGS, and (2) items 11 and 12 (r=-.0.41) into a variable labeled PEOPLE.

The principal component analysis was performed on these two variables plus the remaining 30 unrecoded items (items 5 and 28 were excluded from this as they were at the outset from the multitrait scaling analyses). Ten factors had eigenvalues greater than 1.0; however, only four of these predicted 5 percent or more of the variance. A scree test indicated that four factors could be rotated. Therefore, four factors were rotated, which explained 43 percent of the variance. These were very difficult to interpret. Because so many items had been deleted during the multitrait scaling analyses, the principal components analysis was rerun including only those items that remained in the final multitrait scaling analysis (see Table 49).

This analysis yielded eight factors with eigenvalues greater than one, but only five that explained 5 percent or more of the variance. A scree test indicated that three factors should be rotated. Four were rotated, representing a compromise between the 5 percent test and the scree test. These four factors explained 48 percent of the variance. Results are shown in Table 51.

The four factors roughly correspond to the four scales resulting from the multitrait scaling analysis (see Table 49): close attachments, people who understand, stigma of illness, and cognitive guidance/advice.

Of the 11 items in the close attachments/expressiveness scale, six had their highest loadings on the close attachments factor, and all but one of the rest of the items had their second-highest loading on this

Table 51

CORRELATIONS BETWEEN SOCIAL SUPPORT/EXPRESSIVENESS ITEMS AND ROTATED PRINCIPAL COMPONENTS: TOTAL SAMPLE (N=149)

	Item Grouping/Item[a]	Component I	II	III	IV	h^2
Close Attachments/Expressiveness						
4	Talked to someone about feelings	.66[b]			.29	.54
1,3	Feelings (let people know)	-.63		.43		.63
8	Asked people for help	.62			.27	.47
23	Sought company and support	.61				.39
35	Frequency of contact	.60	-.26			.43
26	Felt close to a friend	.54		-.32	.23	.46
30	Amount of advice about illness	.51			.33	.38
People Who Understand						
27	Felt lonely	-.35	.64			.54
15	Hard to blow off steam		.61			.42
11,12	People understand feelings		.59		-.27	.46
24	Felt loved	.41	-.59			.55
20	Someone available to talk to	.32	-.55	-.34	.32	.62
36	Give as much support as receive		-.49		.27	.36
29	Could count on others	.32	-.47	-.28	.26	.47
18	Could avoid me	.26	.46	.37		.41
17	People treat me differently	.23	.35	.27		.28
No Stigma of Illness						
16	Hesitant to tell friends of illness			.84		.72
19	Hide illness from others			.72		.56
13	Withdraw because people don't understand		.40	.58		.53
14	Family keeps feelings to ourselves	-.26	.33	.42		.36
Cognitive Guidance/Advice						
32	People encourage hopefulness				.67	.51
31	Peopl keep me informed	.34			.65	.54
34	Person close to encouraged better coping		-.34		.62	.51
33	People tell me can lick this disease			-.30	.50	.41
25	Felt close to family	.45	-.28		.47	.55
	Percent of Variance Explained	14	13	11	10	

[a] Item number from Table 47.

[b] Only coefficients above |0.23| are reported.

factor.

Of the four items in the no stigma of illness scale, two had their highest loading on the stigma of illness factor and two had their second-highest loading on this factor.

Of the five items in the people who understand scale, three had their highest loadings on the people who understand factor and two had their second-highest loadings on this factor.

Of the five items in the cognitive guidance/advice scale, four had their highest loadings on the cognitive guidance/advice factor and one had its second-highest loading on this factor.

DESCRIPTION OF SCALES

Because of the small sample size relative to the number of items, more weight was given to the multitrait scaling analysis in determining final scales. Although the principal components identified did not correspond exactly to the scales in the multitrait scaling, they at least approximated them. Therefore, all scales will be retained.

A summary of means, and standard deviations for the four scales, is shown in Table 52.

The cancer sample has higher scores than the MI sample on the close attachments scale ($t=3.34$, $p < .01$), on the cognitive guidance/advice scale ($t=3.00$, $p < .01$), and on the total scale ($t=3.09$, $p < .01$). No significant differences between the two samples were observed on the stigma of illness or the people who understand scales.

A summary of product-moment correlations among the scales is shown in Table 53. The coefficients are all moderate indicating that the scales are not very independent.

An evaluation of frequency distributions of the scales in the total sample (not shown) revealed that the close attachments/expressiveness scale had a flat distribution and the people who understand scale had a slightly skewed distribution with people tending to have high scores.

Table 52

SUMMARY STATISTICS FOR THE SOCIAL SUPPORT/EXPRESSIVENESS SCALES

Scale	Number of Items	Cancer Sample (N=95)		MI Sample (N=62)		Total Sample (N=157)	
		Mean	S.D.	Mean	S.D.	Mean	S.D.
Close Attachments/ Expressivess	11	40.31	8.08	35.39	9.02	38.45	8.77
No Stigma of Illness	4	14.79	3.74	14.69	3.83	14.75	3.78
People who Understand	5	18.55	4.19	17.74	4.02	18.23	4.14
Cognitive Guidance/Advice	5	18.77	3.61	16.62	4.84	17.92	4.27
Total	25	92.41	15.04	84.64	15.66	89.34	15.76

Table 53

PRODUCT-MOMENT CORRELATIONS AMONG SOCIAL SUPPORT/EXPRESSIVENESS SCALES

Scale	Cancer Sample (N=95)					MI Sample (N=62)					Total Sample (N=157)				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
1 Close Attachments/ No Expressiveness	(.87)[a]					(.84)					(.87)				
2 Stigma of Illness	.44	(.78)				.17	(.64)				.32	(.71)			
3 People who Understand	.48	.46	(.73			.49	.31	(.62)			.49	.40	(.68)		
4 Cognitive Guidance/ Advice	.50	.28	.19	(.64)		.48	.04	.25	(.80)		.52	.16	.23	(.74)	
5 Total	.90	.68	.70	.63	(.88)	.89	.44	.69	.66	(.84)	.90	.57	.70	.66	(.87)

[a]Reliability coefficients are on the diagonal.

XIII. WILL TO LIVE

ITEM DESCRIPTION

Thirteen items assessed concepts related to will to live. Four item groupings were hypothesized: reason to live, meaning in living, religious beliefs, and will to live. Items assessing each grouping are shown in Table 54.

DESCRIPTIVE STATISTICS ON ITEMS

The mean, standard deviation, and number of missing responses for each item are shown in Table 54. The frequency distributions for the items are presented in Appendix A, Table A.8.

All but two items are skewed in the same direction in both samples, indicating that these people have reasons to live, meaning in living, and will to live, and that religious or spiritual beliefs are important. Items 2 and 8 are skewed in opposite directions in the two samples: In the cancer sample, people tend not to have done most of the things they wanted to and have become more religious or spiritual, whereas the MI sample tends to report the opposite.

Standard deviations for the 13 items are summarized as follows:

Sample	Lowest Value	Highest Value	Median	Number 1±0.2
Cancer	0.63	1.35	0.98	7
MI	0.74	1.54	1.13	6
Total	0.71	1.47	1.05	8

The frequency distributions (shown in Table A.8) indicated that many items were quite skewed. Items 3, 6, 11, 12, and 13 all had more than 85 percent of responses in the extreme two response categories in all three samples (items 12 and 13 had 90 percent or more in the extreme two response categories in all three samples).

Table 54

WILL TO LIVE ITEMS AND SUMMARY STATISTICS

Item Grouping/Item	Questionnaire Item Number	Response Choices[a]	Direction of Scoring[b]	Cancer Sample (N=95) Mean	S.D.	Number Missing (Percent)	MI Sample (N=63) Mean	S.D.	Number Missing (Percent)	Total Sample (N=158) Mean	S.D.	Number Missing (Percent)
Reason to Live												
1 I have some tasks to accomplish in my life that are important to me.	VI.1X	A	R	1.65	0.86	3 (3)	2.27	1.19	3 (5)	1.89	1.04	6 (4)
2 I have done most of the things I wanted to in my life.	VI.1L	A	-	3.03	1.31	2 (2)	2.53	1.27	3 (5)	2.84	1.32	5 (3)
3 I am important to someone.	VI.1K	A	R	1.40	0.66	4 (4)	1.67	1.04	3 (5)	1.50	0.84	7 (4)
4 There are people who depend on me.	VI.1R	A	R	1.94	1.00	3 (3)	2.32	1.26	3 (5)	2.09	1.12	6 (4)
5 Since I became ill, I like helping other who are ill.	III.5F	T	R	2.05	0.98	2 (2)	2.26	1.21	1 (2)	2.14	1.08	3 (2)
Meaning in Living												
6 My life is empty and has no meaning.	VI.1J	A	-	4.46	0.89	3 (3)	4.42	1.02	4 (6)	4.44	0.94	7 (4)
7 Since I became ill, I am more aware of what is important and meaningful in life.	III.5M	T	R	1.60	0.92	4 (4)	2.23	1.13	2 (3)	1.86	1.05	6 (4)
Religious Beliefs												
8 Since I became ill, I have become more religious or spiritual.	III.5E	T	R	2.75	1.35	3 (3)	3.52	1.54	2 (3)	3.06	1.47	5 (3)
9 My religious or personal spiritual beliefs give meaning to my life.[c]	VI.1D	A	R	2.20	1.24	3 (3)	2.38	1.52	3 (5)	2.27	1.36	6 (4)
10 How important are religious or spiritual beliefs in helping you deal with everyday problems in life?	I.13	I	R	1.91	1.03	2 (2)	1.95	1.11	1 (2)	1.93	1.06	3 (2)
Will to Live												
11 I feel like giving in to my illness.	VI.1T	A	-	4.50	0.82	3 (3)	4.37	0.97	3 (5)	4.45	0.88	6 (4)
12 I am determined to do everything possible to improve or recover.	VI.1I	A	R	1.45	0.63	2 (2)	1.82	0.79	3 (5)	1.59	0.72	5 (3)
13 I have a strong will to live.	VI.1C	A	R	1.40	0.68	3 (3)	1.57	0.74	2 (3)	1.47	0.71	5 (3)

[a]
T: 1 = Definitely true; 2 = Mostly true; 3 = Don't know; 4 = Mostly false; 5 = Definitely false
A: 1 = Strongly agree; 2 = Agree; 3 = Not sure; 4 = Disagree; 5 = Strongly disagree
I: 1 = Very important; 2 = Somewhat important; 3 = Not very important; 4 = Not at all important

[b] An 'R' indicates the item must be recoded so that a high score means greater reason to live, meaning, religious beliefs, or will to live.

[c] In the MI Sample, this item was worded "give me something to live for" instead of "give meaning to my life."

The number of missing responses per item ranged from 2 to 4 percent in the cancer sample (median 3 percent) and from 2 to 6 percent in the MI sample (median 5 percent). The number of missing responses per person ranged from 0 to 9 in the cancer sample and from 0 to 12 in the MI sample (95 percent of each sample had one or zero).

MULTITRAIT SCALING ANALYSES

Multitrait analyses were performed on items recoded as specified in Table 54.

Analysis 1

When all 13 items were analyzed according to the hypothesized item groupings (see Table 54), item 2 clearly did not belong in the matrix (the maximum correlation of this item with any scale was -0.10 in the total sample). Further, items in the reason to live and meaning in living groupings tended to correlate as high or higher with the other scale (i.e., there seemed to be no distinction between the two scales).

Analysis 2

In this analysis, item 2 was excluded and items 1, 3, 4, 5, 6, and 7 were combined into one reason/meaning item grouping. Results are shown in Table 55.

In the reason/meaning grouping, all but one item-scale correlations equaled or exceeded 0.30 in all samples.

Item 5 did not correlate above 0.30 with any scale in the cancer sample, and correlated above 0.30 with the religious/spiritual beliefs scale in the MI and the total sample. Because this item does not clearly assess religious/spiritual beliefs in terms of its content, it was excluded from further analysis. Only items 3 and 4 correlated higher with this scale than with any other scale in all samples. Item 1 correlated higher with the religious/spiritual beliefs scale in the MI sample; item 6 correlated higher with the will to live scale in the cancer and the total samples; and item 7 correlated higher with the religious/spiritual beliefs scale in all three samples. For the next analysis, item 7 was therefore moved to the religious/spiritual beliefs

Table 55

ITEM-SCALE CORRELATION MATRIX OF WILL TO LIVE ITEMS: ANALYSIS TWO

Item Grouping/Item[a] (abbreviated item content)	Cancer Sample (N=93)				MI Sample (N=61)				Total Sample (N=154)			
	REASON	REL/SPIR	WILL	TOTAL	REASON	REL/SPIR	WILL	TOTAL	REASON	REL/SPIR	WILL	TOTAL
Reason/Meaning												
1 Have important tasks to do	.57*	.29	.42	.53*	.38*	.43	.35	.48*	.50*	.38	.41	.53*
3 Important to someone	.52*	.23	.54	.51*	.58*	.20	.39	.46*	.56*	.22	.47	.49*
4 People depend on me	.47*	.20	.29	.39*	.52*	.24	.19	.40*	.51*	.23	.26	.41*
5 Like helping others who are ill	.14*	.28	.13	.25*	.04*	.45	.22	.29*	.11*	.37	.18	.28*
6 Life empty, has no meaning	.55*	.23	.77	.60*	.44*	.13	.39	.36*	.48*	.18	.60	.48*
7 Aware of what's important/meaningful	.35*	.53	.21	.50*	.33*	.41	.39	.46*	.38*	.49	.32	.51*
Religious/Spiritual Beliefs												
8 Become more religious/spiritual	.41	.77*	.18	.56*	.34	.59*	.23	.47*	.42	.67*	.23	.54*
9 Religious/spiritual beliefs give meaning	.50	.79*	.32	.68*	.55	.72*	.55	.74*	.52	.76*	.42	.70*
10 Religious/spiritual beliefs important	.38	.82*	.13	.56*	.49	.80*	.47	.70*	.41	.79*	.26	.60*
Will to Live												
11 Feel like giving in to illness	.47	.11	.71*	.43*	.31	.13	.28*	.27*	.39	.12	.51*	.36*
12 Determined to improve/recover	.53	.21	.74*	.54*	.43	.49	.53*	.57*	.51	.36	.64*	.57*
13 Strong will to live	.59	.31	.67*	.62*	.46	.49	.41*	.57*	.54	.40	.56*	.60*

*Indicates coefficient corrected for overlap.

[a]Item number from Table 54.

Note: Standard errors are 0.10 (Cancer Sample), 0.13 (MI Sample), and 0.08 (Total Sample).

scale and item 6 to the will to live scale.

In the religious/spiritual beliefs scale, all items exceeded 0.30 in all samples, and all items correlated higher with this scale than any other scale. Therefore these items were all retained in this scale for the next analysis.

For the will to live scale, two of the three item-total correlations equaled or exceeded 0.30 (item 11 did not in the MI sample). Only item 12 correlated higher with this scale than any other scale in all samples. Items 11 and 13 did so only in the cancer and total samples. All items were retained for the next analysis.

Analysis 3

Results of the third analysis are shown in Table 56. In the reason to live scale, all item-scale correlations exceed 0.30 in all samples. However, only item 4 correlates higher with this scale than any other in all samples. Item 3 (important to someone) correlates as high or higher with the will to live scale in all three samples. Item 1 correlates highest with this scale in the cancer and total samples. In the total sample, there is one scaling success (item 4), one probable success (item 1), and one probable failure (item 3). Nevertheless the reliability coefficients are all well above 0.50 in all samples (see Table 57), thus this scale is acceptable for group comparisons.

For the religious/spiritual beliefs scale, all item-scale correlations exceed 0.30, and all items correlate highest with this scale in all samples. In the total sample, there are three scaling successes and one probable success. Reliability coefficients are all acceptable (see Table 57).

In the will to live scale, all item-total correlations equal or exceed 0.30 in all samples. Two items (11 and 12) correlate highest with this scale than any other scale in all samples, but items 6 and 13 only do so in the cancer and total samples. In the total sample, there are two scaling successes and two probable successes. Reliability coefficients are all acceptable for purposes of group comparisons (see Table 57).

Table 56

ITEM-SCALE CORRELATION MATRIX OF WILL TO LIVE ITEMS: ANALYSIS THREE

Item Grouping/Item[a] (abbreviated item content)	Cancer Sample (N=93)				MI Sample (N=61)				Total Sample (N=154)			
	REASON	REL/SPIR	WILL	TOTAL	REASON	REL/SPIR	WILL	TOTAL	REASON	REL/SPIR	WILL	TOTAL
Reason/Meaning												
1 Have important tasks to do	.52*	.33	.47	.54*	.37*	.41	.34	.49*	.47*	.40	.42	.54*
3 Important to someone	.38*	.26	.59	.52*	.55*	.21	.55	.48*	.49*	.25	.56	.51*
4 People depend on me	.63*	.22	.33	.41*	.55*	.27	.28	.41*	.60*	.27	.32	.43*
Religious/Spiritual Beliefs												
7 Aware of what's important/meaningful	.33	.56*	.26	.53*	.28	.40*	.37	.45*	.35	.50*	.32	.53*
8 Become more religious/spiritual	.26	.74*	.20	.55*	.22	.58*	.18	.42*	.29	.67*	.22	.52*
9 Religious/spiritual beliefs give meaning	.36	.81*	.31	.68*	.43	.73*	.50	.72*	.40	.76*	.39	.69*
10 Religious/spiritual beliefs important	.18	.80*	.14	.53*	.30	.77*	.42	.65*	.22	.76*	.24	.56*
Will to Live												
6 Life empty, has no meaning	.59	.27	.78*	.62*	.48	.17	.38*	.39*	.52	.22	.60*	.50*
11 Feel like giving in to illness	.37	.12	.73*	.43*	.14	.20	.30*	.25*	.27	.16	.54*	.35*
12 Determined to improve/recover	.47	.23	.74*	.55*	.29	.49	.55*	.56*	.42	.38	.65*	.58*
13 Strong will to live	.50	.33	.76*	.63*	.44	.47	.43*	.58*	.48	.40	.63*	.61*

*Indicates coefficient corrected for overlap.

[a]Item number from Table 54.

Note: Standard errors are 0.10 (Cancer Sample), 0.13 (MI Sample), and 0.08 (Total Sample).

Table 57

RELIABILITY (R_{TT}) AND HOMOGENEITY (R_{II}) COEFFICIENTS FOR WILL TO LIVE SCALES

Scale	Number of items	Cancer Sample (N=93)		MI Sample (N=60)		Total Sample (N=153)	
		r_{tt}	r_{ii}	r_{tt}	r_{ii}	r_{tt}	r_{ii}
Reason to live	3	.68	.42	.67	.41	.70	.43
Religious/spiritual perspective	4	.87	.62	.79	.48	.83	.56
Will to live	4	.88	.64	.62	.29	.79	.48
Total scale	11	.85	.33	.81	.28	.84	.32

PRINCIPAL COMPONENTS ANALYSES

The correlation matrices of the 13 (unrecoded) will to live items are shown in Appendix B, Tables B.14, B.15, and B.16 for the cancer sample, MI sample, and total sample, respectively.

Analysis 1

A principal components analysis of these correlations using all 13 unrecoded items yielded four factors with eigenvalues greater than one, each explaining more than 5 percent of the variance, in all samples. However, item 2 did not seem to belong with this set (as it was the only item loading on a factor in the total sample and the MI sample, and loaded with only one other item (item 5) in the cancer sample). Therefore, item 2 was dropped and the analysis rerun.

Analysis 2

A principal components analysis of the 12 items (excluding item 2) yielded three factors with eigenvalues greater than one, each explaining more than 5 percent of the variance, in all samples. A scree test confirmed that three factors should be rotated. Because of the extreme skewness of many of the items, the results from the total sample will be presented here. Results are shown in Table 58. The three factors

Table 58

CORRELATIONS OF 12 WILL TO LIVE ITEMS WITH ROTATED PRINCIPAL COMPONENTS: ANALYSIS TWO (TOTAL SAMPLE, N=158)

Item Grouping/Item[a]		Components I	II	III	h^2
Will to Live					
11	Feel like giving in to illness	-.82			.67
12	Determined to improve, recover	.76	.27		.67
6	Life empty, has no meaning	-.70		-.42	.67
13	Strong will to live	.67	.30	.28	.62
Religious/Spiritual Perspective					
10	Religious/spiritual beliefs important		.89		.81
9	Religious/spiritual beliefs give meaning		.83		.77
8	Become more religious/spiritual		.80		.68
7	Aware of what's important/meaningful		.55		.36
5	Like helping others who are ill		.54	-.32	.43
Reason to Live					
4	People depend on me			.84	.72
3	Important to someone	.49		.62	.62
1	Have important tasks to do		.34	.61	.54
	Percent of Variance Explained	22	25	16	

[a]Item number from Table 54.

Note: Only coefficients above |0.23| are reported.

explain 63 percent of the variance and correspond to the item groupings resulting from the multitrait scaling analyses. Because item 5 was subsequently dropped from those analyses, and because its item content does not warrant it being in the religious/spiritual perspective scale, it was dropped and the analysis rerun.

Analysis 3

A principal components analysis of the 11 items (excluding items 2 and 5) yielded three factors with eigenvalues greater than one, each explaining more than 5 percent of the variance. A scree test confirmed that three factors were appropriate. Again, because of the skewness of many of the items, only the total sample results will be presented. Results are shown in Table 59. The three factors explain 67 percent of the variance, and again, the three factors correspond to those in the multitrait scaling analyses (will to live, religious/spiritual perspective, and reason to live).

DESCRIPTION OF SCALES

A summary of means and standard deviations for the will to live scales is shown in Table 60. The scales are scored so that higher scores indicate greater reason to live, religious/spiritual perspective, and will to live. The cancer sample has more reason to live than the MI sample ($t=3.15$, $p<.01$), a greater religious/spiritual perspective ($t=2.24$, $p<.01$), and greater total scores ($t=2.99$). No significant differences were observed in will to live.

An evaluation of frequency distributions of the scales in the total sample (not shown) revealed that the reason to live and will to live scales were very skewed (43 and 53 percent, respectively, of people had the highest two scores). The religious/spiritual perspective scale was slightly skewed with people tending to have high scores.

Product-moment correlations among the scales are summarized in Table 61. Correlations are moderate among the separate scales, indicating that they are independent enough to be scored separately, but also warranting a total scale score.

Table 59

CORRELATIONS OF 11 WILL TO LIVE ITEMS WITH ROTATED PRINCIPAL COMPONENTS: ANALYSIS THREE (TOTAL SAMPLE, N=158)

Item Grouping/Item[a]	Components I	II	III	h^2
Will to Live				
11 Feel like giving in to illness	-.82			.67
12 Determined to improve, recover	.77	.28		.69
13 Strong will to live	.68	.32	.28	.63
6 Life empty, has no meaning	-.67		-.46	.67
Religious/Spiritual Perspective				
10 Religious/spiritual beliefs important		.89		.79
9 Religious/spiritual beliefs give meaning	.23	.85		.80
8 Become more religious/spiritual		.82		.69
7 Aware of what's important/meaningful		.58		.38
Reason to Live				
4 People depend on me			.88	.80
3 Important to someone	.43		.69	.66
1 Have important tasks to do		.36	.60	.53
Percent of Variance Explained	22	26	18	

[a]Item number from Table 54.

Note: Only coefficients above |0.23| are reported.

Table 60

SUMMARY STATISTICS FOR WILL TO LIVE SCALES

Scale	Number of Items	Cancer Sample (N=93) Mean	Cancer Sample (N=93) S.D.	MI Sample (N=60) Mean	MI Sample (N=60) S.D.	Total Sample (N=153) Mean	Total Sample (N=153) S.D.
Reason to live	3	13.02	1.98	11.75	2.69	12.52	2.37
Religious/spiritual perspective	4	14.43	3.93	12.92	4.17	13.83	4.09
Will to live	4	18.10	2.59	17.38	2.41	17.82	2.54
Total scale	11	45.55	6.52	42.05	7.39	44.18	7.09

Table 61

PRODUCT-MOMENT CORRELATIONS AMONG WILL TO LIVE SCALES

Sample	Scale	Reason	Rel/Spir	Will	Total
Cancer	Reason	(.68)[a]			
	Rel/Spir	.34	(.87)		
	Will	.56	.27	(.88)	
	Total	.73	.81	.73	(.85)
MI	Reason	(.67)			
	Rel/Spir	.39	(.79)		
	Will	.49	.45	(.62)	
	Total	.74	.85	.76	(.81)
Total	Reason	(.70)			
	Rel/Spir	.39	(.83)		
	Will	.53	.36	(.79)	
	Total	.75	.83	.74	(.84)

[a]Reliability coefficients are on the diagonal.

XIV. ACTIVE COPING

ITEM DESCRIPTION

Fifteen items assessed behaviors classified as active coping, i.e., things a person might do to feel actively involved in the healing process. Three item groupings were hypothesized: active positive thinking, perform health habits to facilitate healing, and seek information. Items assessing each grouping are shown in Table 62.

DESCRIPTIVE STATISTICS ON ITEMS

The mean, standard deviation, and number of missing responses for each item are shown in Table 62. The frequency distributions for the items are presented in Appendix A, Table A.9.

All but two items are skewed in the same direction in both samples, indicating that these people tend to think positively and tell themselves things to help them feel better, that they tend to practice positive health habits (e.g., relax, avoid stress, eat well). With regard to seeking information, in the cancer sample, all items were skewed indicating that people seek information and that it helps. In the MI sample, the skewness indicates that they tend not to seek information but that having information has helped them. Part of this inconsistency in the MI sample may be because many of these people had particular difficulty understanding the negative items regarding information, especially item 14.

Standard deviations for the 15 items are summarized as follows:

Sample	Lowest Value	Highest Value	Median	Number 1±0.2
Cancer	0.83	1.51	1.14	10
MI	0.66	1.49	1.14	7
Total	0.91	1.58	1.14	9

Table 62

ACTIVE COPING ITEMS AND SUMMARY STATISTICS

Item Grouping/Item	Questionnaire Item Number	Response Choices[a]	Direction of Scoring[b]	Cancer Sample (N=95) Mean	S.D.	Number Missing (Percent)	MI Sample (N=63) Mean	S.D.	Number Missing (Percent)	Total Sample (N=158) Mean	S.D.	Number Missing (Percent)
Active Positive Thinking												
1 During the past month, thinking positive thoughts helped me deal with my illness.	III.4B	A	R	1.82	0.96	3 (3)	2.00	0.90	5 (8)	1.89	0.94	8 (5)
2 During the past month, I told myself things to help make me feel better.[c]	III.4G	A	R	2.77	1.19	2 (2)	2.69	1.14	5 (8)	2.74	1.17	7 (4)
3 During the past month, keeping a hopeful outlook helped me deal with my illness.	III.4I	A	R	1.84	0.89	3 (3)	2.10	1.05	3 (5)	1.94	0.96	6 (4)
4 During the past month, I found myself thinking negative thoughts.	III.4H	A	-	3.88	0.86	3 (3)	3.95	1.15	4 (6)	3.91	0.98	7 (4)
Performs Health Habits that Will Facilitate Healing												
5 How often do you take time to relax yourself?	III.2A	E	R	1.55	1.20	3 (3)	1.28	0.66	2 (3)	1.44	1.02	5 (3)
6 During the past month, I could have done a lot more to improve my health and well-being.	III.3E	T	-	3.37	1.46	1 (1)	3.26	1.38	2 (3)	3.33	1.42	3 (2)
7 How often do you eat well-balanced meals?	III.2C	E	R	1.48	0.83	1 (1)	1.52	1.03	3 (5)	1.49	0.91	4 (2)
8 How often do you get a good night's sleep?	III.2D	E	R	1.74	0.94	0 (0)	1.55	0.95	1 (2)	1.66	0.94	1 (1)
9 How often do you do something that is physically active such as walk, run, bike, or swim?	III.2B	E	R	2.40	1.31	1 (1)	1.79	1.30	2 (3)	2.16	1.34	3 (2)
10 I avoid stressful situations as much as I can.	III.5H	T	R	2.32	1.13	4 (4)	1.82	0.71	1 (2)	2.12	1.01	5 (3)
11 During the past month, I have been taking things a little easier.	III.3D	T	R	2.13	1.25	0 (0)	1.71	0.89	1 (2)	1.96	1.14	1 (1)
Seek Information												
12 Information about my illness has helped me plan my health program.	III.1A	T	R	1.79	1.06	1 (1)	2.58	1.49	3 (5)	2.10	1.30	4 (2)
13 I don't actively seek information about my illness.	III.1B	T	-	3.82	1.47	2 (2)	2.88	1.48	2 (3)	3.45	1.54	4 (2)
14 Having information about my illness will not help me deal with it.	III.1D	T	-	4.34	1.14	1 (1)	3.81	1.30	1 (2)	4.13	1.23	2 (1)
15 I've tried to get information from everyone I can think of who might know anything about my illness.[d]	III.1E	T	R	2.56	1.51	0 (0)	3.64	1.46	2 (3)	2.98	1.58	2 (1)

[a]
A: 1 = All of the time; 2 = Most of the time; 3 = Some of the time; 4 = A little of the time; 5 = None of the time
E: 1 = Every day; 2 = 3 or 4 times a wekk; 3 = 1 or 2 times a week; 4 = 2 or 3 times a month; 5 = Never
T: 1 = Definitely true; 2 = Mostly true; 3 = Don't know; 4 = Mostly false; 5 = Definitely false

[b] An 'R' indicates that the item must be recoded so that a high score indicates a more active response.

[c] From Ways of Coping (Lazarus and coworkers, personal communication) (e.g., Folkman and Lazarus, 1980).

[d] From Leta Adler, personal communication.

The frequency distributions (shown in Table A.9) indicate that two items are quite skewed in the cancer sample (items 3 and 7 have 85 percent or more of the responses in the two extreme response categories), and four items are skewed in the MI sample (items 5, 10, and 11 have more than 90 percent in the two extreme categories, and item 8 has more than 85 percent).

The number of missing responses per item ranged from 0 to 4 percent in the cancer sample (median of 2 percent) and from 2 to 8 percent in the MI sample (median of 3 percent). The number of missing responses per person ranged from 0 to 5 in the cancer sample and from 0 to 11 in the MI sample (96 percent of the cancer sample and 89 percent of the MI sample had zero or one missing responses).

MULTITRAIT SCALING ANALYSES: 1

When all 15 items were analyzed according to the hypothesized groupings (and recoded as specified in Table 62), the following items correlated less than 0.30 with their hypothesized scale:

Item	Sample
1	MI
2	MI, total
4	MI, cancer, total
6	MI, cancer, total
7	MI
8	MI
9	MI, cancer, total
10	MI
11	MI
12	MI
15	MI

Because of the many problems of scaling these items, it was decided to do a principal components analysis to determine if any other item groupings could be identified.

PRINCIPAL COMPONENTS ANALYSES

The correlation matrices of the 15 (unrecoded) active coping items are shown in Appendix B, Tables B.17, B.18, and B.19 for the cancer sample, MI sample, and total sample, respectively.

A principal components analysis of these correlations in the total sample using all 15 unrecoded items yielded five factors with eigenvalues greater than one, each explaining more than 5 percent of the variance. A scree test was difficult to evaluate, however the fifth unrotated factor appeared to be a common factor. Therefore, five factors were rotated. Item 6 was the only item to load on the fifth factor, confirming the findings of the multitrait scaling analyses that this item does not belong in its hypothesized group.

Item 4 (thinking negative thoughts) loaded on factor 4 along with items 7 and 8 (eating well-balanced meals and getting a good night's sleep). This confirms that item 4 does not belong in its hypothesized item grouping, as was apparent in the multitrait scaling analyses.

Item 9, however (which did not correlate 0.30 or greater with its hypothesized grouping in any sample in the multitrait scaling analyses), loaded on the first factor along with three other health habit items.

The principal components analysis was rerun, eliminating items 4 and 6. In the total sample, five factors had eigenvalues greater than one, each explaining more than 5 percent of the variance. Because the fifth factor appeared to be a common factor, five factors were rotated. Results are shown in Table 63 for the total sample. The five factors explain 63 percent of the variance.

Essentially, the active use of the mind and seek information groupings are distinguished as separate factors. The health habits grouping, however, splits into three concepts: relax/take it easy, daily routine, and physical activity.

MULTITRAIT SCALING ANALYSES: 2

Multitrait scaling analyses were rerun using the item groupings identified in the principal components analysis (see Table 63). Item 9 (physical activity) was included as a separate item. Results are shown in Table 64.

Table 63

CORRELATIONS BETWEEN ACTIVE COPING ITEMS AND ROTATED PRINCIPAL COMPONENTS: TOTAL SAMPLE (N=158)

Item Grouping/Item[a]	Component I	II	III	IV	V	h^2
Relax/Take it Easy						
10 Avoided stressful situations	.79					.66
11 Took things a little easier	.78					.65
5 Took time to relax	.49			.45	.41	.62
Seek Information						
14 Having information won't help		.80				.68
13 Don't seek information		.75				.60
12 Information helped plan program		-.60	.30	.27	-.28	.62
15 Tried to get information		-.51		-.43		.52
Active Positive Thinking						
3 Hopeful outlook helped			.80			.68
2 Told self things to feel better		.24	.70			.57
1 Thinking positive thoughts helped	.33		.69			.68
Daily Routine						
7 Ate well-balanced meals				.80		.65
8 Got good night's sleep				.74		.59
Physical Activity						
9 Physical activity daily					.85	.77
Percent of Variance Explained	13	15	14	13	9	

[a]Item number from Table 62.

Note: Only coefficients above |0.23| are shown.

Table 64

ITEM-SCALE CORRELATION MATRIX OF ACTIVE COPING ITEMS

Item Grouping/Item[a] (abbreviated item content)	Cancer Sample (N=94)				MI Sample (N=59)				Total Sample (N=152)			
	POS	DAILY	RELAX	INFO	POS	DAILY	RELAX	INFO	POS	DAILY	RELAX	INFO
4 Thought negative thoughts												
6 Could have done more												
9 Physical activity daily	.21	.21	.21	-.02	.26	-.10	.07	.24	.20	.09	.22	-.14
Active Positive Thinking (POS)												
1 Thinking positive thoughts helped	.55*	.26	.33	.18	.24*	.01	.12	.12	.43*	.15	.23	.19
2 Told self things to feel better	.42*	.09	.06	-.03	.35*	-.20	-.06	-.21	.39*	-.02	.03	-.11
3 Hopeful outlook helped	.68*	.18	.21	.04	.33*	-.14	-.21	.03	.53*	.03	.05	.09
Relax/Take it Easy (RELAX)												
5 Took time to relax	.21	.61	.44*	.06	-.22	.04	.27*	.18	.09	.43	.43*	.01
10 Avoided stressful situations	.23	.28	.49*	.14	.07	-.07	.17*	.23	.17	.17	.45*	.06
11 Took things a little easier	.11	.38	.49*	.10	-.03	.12	.35*	.26	.05	.29	.48*	.05
Daily Routine (DAILY)												
7 Ate well-balanced meals	.22	.48*	.55	.04	-.12	.33*	-.15	-.10	.08	.41*	.29	-.01
8 Got a good night's sleep	.15	.48*	.41	.08	-.15	.33*	.25	.15	.03	.41*	.35	.06
Seek Information (INFO)												
12 Information helped plan program	.24	.16	.02	.37*	.12	.19	.17	.10*	.19	.16	-.01	.33*
13 Don't seek information	.03	-.01	.12	.39*	-.15	.06	.27	.30*	-.01	.01	.07	.43*
14 Having information won't help	.05	.18	.20	.52*	-.22	.05	.29	.38*	-.04	.11	.15	.50*
15 Tried to get information	-.07	-.08	.03	.37*	.14	-.23	.04	.01*	.03	-.14	-.05	.32*

*Indicates coefficient corrected for overlap.

[a]Item number from Table 62.

Note: Standard errors are 0.10 (Cancer Sample), 0.13 (MI Sample), and 0.08 (Total Sample).

For the active positive thinking scale, all but one item-total correlation equaled or exceeded 0.30 in all samples (item one did not in the MI sample), and all items correlated higher with this scale in all samples. In the total sample, all three items were scaling successes. Reliability coefficients were acceptable in the cancer sample and the total sample, but not in the MI sample (see Table 65).

For the relax/take it easy scale, in the cancer sample and the total sample, all item-total correlations exceeded 0.30, only one did (item 11) in the MI sample. Only two of the items (10 and 11) correlated higher with this scale than any other scale in the cancer and total samples. In the total sample, two items were scaling successes, and one was a probable success. Reliability coefficients were acceptable in the cancer sample and the total sample, but not in the MI sample.

For the daily routine scale, all item-total correlations exceeded 0.30 in all samples. All but one item (item 7) in the cancer sample correlated highest with this scale than any other scale. In the total sample, both items were scaling successes. Reliability coefficients were acceptable in the cancer sample and the total sample, but not in the MI sample.

Table 65

RELIABILITY (R_{TT}) AND HOMOGENEITY (R_{II}) COEFFICIENTS FOR ACTIVE COPING SCALES

Scale	Number of items	Cancer Sample (N=93)		MI Sample (N=59)		Total Sample (N=152)	
		r_{tt}	r_{ii}	r_{tt}	r_{ii}	r_{tt}	r_{ii}
Active positive thinking	3	.72	.46	.49	.24	.63	.37
Relax/take it easy	3	.66	.39	.42	.20	.64	.37
Daily routine	2	.65	.48	.49	.33	.58	.41
Seek information	4	.62	.29	.35	.12	.61	.28

For the seek information scale, item-total correlations for items 13 and 14 equaled or exceeded 0.30 in all samples. Items 12 and 15 did so only in the cancer sample and the total sample. In the total sample, there were three scaling successes and one probable success. Reliability coefficients were acceptable in the cancer sample and the total sample, but not in the MI sample.

DESCRIPTION OF SCALES

Although none of the scales in the MI sample met the criterion for reliability, they did so in the total sample. It thus appears that they cannot be used alone in the MI sample. The scales are acceptable in the cancer sample, therefore descriptive information will be presented.

A summary of means and standard deviations for the scales is shown in Table 66. The scales are scored so that higher scores indicate greater use of the mind, relaxation, adherence to a daily routine, and information seeking. People in the MI sample do more relaxing and taking it easy ($t=-3.41$, $p<.01$), and are less likely to seek information ($t=-5.81$, $p<.01$) than people in the cancer sample. An evaluation of frequency distributions in the total sample (not shown) indicated that the active positive thinking scale was slightly skewed (with people tending to get high scores). The relax/take it easy and daily routine

Table 66

SUMMARY STATISTICS FOR THE ACTIVE COPING SCALES

Scale	Number of Items	Cancer Sample (N=93) Mean	Cancer Sample (N=93) S.D.	MI Sample (N=59) Mean	MI Sample (N=59) S.D.	Total Sample (N=152) Mean	Total Sample (N=152) S.D.
Active positive thinking	3	11.54	2.45	11.17	2.22	11.40	2.37
Relax/take it easy	3	12.00	2.75	13.19	1.55	12.46	2.43
Daily routine	2	8.82	1.47	8.90	1.62	8.85	1.53
Seek information	4	15.82	3.57	12.52	3.31	14.54	3.83

scales were very skewed (42 and 68 percent of people, respectively, had the highest two scores). The seek information scale was slightly skewed with people tending to get high scores.

Product-moment correlations among the scales are summarized in Table 67.

Table 67

PRODUCT-MOMENT CORRELATIONS AMONG THE ACTIVE COPING SCALES

Sample/Scale	1	2	3	4
CANCER SAMPLE (N=93)				
1 Active positive thinking	(.72)[a]			
2 Relax/take it easy	.23	(.66)		
3 Daily routine	.21	.55	(.65)	
4 Seek information	.07	.07	.13	(.62)
MI SAMPLE (N=59)				
1 Active positive thinking	(.49)			
2 Relax/take it easy	-.08	(.42)		
3 Daily routine	-.16	.05	(.49)	
4 Seek information	-.04	.02	.33	(.35)
TOTAL SAMPLE (N=152)				
1 Active positive thinking	(.63)			
2 Relax/take it easy	.13	(.64)		
3 Daily routine	.06	.39	(.58)	
4 Seek information	.06	.03	.05	(.61)

[a]Reliability coefficients are on the diagonal.

XV. ACCEPTANCE/REJECTION

ITEM DESCRIPTION

Seven items pertained to concepts having to do with acceptance of illness, thinking about illness, and rejection of sick role. No item groupings were hypothesized. Three different response choices were offered. Items are shown in Table 68, and response choices are shown in footnote a.

DESCRIPTIVE STATISTICS ON ITEMS

The mean, standard deviation, number of not applicable responses, and number of missing responses for each item are shown in Table 68. The frequency distributions for these items are presented in Appendix A, Table A.10.

All items are skewed in both samples, indicating that these people tend to avoid letting illness interfere with their lives, they try to forget about their illness, tend to be upset when their illness interferes with what they want to do, and are bothered a little when they think about their illness.

Standard deviations for the seven items are summarized as follows:

Sample	Lowest Value	Highest Value	Median	Number 1±0.2
Cancer	0.83	1.56	1.02	5
MI	0.60	1.50	1.01	2
Total	0.79	1.53	1.08	4

The frequency distributions (shown in Table A.10 in Appendix A) indicated that three items were quite skewed in both samples: Item 4 had more than 90 percent of responses in the extreme two choices in both samples, and items 6 and 7 had 89 percent or more in the extreme two choices in both samples.

Table 68

ACCEPTANCE/REJECTION ITEMS AND SUMMARY STATISTICS

	Item Grouping/Item	Questionnaire Item Number	Response Choices[a]	Direction of Scoring[b]	Cancer Sample (N=95) Mean	S.D.	Number N/A (Percent)	Number Missing (Percent)	MI Sample (N=63) Mean	S.D.	Number N/A (Percent)	Number Missing (Percent)	Total Sample (N=158) Mean	S.D.	Number N/A (Percent)	Number Missing (Percent)
1	Most of the time I try to forget that I am ill.	II.24A	T	R	2.30	1.34	1 (1)	1 (1)	1.98	1.01	0 (0)	2 (3)	2.18	1.23	1 (1)	3 (2)
2	How much of the time do you think about your illness?	II.22	A	-	3.17	0.90	0 (0)	0 (0)	3.28	1.33	0 (0)	2 (3)	3.21	1.08	0 (0)	2 (1)
3	I often get upset when my illness interfered with what I want to do.	II.24B	T	-	2.78	1.56	3 (3)	2 (2)	2.98	1.50	0 (0)	3 (5)	2.86	1.53	3 (2)	5 (3)
4	Most of the time I accept the fact that I am ill and live as fully as possible.	II.24D	T	R	1.51	0.83	1 (1)	0 (0)	1.72	0.72	0 (0)	3 (5)	1.59	0.79	1 (1)	3 (2)
5	How much does it bother you to think about your illness?	II.23	L	-	2.52	1.06	0 (0)	0 (0)	2.85	1.18	0 (0)	2 (3)	2.65	1.12	0 (0)	2 (1)
6	I try to avoid letting my illness interfere with my life.[d]	II.24E	T	R	1.63	0.93	1 (1)	1 (1)	1.74	0.78	0 (0)	4 (6)	1.68	0.87	1 (1)	5 (3)
7	Even though I am ill, I try to just keep going as usual.[d]	II.24C	T	R	1.68	1.02	2 (2)	1 (1)	1.65	0.60	0 (0)	3 (5)	1.67	0.87	2 (1)	4 (2)

[a]
T: 1 = Definitely true; 2 = Mostly true; 3 = Don't know; 4 = Mostly false; 5 = Definitely false
A: 1 = All of the time; 2 = Most of the time; 3 = Some of the time; 4 = A little of the time; 5 = None of the time
L: 1 = A lot; 2 = Some; 3 = A little; 4 = Not at all

[b] An 'R' indicates the item must be recoded so that a high score means greater acceptance, avoidance, or rejection of the sick role.

[c] In the USC part of the MI sample, this item was worded ". . . live like before."

[d] From Ware (1976).

There were some nonapplicable responses in the cancer sample, having to do with people who said they did not feel ill now, or that illness did not interfere with their lives (item 3). No nonapplicable responses occurred in the MI sample.

The number of missing responses ranged from 0 to 2 percent in the cancer sample (median 1 percent) and 3 to 6 percent in the MI sample (median 5 percent).

PRINCIPAL COMPONENTS ANALYSES

Because no item groupings were hypothesized, a principal components analysis was performed first. The correlation matrix of the seven (unrecoded) acceptance/rejection items is shown in Appendix B, Tables B.10, B.21, and B.22. The basic pattern of correlations is similar in the two samples except for items 6 and 7. The extreme skewness of items 6 and 7, especially in the MI sample, probably accounts for these variations.

A principal components analysis of these correlations yielded three factors with eigenvalues greater than one in the cancer sample and two factors greater than one in the MI sample. Because of the extreme skewness of items 6 and 7 in the MI sample, the results for the total sample were considered to be more reliable and will therefore be evaluated here instead of the two separate samples.

In the total sample, three factors had eigenvalues greater than one, and each explained more than 5 percent of the variance. A scree test indicated that three factors were appropriate. Results are shown in Table 69. The three factors explained 72 percent of the variance. The first factor is a rejection of sick role factor, pertaining to not letting the illness interfere with their lives. The second factor is less clear, having to do with being bothered by illness. Two of the items directly pertain to being bothered or upset, and the third indirectly (if one can presume that thinking a lot about the illness probably indicates that the person is bothered by it).

Item 1, trying to forget about the illness, is apparently a separate construct.

Table 69

CORRELATIONS BETWEEN ACCEPTANCE/REJECTION ITEMS AND ROTATED PRINCIPAL COMPONENTS: TOTAL SAMPLE (N=158)

Item Grouping/Item[a]	Component I	Component II	Component III	h^2
Rejection of Sick Role				
6 Avoid letting illness interfere	.89			.80
4 Accept illness, live fully	.81			.67
7 Try to keep going as usual	.74		.23	.60
Not Bothered by Illness				
5 Bothered to think about illness		.84		.74
3 Get upset when illness interferes		.79	.28	.71
2 Think about illness		.72	-.39	.67
Try to Forget				
1 Try to forget I am ill			.92	.86
Percent of Variance Explained	29	27	16	

[a]Item number from Table 1.

Note: Only coefficients above $|0.23|$ are shown.

MULTITRAIT SCALING ANALYSES

To confirm the findings of the principal components analysis, a multitrait scaling analysis was performed on the seven items, using the item groupings from the principal components results. Items were recoded as specified in Table 68.

Results are shown in Table 70. All item-total correlations in all samples equaled or exceeded 0.30; all items in all samples correlate higher with their hypothesized scale than with any other scale. Thus, the first two multitrait scaling criteria are satisfied. All items were scaling successes in all scales and in all samples.

The reliability and homogeneity coefficients are shown in Table 71. The reliability coefficients are all above 0.50, thus these scales are reliable enough for group comparisons.

DESCRIPTION OF SCALES

A summary of mean and standard deviations for the two scales is shown in Table 72. The rejection of sick role scale is scored so that a high score indicates greater rejection. The not bothered by illness scale is scored so that a high score indicates not being bothered. No significant differences in mean scores were observed between the two samples. An evaluation of the frequency distributions of the scales in the total sample (not shown) indicated that the rejection of sick role scale was negatively skewed (48 percent of people received the highest two scores). The not bothered by illness scale had a flat distribution and the try to forget item was slightly skewed with people tending to try to forget.

Product-moment correlations between the two scales were 0.34, 0.03, and 0.22 for the cancer, MI, and total samples, respectively. The coefficients are all small in relation to their reliabilities, indicating that the scales are independent.

Table 70

ITEM-SCALE CORRELATION MATRIX OF ACCEPTANCE/REJECTION ITEMS

Item Grouping/Item[a] (abbreviated item content)	Cancer Sample (N=94)		MI Sample (N=60)		Total Sample (N=154)	
	REJECT	BOTHERED	REJECT	BOTHERED	REJECT	BOTHERED
1 Try to forget I am ill	.08	.14	.28	.17	.16	.13
Rejection of Sick Role						
6 Avoid letting illness interfere	.79*	.35	.49*	.01	.71*	.21
4 Accept illness, live fully	.58*	.20	.52*	.19	.56*	.18
7 Try to keep going as usual	.55*	.29	.39*	-.16	.51*	.15
Not Bothered by Illness						
5 Bothered to think about illness	.37	.64*	-.02	.60*	.22	.62*
3 Get upset when illness interferes	.21	.46*	.01	.45*	.14	.46*
2 Think about illness	.27	.52*	.06	.44*	.17	.48*

*Indicates coefficient is corrected for overlap.

[a]Item number from Table 68.

Note: Standard errors are 0.10 (Cancer Sample), 0.13 (MI Sample), and 0.08 (Total Sample).

Table 71

RELIABILITY (R_{TT}) AND HOMOGENEITY (R_{II}) COEFFICIENTS FOR ACCEPTANCE/REJECTION SCALES

Scale	Number of items	Cancer Sample (N=94)		MI Sample (N=60)		Total Sample (N=154)	
		r_{tt}	r_{ii}	r_{tt}	r_{ii}	r_{tt}	r_{ii}
Rejection of sick role	3	.79	.55	.65	.38	.76	.51
Not bothered by illness	3	.69	.42	.68	.41	.69	.42

Table 72

SUMMARY STATISTICS FOR ACCEPTANCE/REJECTION SCALES

Scale	Number of items	Cancer Sample (N=94)		MI Sample (N=60)		Total Sample (N=154)	
		Mean	S.D.	Mean	S.D.	Mean	S.D.
Rejection of sick role	3	13.19	2.31	12.88	1.60	13.07	2.07
Not bothered by illness	3	8.46	2.80	9.13	3.13	8.72	2.95

XVI. DOCTOR-PATIENT RELATIONSHIP

The items regarding the doctor-patient relationship were asked only of the cancer sample.

ITEM DESCRIPTION

Twenty-six items were asked about various aspects of the doctor-patient relationship. Ten item groupings were hypothesized, as follows:

(1) confidence in doctors
(2) humaneness of doctors
(3) doctors facilitate expression of feelings and concerns
(4) doctors encourage participation
(5) information
(6) doctors believe mind affects body
(7) doctors allow optimism and hope
(8) diagnosis/outlook
(9) doctors encourage positive health habits
(10) overall satisfaction

Items included in each item grouping are shown in Table 73. Three different response choices were used for these items (see footnote a).

DESCRIPTIVE STATISTICS ON ITEMS

The mean, standard deviation, and number of missing responses are shown in Table 73. Frequency distributions for these items are presented in Table A.11 in Appendix A.

All items are skewed indicating that these people have favorable opinions about all of these aspects of their doctors.

Standard deviations for the 26 items range from 0.64 to 1.24 with a median of 1.0. The frequency distributions indicate that six of the items are quite skewed. Items 5, 12, 13, and 15 have between 85 and 90 percent of responses in the extreme two choices, and items 4 and 11 have more than 90 percent in the extreme two choices.

Table 73

DOCTOR-PATIENT RELATIONSHIP ITEMS AND SUMMARY STATISTICS: CANCER SAMPLE (N=95)

Item Grouping/Item	Questionnaire Item Number	Response Choices[a]	Direction of Scoring[b]	Mean	S.D.	Number Missing	(Percent)
Confidence in Doctors							
1 If anything can be done for my illness, my doctors will know about it.	VII.5A	A	R	1.78	0.88	5	(5)
2 Following my doctors' orders will help me get well.	VII.5H	A	R	1.96	0.83	4	(4)
3 When my doctors come into the room, it makes me feel feel better.	VII.4A	TF	R	1.98	1.04	3	(3)
4 My doctors seem very well-trained.[c]	VII.4B	TF	R	1.30	0.64	3	(3)
Humaneness of Doctor							
5 The caring of my doctors has helped me during this illness.	VII.5E	A	R	1.76	0.99	3	(3)
6 My doctors often act more impersonal than is necessary.[c]	VII.5I	A	-	3.87	1.10	4	(4)
7 My doctors always respect my feelings.[c]	VII.5D	A	R	1.94	1.00	4	(4)
Doctor Facilitates Expression of Feelings and Concerns							
8 I usually feel that my doctors don't really listen to me.	VII.5U	A	-	4.09	1.00	3	(3)
9 My doctors usually make it easy for me to tell them my concerns.	VII.5M	A	R	1.99	0.94	3	(3)
10 My doctors often encourage me to tell them how I feel.	VII.5O	A	R	2.13	1.01	5	(5)
Doctor Encourages Participation							
11 My doctors never discuss decisions about my treatment with me.	VII.5F	A	-	4.42	0.73	4	(4)
12 My doctors and I work together to treat my illness.	VII.5R	A	R	1.85	0.83	4	(4)
Information							
13 When I ask questions about my illness and treatment, my doctors always put me off.	VII.5Q	A	-	4.29	0.90	3	(3)
14 My doctors always explain things about my disease, the suggested treatments, and their effects.	VII.5J	A	R	2.01	1.19	3	(3)
15 My doctors hardly ever explain my medical problems to me.[c]	VII.5L	A	-	4.27	0.95	3	(3)
Doctors Believe Mind Affects Body							
16 My doctors encourage me to do things I like to help the healing process.	VII.5N	A	R	1.93	1.04	3	(3)
17 My doctors believe that a fighting spirit will help help me recover.	VII.5W	A	R	2.11	1.01	5	(5)
18 My doctors believe that keeping a hopeful outlook will help me get better.	VII.5S	A	R	1.99	0.83	3	(3)
Doctors Allow Optimism and Hope							
19 My doctors usually inspire hope and optimism.	VII.5K	A	R	2.03	1.02	3	(3)
20 My doctors do not seem hopeful about my chances for recovery.	VII.5V	A	-	4.02	1.06	4	(4)
Communication of Diagnosis							
21 When my doctor told me what I had, I got the feeling there wasn't much that could be done.	VII.5T	A	-	3.88	1.24	4	(4)
22 When my doctor told me what I had, I got the feeling that I had some chance for recovery.	VII.5G	A	R	2.06	1.15	5	(5)
23 When my doctor explained my diagnosis, he/she seemed cold and distant.	VII.5C	A	-	4.09	1.15	4	(4)
24 When my doctor explained my diagnosis, he/she encouraged me to overcome my illness.	VII.5N	A	R	2.19	1.14	4	(4)
Doctors Encourage Positive Health Habits							
25 My doctors encourage me to improve my health habits.	VII.5P	A	R	2.39	1.04	5	(5)
General Satisfaction							
26 Overall, how satisfied are you with your doctors' care?[c]	VII.1	S	R	1.47	0.95	4	(4)

[a]
A: 1 = Strongly agree; 2 = Agree; 3 = Not sure; 4 = Disagree; 5 = Strongly disagree
TF: 1 = Definitely true; 2 = Mostly true; 3 = Don't know; 4 = Mostly false; 5 = Definitely false
S: 1 = Very satisfied; 2 = Somewhat satisfied; 3 = Neither satisfied nor dissatisfied; 4 = Somewhat dissatisfied; 5 = Very dissatisfied

[b] An 'R' indicates the item must be recoded so that a high score means greater confidence, humaneness, facilitation, encouragement of participation, information, beliefs that mind affects body, optimism, and satisfaction.

[c] From Ware, Snyder, and Wright, 1976.

The percent of missing responses per item ranged from 3 to 5 (median of 4) percent.

MULTITRAIT SCALING ANALYSES

All items were included in a multitrait scaling analysis according to the item groupings in Table 73. Items were recoded as specified in Table 73. All item-total correlations equaled or exceeded 0.30 with the hypothesized scale. However, a number of items correlated higher with other scales than the hypothesized scale. Items 11 and 12 correlated highest with the information scale. Therefore, items 11, 12, 13, 14, and 15 were hypothesized to be a single scale pertaining to communication of information. Items 16 and 19 correlated higher with every other scale than with their own, thus both were removed from their hypothesized grouping.

Item 23 (seemed cold and distant when explaining diagnosis) correlated highest with humaneness, facilitate expression, and information. Because this item appears to assess humaneness more than diagnosis/outlook, it was moved to the humaneness scale. Item 20 correlated as high with the diagnosis/outlook scale as with its own. Because the other item in this scale was removed, item 20 was moved to the diagnosis/outlook scale.

Analyses were run including these changes, and results are shown in Table 74. All item-total correlations exceeded 0.30 in all scales. Reliability and homogeneity coefficients are shown in Table 75.

For the confidence in doctors scale, three of the four items correlate higher with this scale than with any other scale. Item 2 (following orders will help) correlates slightly higher with communication of information. The reliability coefficient was 0.76.

For the humaneness scale, two of the four items correlate higher with other scales: item 6 (acts impersonal) correlates highest with facilitate expression, and item 23 (cold and distant) correlates highest with communication of information. The reliability was 0.81.

For the facilitate expression scale, item 8 (don't really listen) correlates higher with the communication of information scale. The reliability was 0.88.

Table 74

ITEM-SCALE CORRELATIONS MATRIX OF DOCTOR-PATIENT RELATIONSHIP ITEMS: CANCER SAMPLE (N=95)

Item Grouping/Item[a] (abbreviated item content)	CONF	HUM	EXPR	COMM	MIND	DIAG	TOTAL
25 Improve health habits	.51	.36	.58	.53	.38	.28	.49*
26 Overall satisfaction	.59	.69	.66	.70	.19	.43	.68*
16 Encourage me to do things I like	.67	.54	.59	.60	.40	.42	.63*
19 Inspire hope and optimism	.60	.68	.77	.70	.45	.63	.79*
Confidence in Doctors (CONF)							
1 Know if anything can be done	.66*	.53	.61	.65	.25	.43	.67*
2 Following orders will help	.52*	.37	.48	.53	.47	.49	.60*
3 Make me feel better	.48*	.25	.33	.33	.30	.21	.38*
4 Seem well-trained	.66*	.39	.52	.62	.09	.26	.55*
Humaneness (HUM)							
5 Caring	.44	.64*	.55	.54	.40	.49	.65*
6 Act impersonal	.42	.66*	.78	.63	.29	.43	.69*
7 Respect my feelings	.26	.67*	.55	.51	.36	.39	.58*
23 Cold and distant	.43	.55*	.56	.58	.20	.46	.61*
Facilitates Expression (EXPR)							
8 Don't really listen	.63	.68	.74*	.81	.36	.41	.78*
9 Make it easy to talk	.57	.73	.84*	.77	.45	.49	.81*
10 Encourage expression	.46	.65	.74*	.61	.47	.39	.69*
Communication of Information (COMM)							
11 Never discuss decisions	.39	.55	.46	.60*	.26	.35	.56*
12 We work together	.67	.64	.77	.70*	.48	.44	.78*
13 Puts off my questions	.61	.62	.75	.80*	.34	.45	.77*
14 Explain things	.52	.58	.69	.69*	.23	.40	.67*
15 Hardly even explain	.58	.58	.67	.87*	.33	.47	.74*
Believes Mind Affects Body (MIND)							
17 Believe in fighting spirit	.31	.34	.42	.37	.77*	.50	.51*
18 Believe in hopeful outlook	.41	.39	.47	.35	.77*	.48	.54*
Diagnosis/Outlook (DIAG)							
21 Wasn't much to be done	.23	.39	.25	.36	.35	.63*	.45*
22 Had chance for recovery	.36	.34	.33	.35	.45	.73*	.51*
24 Encouraged me to overcome	.43	.64	.54	.46	.48	.59*	.66*
20 Not hopeful	.41	.37	.39	.43	.37	.47*	.51*

*Indicates coefficient corrected for overlap.

[a]Item number from Table 73.

Note: Standard error is 0.10.

Table 75

RELIABILITY (R_{TT}) AND HOMOGENEITY (R_{II}) COEFFICIENTS FOR DOCTOR-PATIENT RELATIONSHIP SCALES: CANCER SAMPLE (N=92)

Scale	Number of items	r_{tt}	r_{ii}
Confidence in doctors	4	.76	.44
Humaneness	4	.81	.51
Facilitate expression	3	.88	.71
Communication of information	5	.88	.60
Doctors believe mind affects body	2	.86	.75
Diagnosis/outlook	4	.79	.49
Total	26	.91	.28

For the communication of information scale, item 12 (we work together) correlates highest with the facilitate expression scale. The reliability was 0.88.

For the mind affects body scale, both items correlate highest with this scale than any other scale. The reliability was 0.86.

For the diagnosis/outlook scale, item 24 (encouraged me to overcome illness) correlates highest with the humaneness scale. The reliability was 0.79.

To facilitate the interpretation of these results, a principal components analysis was performed.

PRINCIPAL COMPONENTS ANALYSES

A summary of product-moment correlations among the 26 (unrecoded) items is presented in Appendix B, Table B.23. A principal components analysis was performed on all items except 25 and 26, which were hypothesized as separate items. This analysis yielded five factors with eigenvalues greater than one, but only four explained 5 percent or more of the variance. Only two items had loadings greater than 0.30 on the fifth unrotated factor. Therefore, four factors were rotated. These explained 67 percent of the variance, and results are shown in Table 76.

Table 76

CORRELATIONS OF DOCTOR-PATIENT RELATIONSHIP ITEMS WITH ROTATED PRINCIPAL COMPONENTS: CANCER SAMPLE (N=95)

Item Grouping/Item[a] (abbreviated item content)	Components I	II	III	IV	h^2
Humaneness					
6 Act impersonal	-.78		-.26		.70
7 Respect my feelings	.77	.27			.69
9 Make it easy to talk	.72	.33	.39		.79
8 Don't really listen	-.66		-.56		.78
10 Encourage expression	.63	.47	.29		.72
5 Caring	.63	.37		.23	.60
14 Explain things	.61		.48		.66
23 Cold and distant	-.59		-.33		.51
15 Hardly ever explain	-.57		-.53	-.33	.72
11 Never discuss decisions	-.57		-.25	-.30	.47
19 Inspire hope and optimism	.57	.39	.42	.27	.72
Believes Mind Affects Body					
18 Believe in hopeful outlook		.84			.78
17 Believe in a fighting spirit		.72		.34	.66
24 Encourage me to overcome	.46	.48		.42	.63
Confidence in Doctors					
4 Seem well-trained	.24		.80		.71
1 Know if anything can be done	.30		.72		.67
16 Encourage me to do things I like	.30	.38	.64		.65
3 Make me feel better		.48	.62		.62
12 We work together	.51	.40	.59		.77
13 Puts off my questions	-.57		-.58	-.24	.72
Diagnosis/Outlook					
21 Wasn't much to be done				-.83	.75
22 Had chance for recovery		.36		.75	.72
20 Not hopeful			-.38	-.56	.49
2 Following orders will help		.47	.34	.48	.57
Percent of Variance Explained	24	13	18	11	

[a]Item number from Table 73.

Note: Only coefficients greater than |0.23| are reported.

The first factor pertains to humaneness and includes all items from the humaneness scale (5, 6, 7, 23), all items from the facilitate expression scale (8, 9, 10), and three items from the communication of information scale (11, 14, 15).

The second factor pertains to the doctor believing that mind affects body, including both items from that scale. Item 24 (encourage me to overcome illness) had a moderate loading on this factor.

The third factor includes three of the four confidence in doctors items (and the fourth had a high secondary loading on this factor), and two of the five communication of information items.

The fourth factor includes three of the four communication of diagnosis items, and seems to pertain to the outlook as well as the way of communicating.

These results seem to confirm the scales hypothesized in the multitrait scaling analyses. Although three of the scales appear to assess a general humaneness factor (humaneness, facilitate expression, and communication of information), the distinctions among these scales warrant keeping them separate at this time. (They could be combined later during the higher-order analyses.)

DESCRIPTION OF SCALES

All scales were of acceptable reliability and will be retained. A summary of means and standard deviations for these scales is shown in Table 77. An evaluation of scale frequency distributions (not shown) revealed that the confidence in doctors scale was negatively skewed (31 percent of people received the highest two scores). The overall satisfaction item was skewed with people tending to be satisfied. All the other scales were bimodally distributed with about 20 to 26 percent of people receiving the highest scores, but otherwise being normally distributed. Product-moment correlations among the scales are shown in Table 78.

Table 77

SUMMARY STATISTICS FOR DOCTOR-PATIENT RELATIONSHIP SCALES: CANCER SAMPLE (N=92)

Scale	Number of Items	Mean	S.D.
Confidence in doctors	4	17.03	2.62
Humaneness	4	16.28	3.37
Facilitate expression	3	11.97	2.65
Communication of information	5	21.16	3.82
Doctors believe mind affects body	2	7.90	1.71
Diagnosis/outlook	4	15.73	3.54
Total	26	90.08	14.22

Table 78

PRODUCT-MOMENT CORRELATIONS AMONG DOCTOR-PATIENT RELATIONSHIP SCALE: CANCER SAMPLE (N=92)

Scale	1	2	3	4	5	6	7
Confidence in doctors	(.76)[a]						
Humaneness	.49	(.81)					
Facilitate expression	.61	.77	(.88)				
Communication of information	.67	.71	.81	(.88)			
Doctors believe mind affects body	.38	.39	.47	.39	(.86)		
Diagnosis/outlook	.45	.56	.48	.51	.52	(.79)	

[a]Reliability coefficients are on the diagonal.

XVII. RESULTS: PLEASURES/BENEFITS

ITEM DESCRIPTION

Fifteen items assessed pleasurable activities engaged in by the respondent and benefits of illness. Three item groupings were hypothesized: enjoy life more, benefits of illness, and pleasurable activities/diversions. The items and item groupings are shown in Table 79. Two different response choices were offered for these items (shown in footnote a).

DESCRIPTIVE STATISTICS ON ITEMS

The mean, standard deviation, and number of not applicable and missing responses for the 15 items are shown in Table 79. The frequency distributions for these items are in Appendix A, Table A.12.

The five enjoy life more items are not consistently skewed either within either sample, or between the two samples.

Three items are skewed consistently in both samples indicating that these people tend to live more for today, are not doing things they always wanted to do, and have been able to reduce the pressure in their lives. In the cancer sample, people tend to do the same things as before and enjoy everyday experiences more, but the opposite tendency was observed in the MI sample.

For the four benefits of illness items, three are skewed in the cancer sample indicating that the illness has not given them a chance to get away from a bad situation, they do not enjoy being taken care of when ill, and that people do pay more attention now. In the MI sample, all four items are skewed indicating that illness has not given them a chance to get away from a bad situation, it has given them a break from a busy life, they do enjoy being taken care of when ill, and people pay them more attention.

The six pleasurable activities/diversions items were all similarly skewed in the two samples except item 13--whereas people in the cancer sample tended to have taken a vacation since becoming ill, people in the MI sample tended not to. The other five items were skewed indicating

PLEASURES/BENEFITS ITEMS AND SUMMARY STATISTICS

Item Grouping/Item	Questionnaire Item Number	Response Choices[a]	Direction of Scoring[b]	Cancer Sample (N=95) Mean	S.D.	Number N/A (Percent)	Number Missing (Percent)	MI Sample (N=62) Mean	S.D.	Number N/A (Percent)	Number Missing (Percent)	Total Sample (N=158) Mean	S.D.	Number N/A (Percent)	Number Missing (Percent)
Enjoy Life More															
1 Since I became ill, I live more for today.	III.5B	T	R	1.89	0.96	0 (0)	3 (3)	2.20	0.94	0 (0)	2 (3)	2.01	0.97	0 (0)	5 (3)
2 During the past month, I did things I always wanted to do, but had never gotten around to.	III.3A	T	R	3.32	1.35	0 (0)	0 (0)	3.75	1.35	0 (0)	2 (3)	3.49	1.36	0 (0)	2 (1)
3 Since I became ill, I usually do pretty much what I used to do.	III.5C	T	-	2.61	1.32	0 (0)	2 (2)	3.18	1.50	0 (0)	1 (2)	2.84	1.42	0 (0)	3 (2)
4 I enjoy everyday experiences more than I did before I was ill.[c]	III.5J	T	R	2.46	1.24	0 (0)	4 (4)	3.02	1.35	0 (0)	3 (5)	2.68	1.31	0 (0)	7 (4)
5 Since I became ill, I have not been able to reduce the pressures in my life.	III.5L	T	-	3.47	1.42	1 (1)	5 (5)	3.31	1.34	0 (0)	2 (3)	3.42	1.38	1 (1)	7 (4)
Benefits of Illness															
6 My illness has given me a chance to get away from a bad situation.	III.5K	T	R	4.17	1.24	0 (0)	5 (5)	3.74	1.34	0 (0)	2 (3)	3.99	1.29	0 (0)	7 (4)
7 My illness has given me a chance to rest or to have a break from my busy life.	III.5H	T	R	3.00	1.44	0 (0)	4 (4)	2.36	1.20	0 (0)	2 (3)	2.76	1.36	0 (0)	6 (4)
8 I enjoy being taken care of when I am ill.	III.5A	T	R	3.15	1.37	0 (0)	3 (3)	2.69	1.53	0 (0)	2 (3)	2.97	1.45	0 (0)	5 (3)
9 People around me seem to pay more attention to me since I became ill.	III.5I	T	R	2.70	1.23	0 (0)	2 (2)	2.64	1.30	0 (0)	2 (3)	2.68	1.26	0 (0)	4 (2)
Pleasurable Activities/Diversions															
10 During the past month, I often took time to do things I enjoy.	III.3F	T	R	2.26	1.19	0 (0)	2 (2)	2.39	1.05	0 (0)	2 (3)	2.31	1.13	0 (0)	4 (2)
11 During the past month, I was usually too busy to take time just for fun.	III.3B	T	-	3.61	1.31	1 (1)	2 (2)	3.36	1.45	0 (0)	2 (3)	3.53	1.37	1 (1)	4 (2)
12 During the past month, I relied on work or other activities to take my mind off things.[b]	III.3C	T	R	2.84	1.43	0 (0)	3 (3)	2.70	1.39	0 (0)	2 (3)	2.78	1.41	0 (0)	5 (3)
13 I have taken a vacation or gotten away from things for awhile since I became ill.[b]	III.5D	T	R	2.46	1.55	0 (0)	5 (5)	3.80	1.57	0 (0)	2 (3)	3.00	1.69	0 (0)	7 (4)
14 During the past month, I daydreamed and imagined things that made me feel better.	III.4E	A	R	3.20	.133	0 (0)	1 (1)	3.43	1.44	0 (0)	3 (8)	2.29	1.37	0 (0)	6 (4)
15 During the past month, I usually found it easy to fill my free time.	III.3G	T	R	1.98	1.12	1 (1)	1 (1)	2.13	1.09	0 (0)	2 (3)	2.04	1.11	1 (1)	3 (2)

[a] A: 1 = Definitely true; 2 = Mostly true; 3 = Don't know; 4 = Mostly false; 5 = Definitely false.
T: 1 = All of the time; 2 = Most of the time; 3 = Some of the time; 4 = A little of the time; 5 = None of the time.

[b] Adapted from Ways of Coping (Lazarus and coworkers, personal communication, e.g., Folkman and Lazarus, 1980).

[c] From Lota Adler, personal communication.

that people did take time to do enjoyable things, they tended to rely on work and other activities to take their mind off things, they did not daydream, and they tended to find it easy to fill their free time.

Standard deviations for the 15 items are summarized as follows:

Sample	Lowest Value	Highest Value	Median	Number 1±0.2
Cancer	0.96	1.55	1.31	3
MI	0.94	1.57	1.35	4
Total	0.97	1.69	1.37	3

The item frequency distributions (see Table A.12, Appendix A) were all fairly spread out with none of the items being especially skewed.

The number of missing responses per item ranged from 0 to 5 percent in the cancer sample (median of 3 percent) and from 2 to 8 percent in the MI sample (median of 3 percent). A count of the number of missing items per person (out of 15 items) ranged from 0 to 10 in the cancer sample and 0 to 15 in the MI sample (one person did not complete any of the items in the MI sample). Most respondents were missing none or one of the items (94 percent in the cancer sample and 97 percent in the MI sample).

PRINCIPAL COMPONENTS ANALYSES

Because of the inconsistencies in item distributions (i.e. because items were skewed in opposite directions for similarly worded items), it was decided to begin with an exploratory principal components analysis to suggest new item groupings.

The product-moment correlations among the 15 (unrecoded) items are presented in Tables B.24, B.25, and B.26 in Appendix B.

A principal components analysis was performed on all unrecoded items. In the total sample, five factors had eigenvalues greater than one, each explaining more than 5 percent of the variance. A scree test confirmed that five factors should be rotated; these five factors explained 59 percent of the variance (see Table 80).

Table 80

CORRELATIONS OF PLEASURES/BENEFITS ITEMS
WITH ROTATED PRINCIPAL COMPONENTS:
TOTAL SAMPLE (N=158)

Item Grouping/Item[a] (abbreviated item content)	Component I	II	III	IV	V	h^2
ENJOY LIFE						
15 Easy to fill free time	.74					.57
1 Live more for today	.70					.55
10 Took time for things I enjoy	.69	.25		-.30		.63
DOING DIFFERENT THINGS						
13 Taken vacation/gotten away		.72		-.24		.65
2 Did things never got around to		.70			.25	.58
4 Enjoy everyday experiences more	.39	.53		.39		.59
6 Got away from bad situation		.52	.28	.27		.46
BREAK FROM BUSY LIFE						
7 Rest or break from busy life			.79			.68
3 Do what I used to do	.30		-.65	-.23		.60
5 Not able to reduce pressures	-.27		-.56	.38		.54
BUSY, WORKING						
12 Work took mind off things				.84		.72
11 Too busy for fun	-.28			.70		.62
ENJOY BEING CARED FOR						
8 Enjoy being taken care of when ill					.83	.74
9 People pay me more attention		.28			.70	.59
14 Daydreamed, imagined things		.35		.24	.42	.38
Percent of Variance explained	14	13	10	13	10	

NOTE: Only coefficients above |0.23| are reported.

[a]Item number from Table 1.

The first factor pertains to enjoying life. The second is harder to characterize, concerning doing different things and enjoying everyday experiences more. The third factor is having a break from a busy life. The fourth factor is being busy or working to take their mind off things, and the fifth factor is enjoying being cared for.

Based on these results and a reevaluation of the item content, the following item groupings were hypothesized:

(1) enjoy life (items 1, 4, 10, 15)
(2) change as a result of illness (items 2, 3, 5, 6, 7, 13)
(3) enjoy being cared for (items 8, 9)
(4) busy/working (items 11, 12)

Item 14 was not hypothesized as part of any grouping (although it loaded on factor V, it does not belong to this item grouping based on its item content).

MULTITRAIT SCALING ANALYSES

Multitrait scaling analyses were performed on the 15 items (item 14 was included as a separate item), according to the above four item groupings. Items were recoded as specified in Table 79; however, item 11 was reversed in sign for inclusion in the busy/working item grouping.

Results indicated that items 3 and 13 did not belong in the "change" grouping (these correlated 0.05 and 0.16 with this scale in the total sample). These were excluded and the analyses rerun.

Item-total correlations of the 13 items are shown in Table 81.

Item 14 is not associated consistently with any hypothesized item grouping.

In the enjoy life scale, all item-total correlations exceed 0.30 in the cancer sample only. Only two of the four items do so in the MI sample. All items correlate highest with this scale than any other scale in the cancer sample. In the MI sample, this is true for three items, but item 4 (enjoy everyday experiences more) correlates higher with the "change" and "busy" scales. The reliability coefficients for this scale are 0.64 for the cancer sample and 0.56 for the MI sample (see Table 82).

In the change resulting from illness scale, two of the four item-total correlations equal or exceed 0.30 in the cancer sample, and none do so in the MI sample. The reliability coefficients for this scale are 0.50 in the cancer sample, 0.38 in the MI sample, and 0.44 in the total

Table 81

ITEM-SCALE CORRELATION MATRIX OF 13 PLEASURES/BENEFITS ITEMS

Item Grouping/Item[a] (abbreviated item content)	Cancer Sample (N=93)				MI Sample (N=61)				Total Sample (N=154)			
	ENJOY	CHANGE	CARED	BUSY	ENJOY	CHANGE	CARED	BUSY	ENJOY	CHANGE	CARED	BUSY
14 Daydreamed, imagined things	.10	.38	.23	-.02	.06	.07	.29	.33	.10	.26	.24	.12
Enjoy Life (ENJOY)												
1 Live more for today	.48*	.14	.20	.03	.27*	.20	.11	-.03	.41*	.15	.14	-.01
4 Enjoy everyday experiences more	.32*	.23	.13	.19	.20*	.46	.26	.38	.29*	.29	.16	.25
10 Took time for things I enjoy	.49*	.16	.11	-.35	.48*	.30	.21	-.07	.48*	.21	.14	-.24
15 Easy to fill free time	.42*	.05	.06	-.15	.46*	.20	.06	-.15	.43*	.10	.05	-.15
Change Resulting from Illness (CHANGE)												
2 Did things never got around to	.24	.22*	.27	-.11	.26	.26*	.18	.22	.27	.20*	.21	.01
5 Not able to reduce pressures	.17	.28*	.08	-.38	.18	.09*	.29	.01	.18	.20*	.16	-.23
6 Got away from bad situation	.03	.30*	.07	.14	.25	.25*	.24	.33	.09	.28*	.15	.23
7 Rest or break from busy life	.09	.39*	.12	-.05	.42	.24*	.24	.28	.15	.32*	.19	.08
Enjoy Being Cared For (CARED												
8 Enjoy being taken care of when ill	.18	.10	.36*	-.24	.16	.22	.33*	.21	.14	.16	.35*	-.03
9 People pay me more attention	.11	.26	.36*	-.17	.25	.45	.33*	.16	.16	.33	.35*	-.03
Busy/Working (BUSY)												
11 Too busy for fun	-.19	-.01	-.17	.41*	.07	.33	.21	.60*	-.10	.12	.00	.49*
12 Work took mind off things	.01	-.27	-.25	.41*	.09	.29	.21	.60*	.03	-.06	-.06	.49*

*Indicates coefficient corrected for overlap.

[a]Item number from Table 68.

Note: Standard errors are 0.10 (Cancer Sample), 0.13 (MI Sample), and 0.08 (Total Sample).

Table 82

RELIABILITY (R_{TT}) AND HOMOGENEITY (R_{II}) COEFFICIENTS FOR BENEFITS/PLEASURE SCALES

Scale	Number of items	Cancer Sample (N=93)		MI Sample (N=61)		Total Sample (N=154)	
		r_{tt}	r_{ii}	r_{tt}	r_{ii}	r_{tt}	r_{ii}
Enjoy life	4	.64	.30	.56	.24	.62	.29
Change resulting from illness	4	.50	.20	.38	.13	.44	.16
Enjoy being cared for	2	.52	.36	.50	.33	.50	.34
Busy/working	2	.58	.41	.75	.60	.66	.49

sample. Because these are not acceptable in the MI and total samples, and because no improvements in the scale appear to be possible, this scale will not be used.

In the enjoy being cared for scale, both item-total correlations equal or exceed 0.30 in both samples. Both items correlate higher with this scale than with any other scale. The reliability coefficients are 0.52 and 0.50 for the cancer and the MI samples, respectively, which are barely acceptable.

In the busy/working scale, both item-total correlations exceed 0.30 in all samples, and both items correlate higher with this scale than with any other scale. There is one scaling success and one probable success in the cancer sample, and two scaling successes in the MI sample. Reliability coefficients are 0.58 and 0.75 in the cancer and MI samples, respectively.

DESCRIPTION OF SCALES

The mean and standard deviation of the three acceptable pleasures/benefits scales are shown in Table 83. People in the cancer sample enjoy life more ($t=2.38$, $p<.05$). An evaluation of scale frequency distributions in the total sample (not shown) revealed that

Table 83

SUMMARY STATISTICS FOR THE PLEASURES/BENEFITS SCALES

Scale	Number of Items	Cancer Sample (N=93) Mean	S.D.	MI Sample (N=61) Mean	S.D.	Total Sample (N=158) Mean	S.D.
Enjoy life	4	15.44	3.10	14.27	2.90	14.97	3.07
Enjoy being cared for	2	6.14	2.13	6.67	2.30	6.35	2.22
Busy/working	2	5.60	2.33	5.93	2.52	5.73	2.41

the enjoy life scale was slightly skewed with people tending to score high. The other scales were roughly normally distributed. The correlations among the three scales are shown in Table 84.

Table 84

PRODUCT-MOMENT CORRELATIONS AMONG PLEASURES/BENEFITS SCALES

Sample/Scale	1	2	3
Cancer			
1. Enjoy life	(.64)[a]		
2. Enjoy being cared for	.18	(.52)	
3. Busy/working	-.10	-.25	(.58)
MI			
1. Enjoy life	(.56)		
2. Enjoy being cared for	.25	(.50)	
3. Busy/working	.08	.23	(.75)
Total			
1. Enjoy life	(.62)		
2. Enjoy being card for	.18	(.50)	
3. Busy/working	-.04	-.03	(.66)

[a]Reliability coefficients are on the diagonal.

XVIII. POSITIVE AND NEGATIVE FEELINGS

ITEM DESCRIPTION

Several positive and negative feelings were assessed by 31 items, including optimism/positive outlook, satisfaction with life, positive well-being, depression, anxiety, guilt, and anger. These items and item groupings are shown in Table 85.

DESCRIPTIVE STATISTICS ON ITEMS

The mean, standard deviation, and number of missing responses for each item are shown in Table 85. The frequency distributions for the items are presented in Appendix A, Table A.13.

All items are skewed, and all but one item are skewed in the same direction, in both samples. Item 9 is differentially skewed, with the cancer sample indicating more satisfaction with work than the MI sample. The direction of skewness indicates that all these people tend to be optimistic, satisfied with their lives, and experience positive well-being. They do not tend to be depressed, anxious, guilty, or angry.

Standard deviations for the 31 items are summarized as follows:

Sample	Lowest Value	Highest Value	Median	Number 1±0.2
Cancer	0.70	1.24	0.96	24
MI	0.42	1.58	1.15	21
Total	0.68	1.44	1.03	23

The frequency distributions (shown in Table A.13) indicated that several items were quite skewed, especially in the MI sample. Items 2 and 26 had more than 85 percent of responses in the extreme two categories in the cancer sample, and more than 95 percent in the MI sample. Items 2 and 13 had no response of five in either sample.

The number of missing responses was high for item 10 (satisfaction

Table 85

POSITIVE AND NEGATIVE FEELINGS ITEMS AND SUMMARY STATISTICS

	Item Grouping/Item	Questionnaire Item Number	Response Choices[a]	Direction of Scoring[b]	Cancer Sample (N=95) Mean	S.D.	Number Missing (Percent)	MI Sample (N=63) Mean	S.D.	Number Missing (Percent)	Total Sample (N=158) Mean	S.D.	Number Missing (Percent)
Optimism/Positive Outlook													
1	I am optimistic that my life will work out well.	VI.1G	A	R	1.98	0.78	3 (3)	2.10	0.85	5 (8)	2.03	0.81	8 (5)
2	No matter how serious my illness is, there is always hope of getting better.	VI.1M	A	R	1.63	0.72	2 (2)	1.58	0.62	4 (6)	1.61	0.68	6 (4)
3	During the past month, how often have you felt that you had nothing to look forward to?	VI.9B	T	-	4.20	1.06	4 (4)	4.42	0.98	3 (5)	4.28	1.03	7 (4)
4	During the past month, everything looked very discouraging.	III.4F	T	-	4.01	0.96	2 (2)	3.85	1.17	4 (6)	3.95	1.05	6 (4)
5	During the past month, I looked on the bright side of things.	III.4D	T	R	1.92	0.90	2 (2)	1.97	0.82	3 (5)	1.94	0.87	5 (3)
6	During the past month, I felt weighed down by my illness.	III.4C	T	-	3.49	1.09	2 (2)	3.41	1.38	4 (6)	3.46	1.21	6 (4)
7	During the past month, I told myself that things could be a lot worse.	III.4A	T	R	2.31	1.24	2 (2)	2.63	1.27	4 (6)	2.45	1.26	6 (4)
Satisfaction with Life													
8	During the past month, how much of the time have you been satisfied with your personal life?	VI.6B	T	R	2.41	0.94	3 (3)	2.66	1.15	2 (3)	2.51	1.03	5 (3)
9	During the past month, how much of the time have you been satisfied with your work?	VI.6A	T	R	2.86	1.19	13[c] (14)	3.60	1.57	15[c] (24)	3.14	1.38	28[c] (18)
10	During the past month, how much of the time have you been satisfied with your friendships?	VI.6C	T	R	2.13	0.96	2 (2)	2.45	1.20	3 (5)	2.25	1.07	5 (3)
11	During the past month, how much of the time have you been satisfied with your leisure activities?	VI.6D	T	R	2.60	1.11	3 (3)	2.82	1.20	3 (5)	2.68	1.15	6 (4)
Positive Well-Being													
12	During the past month, how much of the time did you enjoy the things you did?	VI.8	T	R	2.05	1.01	2 (2)	2.18	1.29	1 (2)	2.10	1.13	3 (2)
13	During the past month, how often have you felt you were in a good mood?	VI.9D	T	R	2.38	0.70	4 (4)	2.31	0.66	2 (3)	2.28	0.69	6 (4)
14	During the past month, how often have you felt cheerful?	VI.9G	T	R	2.48	0.73	2 (2)	2.27	0.82	3 (5)	2.40	0.77	5 (3)
15	During the past month, how often have you felt happy?	VI.9J	T	R	2.52	0.84	2 (2)	2.46	0.90	4 (6)	2.49	0.86	6 (4)
Depression													
16	During the past month, how often have you felt depressed?	VI.9D	T	R	3.64	0.97	2 (2)	3.90	1.15	5 (8)	3.74	1.05	7 (4)
17	During the past month, how often have you felt so down in the dumps that nothing could cheer you up?	VI.9F	T	R	4.46	0.82	3 (3)	4.64	0.86	2 (3)	4.53	0.84	5 (3)
18	During the past month, how often have you felt in low spirits?	VI.9M	T	R	3.57	0.98	1 (1)	3.81	1.17	4 (6)	3.67	1.06	5 (3)
19	In the past month, how much has feeling depressed interfered with what you usually do?	VI.3C	T	R	3.92	1.03	2 (2)	4.27	1.04	3 (5)	4.06	1.05	5 (3)

Table 85 (continued)

Item Grouping/Item	Questionnaire Item Number	Response Choices[a]	Direction of Scoring	Cancer Sample (N=95) Mean	S.D.	Number Missing (Percent)	MI Sample (N=63) Mean	S.D.	Number Missing (Percent)	Total Sample (N=158) Mean	S.D.	Number Missing (Percent)
Anxiety												
20 During the past month, how often have you felt nervous?	VI.2B	T	R	3.29	0.80	1 (1)	3.50	1.27	5 (8)	3.37	1.01	8 (5)
21 During the past month, how often have you felt anxious?	VI.2I	T	R	3.41	0.90	2 (2)	3.22	1.26	3 (5)	3.33	1.06	5 (3)
22 During the past month, how often have you felt tense?	VI.2K	T	R	3.40	0.85	2 (2)	3.53	1.06	5 (8)	3.45	0.94	7 (4)
23 In the past month, how much has feeling anxious interfered with what you usually do?	VI.3B	T	R	3.92	0.99	2 (2)	4.15	1.13	4 (6)	4.01	1.05	6 (4)
Guilt												
24 During the past month, how often have you felt guilty that your illness brought on problems for your family and friends?	VI.9E	T	R	4.10	1.08	4 (4)	4.39	1.08	2 (3)	4.22	1.08	6 (4)
25 I blame myself for my illness.	II.24P	TF	R	3.96	1.32	1 (1)	3.40	1.58	3 (5)	3.74	1.44	4 (2)
26 In the past month, how much has feeling guilty interfered with what you usually do?	VI.3D	T	R	4.49	0.85	2 (2)	4.88	0.42	3 (5)	4.65	0.74	5 (3)
Anger												
27 During the past month, how often have you felt easily annoyed?	VI.2K	T	R	3.46	0.92	1 (1)	3.72	1.15	3 (5)	3.56	1.02	4 (2)
28 During the past month, how often have you felt angry?	VI.2C	T	R	3.60	0.82	2 (2)	3.64	1.15	5 (8)	3.62	0.96	7 (4)
29 During the past month, how often have you felt irritated?	VI.2H	T	R	3.50	0.70	1 (1)	3.65	1.15	3 (5)	3.56	0.90	4 (2)
30 During the past month, how often have you felt resentful?	VI.2N	T	R	4.05	1.04	1 (1)	4.27	1.07	3 (5)	4.14	1.05	4 (2)
31 In the past month, how much has feeling angry interfered with what you usually do?	VI.3A	T	R	4.14	0.96	2 (2)	4.33	0.89	2 (3)	4.21	0.94	4 (2)

[a]
A: 1 = Strongly agree; 2 = Agree; 3 = Not sure; 4 = Disagree; 5 = Strongly disagree
T: 1 = All of the time; 2 = Most of the time; 3 = Some of the time; 4 = A little of the time; 5 = None of the time
TF: 1 = Definitely true; 2 = Mostly true; 3 = Don't know; 4 = Mostly false; 5 = Definitely false

[b] An 'R indicates that items must be recoded so that a high score means more of the feeling (e.g., more positive well-being, more depression).

[c] A number of these missing responses are due to people not working.

[d] From Ware, Johnston, and Davies-Avery, 1979.

with work) because many people did not work (14 and 24 percent for the cancer and MI samples, respectively). Not including item 10, the number of missing responses per item ranged from 1 to 4 percent in the cancer sample (median of 2 percent) and from 2 to 8 percent in the MI sample (median of 5 percent). The number of missing responses per person ranged from 0 to 26 in the cancer sample and from 0 to 30 in the MI sample. Ninety-five percent of the cancer sample and 87 percent of the MI sample had two or less missing items.

MULTITRAIT SCALING ANALYSES

All items were recoded as shown in Table 85. When all 31 items were analyzed according to the hypothesized item groupings (see Table 85), item 7 clearly did not belong in the matrix (it correlated only 0.21 with the optimism scale in all samples, and correlated 0.20 or less with all other scales in all samples). Analyses were rerun excluding item 7. In these results (not shown), item 9 (satisfaction with work) correlated much lower with the satisfaction with life scale than did the other three items in the scale. Because satisfaction with work can be quite distinct from satisfaction with other aspects of life, and because of the large number of missing responses on this item due to nonworking people, this item was excluded from the scale. (Satisfaction with work will thus be scored as a single item measure). In addition, item 3 (nothing to look forward to) correlated much higher with the depression scale than the optimism scale in all three samples. Therefore, the analyses were rerun with item 9 excluded and item 3 moved to the depression scale. Results are shown in Table 86.

In the optimism/positive outlook scale, all item-total correlations exceeded 0.30 in all samples except for item 2 in the MI sample. Most items correlated highest with this scale; exceptions were items 1 and 4 in the MI sample and item 6 in all samples. In the total sample, all items are probable scaling successes. Reliability coefficients are all acceptable (i.e. all are above 0.50) (see Table 87).

In the satisfaction with life scale, all item-total correlations equal or exceed 0.30 in all samples. All items correlate highest with this scale except for item 8 in the cancer sample. In the total sample,

Table 86

ITEM-SCALE CORRELATION MATRIX OF POSITIVE AND NEGATIVE FEELINGS ITEMS

Item Grouping/Item[a] (abbreviated item content)	Cancer Sample (N=93)							MI Sample (N=60)							Total Sample (N=153)						
	OPT	SAT	PWB	DEP	ANX	GLT	ANG	OPT	SAT	PWB	DEP	ANX	GLT	ANG	OPT	SAT	PWB	DEP	ANX	GLT	ANG
Optimism/Positive Outlook (OPT)																					
1 Optimistic that life will work out	.61*	.37	.50	-.39	-.26	-.18	-.17	.32*	.36	.13	-.12	.02	.06	.04	.49*	.37	.34	-.26	-.12	-.09	-.07
2 Always hope of getting better	.48*	.37	.41	-.29	-.21	-.13	-.12	.23*	.18	.22	-.05	.01	.17	.07	.38*	.28	.35	-.21	-.12	-.03	-.05
4 Everything looked discouraging	.61*	.46	.56	-.60	-.44	-.43	-.34	.47*	.45	.33	-.47	-.24	-.16	-.32	.55*	.46	.45	-.52	-.33	-.31	-.32
5 Looked on bright side	.61*	.37	.49	-.39	-.26	-.21	-.17	.31*	.20	.19	-.18	-.09	.07	-.05	.50*	.30	.37	-.31	-.18	-.12	-.11
6 Felt weighed down by illness	.46*	.32	.37	-.39	-.26	-.44	-.31	.32*	.33	.35	-.43	-.43	-.39	-.46	.38*	.33	.35	-.39	-.39	-.42	-.37
Satisfaction with Life (SAT)																					
8 Satisfied with personal life	.45	.73*	.75	-.70	-.58	-.38	-.63	.45	.63*	.49	-.61	-.33	-.16	-.40	.45	.69*	.62	-.62	-.45	-.28	-.49
10 Satisfied with friendships	.47	.71*	.64	-.51	-.50	-.37	-.52	.41	.59*	.42	-.48	-.18	-.23	-.20	.44	.66*	.52	-.45	-.33	-.30	-.33
11 Satisfied with leisure	.43	.66*	.58	-.48	-.38	-.39	-.40	.44	.64*	.47	-.43	-.29	-.15	-.36	.44	.65*	.53	-.44	-.33	-.29	-.37
Positive Well-Being (PWB)																					
12 Enjoyed things	.51	.69	.73*	-.65	-.55	-.33	-.52	.40	.48	.65*	-.58	-.36	-.06	-.15	.46	.64	.68*	-.60	-.45	-.21	-.33
13 In a good mood	.51	.65	.84*	-.59	-.49	-.33	-.52	.37	.41	.57*	-.59	-.41	-.22	-.51	.44	.52	.72*	-.60	-.46	-.29	-.52
14 Cheerful	.58	.63	.77*	-.70	-.59	-.40	-.55	.29	.33	.66*	-.61	-.37	-.10	-.39	.45	.47	.72*	-.67	-.49	-.28	-.49
15 Happy	.67	.67	.82*	-.67	-.58	-.36	-.51	.28	.37	.69*	-.55	-.40	-.13	-.37	.52	.53	.77*	-.62	-.48	-.28	-.45
Depression (DEP)																					
16 Depressed	-.60	-.53	-.64	.76*	.72	.50	.64	-.44	-.49	-.57	.77*	.65	.13	.68	-.52	-.48	-.61	.77*	.69	.76	.66
17 Down in the dumps	-.49	-.48	-.64	.77*	.55	.39	.56	-.26	-.48	-.43	.59*	.30	.19	.27	-.39	-.45	-.56	.70*	.44	.31	.44
18 In low spirits	-.55	-.63	-.68	.79*	.71	.43	.65	-.35	-.40	-.24	.73*	.53	.20	.51	-.45	-.50	-.70	.76*	.62	.33	.59
19 Feeling depressed interfered	-.29	-.52	-.51	.76*	.62	.48	.70	-.36	-.40	-.57	.67*	.61	.23	.63	-.29	-.43	-.54	.73*	.62	.39	.67
3 Nothing to look forward to	-.53	-.55	-.67	.69*	.53	.43	.56	-.47	-.62	-.47	.53*	.22	.28	.21	-.49	-.56	-.60	.63*	.40	.30	.42
Anxiety (ANX)																					
20 Nervous	-.44	-.50	-.60	.59	.62*	.43	.62	-.40	-.16	-.29	.35	.36*	.07	.41	-.40	-.30	-.44	.47	.47*	.25	.51
21 Anxious	-.40	-.47	-.52	.57	.79*	.39	.67	-.13	-.24	-.40	.46	.63*	.11	.48	-.27	-.36	-.45	.48	.69*	.26	.55
22 Tense	-.40	-.45	-.53	.64	.81*	.36	.66	-.20	-.30	-.38	.51	.53*	.42	.53	-.30	-.36	-.46	.58	.67*	.38	.60
23 Feeling anxious interfered	-.24	-.45	-.47	.69	.61*	.38	.71	-.17	-.28	-.35	.50	.70*	.18	.54	-.21	-.35	-.42	.61	.66*	.30	.63
Guilt (GLT)																					
24 Guilty for problems of illness	-.30	-.35	-.27	.27	.24	.32*	.32	-.24	-.20	-.31	.36	.31	.02*	.36	-.27	-.27	-.29	.32	.28	.20*	.35
25 Blame self for illness	-.28	-.23	-.21	.31	.27	.35*	.38	-.01	-.14	.06	.01	.02	.06*	.00	-.17	-.21	-.08	.14	.13	.19*	.17
26 Feeling guilty interfered	-.32	-.40	-.45	.64	.56	.41*	.65	-.17	-.03	-.09	.18	.28	.26*	.09	-.25	-.24	-.35	.53	.45	.33*	.47
Anger (ANG)																					
27 Easily annoyed	-.35	-.45	-.47	.54	.65	.42	.62*	-.28	-.36	-.41	.56	.59	.13	.74*	-.31	-.38	-.45	.55	.62	.30	.68*
28 Angry	-.18	-.46	-.40	.52	.62	.45	.73*	-.14	-.18	-.31	.44	.49	.11	.70*	-.16	-.31	-.36	.47	.55	.30	.71*
29 Irritated	-.19	-.40	-.45	.59	.65	.40	.66*	-.27	-.35	-.33	.43	.54	.19	.66*	-.22	-.35	-.33	.50	.58	.29	.65*
30 Resentful	-.33	-.51	-.51	.62	.62	.58	.65*	-.38	-.31	-.35	.54	.50	.27	.73*	-.34	-.42	-.45	.59	.57	.46*	.69*
31 Feeling angry interfered	-.21	-.51	-.54	.69	.67	.50	.75*	-.23	-.30	-.30	.46	.48	.17	.64*	-.21	-.40	-.45	.61	.58	.39	.69*

*Indicates coefficient corrected for overlap.

[a]Item number from Table 85.

Note: Standard errors are 0.10 (Cancer Sample), 0.13 (MI Sample), and 0.08 (Total Sample).

Table 87

RELIABILITY (R_{TT}) AND HOMOGENEITY (R_{II}) COEFFICIENTS
FOR POSITIVE AND NEGATIVE FEELINGS SCALES

Scale	Number of Items	Cancer Sample (N=93)		MI Sample (N=60)		Total Sample (N=153)	
		r_{tt}	r_{ii}	r_{tt}	r_{ii}	r_{tt}	r_{ii}
Optimism/positive outlook	5	.77	.40	.56	.20	.69	.31
Satisfaction with life	4	.83	.62	.78	.54	.81	.59
Positive well-being	4	.90	.69	.80	.49	.86	.60
Depression	5	.90	.64	.85	.52	.88	.60
Anxiety	4	.86	.60	.75	.43	.80	.50
Guilt	3	.54	.28	.13	.05	.37	.17
Anger	5	.86	.55	.86	.56	.86	.56

all three items are probable successes. Reliability coefficients are all acceptable (see Table 87).

In the positive well-being scale, all item-total correlations exceed 0.30 in all samples. All items correlate higher with this scale than any other scale except item 13 in the MI sample. The total sample has one scaling success and three probable successes. Reliability coefficients are acceptable (see Table 87).

In the depression scale, all item-total correlations exceed 0.30 in all samples. All items correlate higher with this scale than any other scale except item 18 in the MI sample. In the total sample, all items are probable successes.

In the anxiety scale, all item-total correlations exceed 0.30 in all samples. Item 21 correlates higher with this scale than any other scale in all samples. Items 22 and 23 do so in the total sample and one subsample each. Item 20 (feel nervous) correlates the same or higher with the anger scale in all samples. In the total sample, three items are probable successes, and one is a probable failure. Reliability coefficients are all acceptable (see Table 87).

In the guilt scale, none of the item-scale correlations equal or exceed 0.30 in the MI sample but all of them do in the cancer sample. One item (26) does so in the total sample. Reliability coefficients are acceptable in the cancer sample but are not in the MI sample or the total sample. This scale will not be retained.

In the anger scale, all item-total correlations equal or exceed 0.30 in all samples. All items correlate higher with this scale than any other scale except item 27 (easily annoyed) in the cancer sample, which correlates highest with the anxiety scale. In the total sample, all items are probable successes. Reliability coefficients are all acceptable (see Table 87).

PRINCIPAL COMPONENTS ANALYSES

The correlation matrices of the 31 (unrecoded) positive and negative feelings items are shown in Appendix B, Tables B.27, B.28, and B.29 for the cancer sample, MI sample, and total sample, respectively.

A principal components analysis of the 27 items used in the multitrait scaling analysis (item 7 and the three guilt items were excluded) yielded four factors with eigenvalues greater than one in the total sample. Only three of these explained at least 5 percent of the variance; a scree test suggested that three or four factors should be rotated. Because there were several loadings greater than 0.30 on the fourth unrotated factor, four factors were rotated. Results are shown in Table 88. These four factors explained 60 percent of the variance.

The first factor is a general negative feelings factor, including all of the anger items, three of the four depression items (and the fourth, item 17, had a secondary loading on this factor), and all of the anxiety items.

The second factor is an optimism/positive outlook factor. The first three items (1, 2, 5) are from the same scale, and items 14 and 15 are from the positive well-being scale. The remaining optimism/positive outlook items had secondary loadings on this factor.

The third factor seems to be a satisfied with work factor, with the other two items having several secondary loadings. This is consistent with the multitrait scaling results where satisfaction with work was the

Table 88

CORRELATIONS OF POSITIVE AND NEGATIVE FEELINGS ITEMS WITH ROTATED PRINCIPAL COMPONENTS: TOTAL SAMPLE (N=154)

Item Grouping/Item[a]	Component I	II	III	IV	h^2
Negative Feelings					
27 Easily annoyed	.78				.65
28 Angry	.76				.59
29 Irritated	.75				.58
16 Depressed	.74	-.33		.28	.74
22 Tense	.73				.59
30 Resentful	.68			.29	.56
21 Anxious	.66		-.30		.56
23 Feeling anxious interfered	.66			.42	.63
31 Feeling angry interfered	.66			.49	.70
19 Feeling depressed interfered	.65			.52	.70
18 In low spirits	.64	-.40		.39	.72
20 Nervous	.61	-.33			.52
Optimism/Positive Outlook					
5 Looked on bright side		.69			.50
2 Always hope of getting better		.66			.46
1 Optimistic that life will work out		.61		-.26	.49
15 Happy	-.38	.53		-.43	.61
14 Cheerful	-.46	.51		-.41	.66
Satisfied with Work					
9 Satisfied with work			.81		.70
4 Everything looked discouraging	.24	-.40	-.51	.29	.56
6 Felt weighed down by illness	.45	-.36	-.50		.60
General Satisfaction/Well-Being					
3 Nothing to look forward to		-.23		.74	.67
12 Enjoyed things		.35		-.66	.64
8 Satisfied with personal life	-.28	.24	.27	-.66	.65
11 Satisfied with leisure			.42	-.63	.61
10 Satisfied with friendships		.23	.38	-.58	.56
17 Down in the dumps	.41	-.28		.55	.56
13 In a good mood	-.44	.40		-.48	.59
Percent of Variance Explained	26	12	7	16	

[a]Item number from Table 85.

Note: Only coefficients above |0.23| are reported.

least correlated with the satisfaction with life scale. These findings confirm that satisfaction with work should be scored separately. The fourth factor is primarily a satisfaction with life factor, including all three of the satisfaction items. It also includes one optimism item, two positive well-being items, and two depression items.

These results support scoring a global negative feelings measure. However, because the three feelings can be distinguished in multitrait scaling studies, they will be scored separately at this time. These results suggest that optimism/positive outlook and positive well-being are very similar and might be one construct. Again, however, because they were distinguished in the multitrait scaling studies, they will be scored separately at this time. Life satisfaction and positive well-being also appear to be similar.

Essentially, the principal components results suggest that collapsing the positive and negative feelings scales into more global indicators may be warranted. However, for purposes of this study, they will be scored separately.

DESCRIPTION OF SCALES

A summary of means and standard deviations for the scales is shown in Table 89. The scales are scored so that a higher score indicates more of the title of the scale (e.g., a high score means more depression). Only one difference in means between the two samples was statistically significant: The cancer sample has more depression than the MI sample ($t=1.96$, $p < .05$). An evaluation of scale frequency distributions in the total sample (not shown) revealed that all of the positive feelings scales were normally distributed, as was the satisfaction with work item. The depression, anxiety, and anger scales were slightly positively skewed in the total sample with people tending to get low scores.

Product-moment correlations among the scales are summarized in Table 90. Correlations are high among the three negative feelings scales ($r=0.68$ and greater in the total sample), suggesting that a single scale may be appropriate. Correlations are moderate among the three positive feelings scales (range is from 0.52 to 0.65 in the total

Table 89

SUMMARY STATISTICS FOR THE POSITIVE AND NEGATIVE FEELINGS SCALES

Scale	Number of Items	Cancer Sample (N=93)		MI Sample (N=60)		Total Sample (N=153)	
		Mean	S.D.	Mean	S.D.	Mean	S.D.
Optimism/Positive Outlook	5	18.97	3.22	18.64	2.98	18.84	3.13
Satisfaction with Life	3	10.87	2.59	10.10	2.94	10.56	2.75
Positive Well-Being	4	14.60	2.89	14.99	2.92	14.74	2.91
Depression	5	10.22	4.08	8.77	3.95	9.65	4.09
Anxiety	4	9.99	2.96	9.57	3.57	9.82	3.22
Anger	5	11.19	3.51	10.20	4.19	10.80	3.82

Table 90

PRODUCT-MOMENT CORRELATIONS AMONG THE POSITIVE AND NEGATIVE FEELINGS SCALES

Sample/Scale	1	2	3	4	5	6
CANCER SAMPLE (N=93)						
1 Optimism/positive outlook	(.77)[a]					
2 Satisfaction with life	.52	(.83)				
3 Positive well-being	.64	.75	(.90)			
4 Depression	-.58	-.64	-.74	(.90)		
5 Anxiety	-.43	-.55	-.62	.74	(.86)	
6 Anger	-.32	-.59	-.59	.74	.80	(.86)
MI SAMPLE (N=60)						
1 Optimism/positive outlook	(.56)					
2 Satisfaction with life	.52	(.78)				
3 Positive well-being	.42	.55	(.80)			
4 Depression	-.47	-.60	-.71	(.85)		
5 Anxiety	-.30	-.32	-.47	.60	(.75)	
6 Anger	-.32	-.38	-.40	.60	.64	(.86)
TOTAL SAMPLE (N=153)						
1 Optimism/positive outlook	(.69)					
2 Satisfaction with life	.52	(.81)				
3 Positive well-being	.55	.65	(.86)			
4 Depression	-.52	-.59	-.73	(.88)		
5 Anxiety	-.37	-.43	-.55	.68	(.80)	
6 Anger	-.31	-.46	-.51	.68	.72	(.86)

[a]Reliability coefficients are on the diagonal.

sample). A high negative correlation was observed between depression and positive well-being (e.g., r=-.073 in the total sample) indicating that these may be opposite ends of a single dimension.

XIX. FUNCTIONAL STATUS

ITEM DESCRIPTION AND SUMMARY STATISTICS

Twelve items assessed three aspects of functional status: personal functioning, role functioning, and overall functioning. Most of these items have been previously scaled in the Rand Health Insurance Study (Stewart, Ware, and Brook, 1981a and b). The items are presented in Table 91, with the number limited on each item. Two types of response choices were offered (see footnote a). The frequency distributions for each item are shown in Table A.14 in Appendix A.

In the cancer sample, the percent limited on each item ranged from 80 percent on item 1 to 3 percent on item 9. In the MI sample, the percent limited ranged from 92 percent on item 1 to 2 percent on item 8.

The number of missing responses was high for item 11, because a skip pattern in the questionnaire erroneously instructed people whose illness did not keep them from working to skip item 11. Apparently some people ignored these instructions and responded anyway. However, the scaling results of these role functioning items will be problematic. For the remaining 11 items, the percent of missing responses per item ranged from 0 to 2 in the cancer sample (median of 0.5 percent) and from 0 to 3 in the MI sample (median of 1.6 percent).

GUTTMAN SCALOGRAM ANALYSES

For purposes of the scalogram analysis, items were recoded into dichotomous measures (0 = not limited, 1 = limited). For those items with three response choices (items 3-9), a response of either 2 or 3 was considered "limited."

Two Guttman scales were tested, personal functioning (items 1-9) and role functioning (items 10 and 11).

Table 91

FUNCTIONAL STATUS ITEMS AND NUMBER LIMITED

Item Grouping/Item	Questionnaire Item Number	Response Choices[a]	Cancer Sample (N=95) Number Limited[b]	Cancer Sample (N=95) Percent[c]	MI Sample (N=63) Number Limited[b]	MI Sample (N=63) Number Percent[c]	Total Sample (N=158) Number Limited[b]	Total Sample (N=158) Percent[c]
Personal Functioning								
1 Does your health limit the kinds or amounts of vigorous activities you can do such as running, lifting heavy objects, or participating in active sports?	II.11	A	76	80.0	56	91.8	132	84.6
2 Does your health limit the kinds or amounts of moderate activities you can do such as moving a table, carrying groceries, or bowling?	II.12	A	46	48.9	40	63.5	86	54.8
3 If you had to, could you do light work around the house like dusting or washing dishes?	II.13	B	21	22.1	9	14.3	30	9.1
4 If you had to, could you run a short distance?	II.14	B	40	42.1	41	65.1	81	51.9
5 Can you walk uphill or upstairs?	II.15	B	33	34.7	26	41.3	59	33.1
6 Can you walk a block or more?	II.16	B	24	25.3	15	23.8	39	24.7
7 Can you walk around inside the house?	II.17	B	10	10.5	4	6.3	14	8.9
8 Can you dress yourself?	II.18	B	5	5.3	1	1.6	6	3.8
9 Can you bathe without help?	II.19	B	3	3.2	3	4.8	6	3.8
Role Functioning								
10 Does your illness keep you from working at a job or going to school?	I.6C	A	38	40.4[d]	30	49.2[d]	68	43.9[d]
11 Does your illness limit the kinds or amounts or work or schoolwork that you usually do?	I.7	A	52	73.2[e]	41	71.9[e]	93	72.6[e]
Overall Functioning								
12 Does your illness limit you in any way in doing the things you like to do in your free time?	II.10	A	58	61.7	45	72.6	103	66.0

[a] A { 1 = Yes, 2 = No } B { 1 = Yes, 2 = Yes, but only slowly, 3 = No, I can't do this }

[b] Limited is response of 1 on items 1, 2, 10, 11, 12, and response of 2 or 3 on items 3 through 9.

[c] Percent is of those who responded.

[d] Those who were working at a paid job (and were instructed to skp this item) were assigned a score of 'not limited' on this item.

[e] This item had a large number of missing responses due to a faulty skip pattern in the questionnaire

Personal Functioning

When items 1-9 were tested, each as a separate item, the following scaling coefficients resulted, where CR is the coefficient of reproducibility, CS is the coefficient of scalability, and MMR is the minimum marginal reproducibility:

Sample	CR	CS	MMR
Cancer	.94	.77	.76
MI	.91	.54	.81
Total	.94	.73	.77

An evaluation of scaling errors in all samples indicated that items 2 and 4 appeared to be measuring the same severity level. Therefore the analysis was rerun combining items 2 and 4. Results are shown in Table 92. A summary of the scaling coefficients is shown in Table 93. The coefficient of reproducibility is above 0.95 in all samples, and the coefficient of scalability is above 0.70. Thus this scale is acceptable for purposes of group comparisons. As seen in Table 92, about 80 percent of the cancer sample and 95 percent of the MI sample have one or more limitations in personal functioning ($z=247.42$, $p<.001$). The scale is negatively skewed in the total sample with about 29 percent of people receiving the highest two possible scores.

Role Functioning

The two role functioning items formed a perfect Guttman scale, as seen in Table 93 (i.e., CR and CS were 1.00 in both samples). Summary statistics for this scale are shown in Table 94. About 73 percent of the cancer sample and 71 percent of the MI sample have one or more limitations in role functioning (difference is significant, $z=15.90$, $p<.01$). The scale is skewed with 49 percent of the people in the total sample receiving the lowest score.

Table 92

SUMMARY OF STATISTICS FOR PERSONAL FUNCTIONING SCALE

Scale Level[a]	Item 8[b] Limited in Dressing Self	Item 9 Limited in Bathing	Item 7 Limited in Walking Inside	Item 3 Limited in Light Work	Item 6 Limited in Walking Block or More	Item 5 Limited in Walking Uphill	Item 2 or 4 Limited in Running or Moderate Activities	Item 1 Limited in Vigorous Activities	Cancer Sample (N=95)		MI Sample (N=63)		Total Sample (N=158)	
									Number	Percent	Number	Percent	Number	Percent
0	yes	yes	yes	yes	yes	yes	yes	yes	3	3.3	0	0.0	3	2.0
1	no	yes	yes	yes	yes	yes	yes	yes	1	1.1	3	5.2	4	2.7
2	no	no	yes	yes	yes	yes	yes	yes	5	5.4	0	0.0	5	3.3
3	no	no	no	yes	yes	yes	yes	yes	9	9.8	4	6.9	13	8.7
4	no	no	no	no	yes	yes	yes	yes	6	6.5	5	8.6	11	7.3
5	no	no	no	no	no	yes	yes	yes	10	10.9	17	29.3	27	18.0
6	no	no	no	no	no	no	yes	yes	25	27.2	18	31.0	43	28.7
7	no	no	no	no	no	no	no	yes	15	16.3	8	13.8	23	15.3
8	no	no	no	no	no	no	no	no	18	19.6	3	5.2	21	14.0
	Missing								3	-	5	-	8	-
	Total								95	100.0	63	100.0	158	100.0
	Percent Limited								80.4		94.8		86.0	

[a]Scale is scored so that a high score indicates better functioning.

[b]See Table 91.

Table 93

SUMMARY OF SCALING COEFFICIENTS FOR FUNCTIONAL STATUS MEASURES

	Personal Functioning			Role Functioning		
Sample	CR[a]	CS[b]	MMR[c]	CR[a]	CS[b]	MMR[c]
Cancer	.98	.91	.80	1.00	1.00	.64
MI	.96	.74	.85	1.00	1.00	.62
Total	.97	.84	.82	1.00	1.00	.62

[a]Coefficient of reproducibility.

[b]Coefficient of scalability.

[c]Minimum marginal reproducibility.

Table 94

SUMMARY STATISTICS FOR ROLE FUNCTIONING SCALE

Scale Level	Item 10 Limited in Working	Item 11 Limited in Kind or Amount of Work	Cancer Sample (N=95) No.	Cancer Sample (N=95) %	MI Sample (N=63) No.	MI Sample (N=63) %	Total Sample (N=158) No.	Total Sample (N=158) %
0	Yes	Yes	32	45.7	30	53.6	62	49.2
1	No	Yes	19	27.1	10	17.8	29	23.0
2	No	No	19	27.1	16	28.6	35	27.8
	Missing		25	-	7	-	32	-
	Total		95	100.0	63	100.0	158	100.0
	Percent limited at all		72.8		71.4		72.2	

SUMMATED PERSONAL FUNCTIONING SCALE

Because many of the personal functioning items had three response choices, and because some of this information was lost when dichotomous items were created for use in the Guttman scale, a summated scale was also constructed for the personal functioning items. For this scale, items 1 and 2 were recoded so that a "no" response was equal to a 1 and a "yes" response was recoded to a 3. The remaining items were recoded so that a response of yes (able to do the activity) was a 3, able to do it but slowly remained a 2, and unable to do it was recoded to a 1. All nine items were then summed. Results are shown in Table 95. Possible scores range from 9 to 27, and a high score indicates better functioning. This scale is slightly skewed with people tending to receive high scores.

The internal-consistency reliability (r_{tt}) and inter-item correlation (r_{ii}) are summarized as follows:

Sample	r_{tt}	r_{ii}
Total	0.78	0.29
Cancer	0.80	0.31
MI	0.76	0.26

Table 95

FREQUENCY DISTRIBUTION OF PERSONAL FUNCTIONING SUMMATED SCALE

	Cancer Sample (N=95)		MI Sample (N=63)		Total Sample (N=158)	
Score[a]	Number	Percent	Number	Percent	Number	Percent
27	18	19.6	3	5.2	21	14.0
26	0	0.0	0	0.0	0	0.0
25	15	16.3	8	13.8	23	15.3
24	6	6.5	3	5.2	9	6.0
23	17	18.5	12	20.7	29	19.3
22	7	7.6	5	8.6	12	8.0
21	4	4.3	5	8.6	9	6.0
20	7	7.6	3	5.2	10	6.7
19	5	5.4	11	19.0	16	10.7
18	2	2.2	2	3.4	4	2.7
17	3	3.3	3	5.2	6	4.0
16	6	6.5	0	0.0	6	4.0
15	1	1.1	0	0.0	1	0.7
14	1	1.1	0	0.0	1	0.7
13	0	0.0	1	1.7	1	0.7
12	0	0.0	2	3.4	2	1.3
11	0	0.0	0	0.0	0	0.0
10	0	0.0	0	0.0	0	0.0
9	0	0.0	0	0.0	0	0.0
Missing	3	---	5	---	8	---
Total	95	100.0	63	100.0	158	100.0

[a]A high score indicates better functioning.

XX. SYMPTOMS

ITEM DESCRIPTION AND SUMMARY STATISTICS

Twenty-four symptoms were included, and respondents were asked to report whether they experienced these in the past 30 days. These were selected from the symptoms list used in the Rand Health Insurance Study (Manning, Newhouse, and Ware, 1981). The symptoms are shown in Table 96, along with the percent of people responding "yes" to each symptom, and the number of missing responses.

Shortness of breath with light exercise or light work was the most frequently reported symptom for both samples (56 and 53 percent in the cancer and MI samples, respectively).

In the cancer sample, the next three most commonly reported symptoms were trouble falling asleep at night (55 percent), upset stomach (50 percent), and getting up exhausted in the mornings (48 percent).

In the MI sample, the next three most commonly reported symptoms were backaches or sciatica (43 percent), getting up exhausted in the mornings (42 percent), and chest pain when exercising (34 percent).

The number of missing responses per item ranged from 0 to 7 percent in the cancer sample (median 0 percent) and from 0 to 25 percent in the MI sample (median 5 percent). The number of missing responses per person ranged from 0 to 3 in the cancer sample and from 0 to 22 in the MI sample. Ninety-six percent of the cancer sample and 89 percent of the MI sample had one or zero missing responses.

These symptoms were summarized by counting the number of symptoms respondents reported having. This method of summarizing corresponds to that used in the Rand Health Insurance Study (Manning, Newhouse, and Ware, 1981).

The frequency distribution of the number of symptoms in each sample is shown in Table 97. Three people were assigned missing scores on this count of symptoms becuse they had 16 or more missing responses. The maximum number of missing responses in people who received a score was three.

Table 96

SYMPTOMS LIST ITEMS AND NUMBER WITH EACH SYMPTOM

	Symptom (During Past 30 Days)	Cancer Sample (N=95)				MI Sample (N=63)				Total Sample (N=158)			
		1 = Yes		Missing		1 = Yes		Missing		1 = Yes		Missing	
		Number	(Percent of total)[a]	Number	(Percent of total)[a]	Number	(Percent of total)[a]	Number	(Percent of total)[a]	Number	(Percent of total)[a]	Number	(Percent of total)[a]
A	A cough, without fever, which lasted at least 3 weeks	14	(14.9)	1	(1)	11	(17.7)	1	(2)	25	(16.0)	2	(1)
B	A sore throat or cold, with fever, lasting more than 3 days	13	(13.8)	1	(1)	14	(22.6)	1	(2)	27	(17.3)	2	(1)
C	A weight loss of more than 10 pounds (unless you were dieting)	7	(7.4)	1	(1)	8	(13.1)	2	(3)	15	(9.7)	3	(2)
D	An upset stomach, for less than 24 hours	47	(49.5)	0	(0)	17	(27.4)	1	(2)	64	(40.8)	1	(1)
E	Stiffness, pain or swelling of joints, lasting more than 2 weeks	28	(30.1)	2	(2)	19	(30.6)	1	(2)	47	(30.3)	3	(2)
F	Backaches or sciatica	32	(33.7)	0	(0)	26	(42.6)	2	(3)	58	(37.2)	2	(1)
G	Trouble falling asleep at night	52	(55.3)	1	(1)	21	(33.3)	0	(0)	73	(46.5)	1	(1)
H	Getting up exhausted in the mornings, even with the usual amount of sleep	46	(48.4)	0	(0)	25	(42.4)	4	(6)	71	(46.1)	4	(2)
I	A skin rash, or breaking out on any part of the body	28	(29.5)	0	(0)	12	(20.0)	3	(5)	40	(25.8)	3	(2 (2)
J	Shortness of breath with light exercise or light work	53	(55.8)	0	(0)	32	(53.3)	3	(5)	85	(54.8)	3	(2)
K	Chest pain when exercising	14	(15.5)	3	(3)	20	(33.9)	4	(6)	34	(22.5)	7	(4)
L	Your nose stopped up, or sneezing or allergies for 2 weeks or more	19	(20.0)	0	(0)	11	(18.6)	4	(6)	30	(19.5)	4	(2)
M	Swollen ankles when you wake up	9	(9.5)	0	(0)	12	(20.3)	4	(6)	21	(13.6)	4	(2)
N	Headaches almost every day	18	(18.9)	0	(0)	15	(25.0)	3	(5)	33	(21.3)	3	(2)
O	A cough without fever, which lasted for less than a week	14	(14.7)	0	(0)	11	(18.3)	3	(5)	25	(16.1)	3	(2)
P	Loss of consciousness, fainting, or passing out	3	(3.2)	0	(0)	2	(3.3)	3	(5)	5	(3.2)	3	(2)
Q	Acid indigestion or heartburn after many meals	28	(29.5)	0	(0)	18	(30.5)	4	(6)	46	(29.9)	4	(2)
R	A sprained ankle, but you could still walk	6	(6.3)	0	(0)	2	(3.4)	4	(6)	8	(5.2)	4	(2)
S	A toothache (Did you see a dentist for this?)	8	(8.4)	0	(0)	7	(11.7)	3	(5)	15	(9.7)	3	(2)
T	Stomach "flu" or virus (gastroenteritis) with vomiting or diarrhea	19	(20.4)	2	(2)	6	(10.0)	3	(5)	25	(16.3)	5	(3)
U	Bleeding (other than nose bleed or period) not caused by accident or injury	5	(5.3)	1	(1)	3	(5.0)	3	(5)	8	(5.2)	4	(2)
V	An eye infection	10	(10.9)	1	(1)	5	(8.3)	3	(5)	15	(9.9)	6	(4)
W	Men only: Difficulty passing urine, or prostate trouble	2	(8.1)[b]	0	(0)[b]	6	(15.8)[b]	1	(2)[b]	8	(12.9)[b]	1	(2)[b]
X	Women only: Irregular periods, or bleeding between periods	11	(19.3)[c]	1	(2)[c]	1	(5.6)[c]	6	(25)[c]	14	(16.7)[c]	11	(12)[c]

[a] Percent of those who responded.

[b] Percent of men.

[c] Percent of women.

Table 97

FREQUENCY DISTRIBUTIONS OF NUMBER OF SYMPTOMS

Number of Symptoms[a]	Cancer Sample (N=95) No.	%	Cumulative %	MI Sample (N=63) No.	%	Cumulative %	Total Sample (N=158) No.	%	Cumulative %
0	5	5.3	5.3	5	8.3	8.3	10	6.4	6.4
1	5	5.3	10.5	4	6.7	15.0	9	5.8	12.2
2	10	10.5	21.0	6	10.0	25.0	16	10.3	22.6
3	15	15.8	36.8	11	18.3	43.3	26	16.8	39.4
4	12	12.6	49.5	7	11.7	55.0	19	12.2	51.6
5	8	8.4	57.9	5	8.3	63.3	13	8.4	60.0
6	10	10.5	68.4	3	5.0	68.3	13	8.4	68.4
7	11	11.6	80.0	5	8.3	76.7	16	10.3	78.7
8	5	5.3	85.3	3	5.0	81.7	8	5.2	83.9
9	5	5.3	90.5	4	6.7	88.3	9	5.8	89.7
10	1	1.0	91.6	0	0.0	88.3	1	0.6	90.3
11	3	3.2	94.7	4	6.7	95.0	7	4.5	94.8
12	3	3.2	97.9	0	0.0	95.0	3	1.9	96.8
13	1	1.0	98.9	0	0.0	95.0	1	0.6	97.4
14	0	0.0	98.9	1	1.7	96.7	1	0.6	98.1
15	0	0.0	98.9	2	3.3	100.0	2	1.3	99.4
16	1	1.0	100.0	0	0.0	100.0	1	0.6	100.0
Missing	0	---		3	---		3	---	
Total	95	100.0		63	100.0		158	100.0	

[a]Total possible is 24.

The means and standard deviations of the number of symptoms were:

Sample	Mean	S.D.
Cancer	5.14	3.28
MI	5.05	3.76
Total	5.10	3.46

Out of 24 possible symptoms, about half of these people had four or fewer symptoms. Only 5 percent of the cancer sample and 8 percent of the MI sample reported no symptoms.

XXI. PAIN AND GENERAL HEALTH

Pain was assessed using a single item. General health was assessed in two ways, each based on a single item: (1) as health in general compared with one month ago, and (2) as current health.

The items and frequency distributions are shown in Table 98.

No pain at all during the past month was reported by about 36 percent of the cancer sample and 38 percent of the MI sample. Most people experienced either some or a little pain (54 and 52 percent of the cancer and MI samples, respectively). About 10 percent of each sample experienced a great deal of pain during the past month.

Compared with a month ago, about 39 percent of the cancer sample and 44 percent of the MI sample reported being better. About 16 and 19 percent (cancer and MI samples, respectively) reported being worse.

Most people reported their current health is either good or fair (70 and 85 percent of the cancer and MI samples, respectively). About 17 percent of the cancer sample reported excellent health but only 5 percent of the MI sample did so.

Table 98

PAIN AND GENERAL HEALTH ITEMS AND FREQUENCY DISTRIBUTIONS

Item/Response Choices	Questionnaire Item Number	Cancer Sample (N=95)		MI Sample (N=63)		Total Sample (N=158)	
		Number	Percent	Number	Percent	Number	Percent
Pain							
1 During the past month, how much pain have you had?	II.20						
1 A great deal		9	9.5	6	9.5	15	9.5
2 Some pain		20	21.3	16	25.4	36	22.9
3 A little pain		31	33.0	17	27.0	48	30.6
4 No pain at all		34	36.2	24	38.1	58	36.9
Missing		1	-	0	-	1	-
Total		95	100.0	63	100.0	158	(100.0)
General Health							
2 Compared with one month ago, would you say your health in general is:	II.6						
1 Better		37	38.9	28	44.4	65	41.1
2 About the same		43	45.3	23	36.5	66	41.8
3 Worse		15	15.8	12	19.0	27	17.1
Missing		0	-	0	-	0	-
Total		95	100.0	63	100.0	158	100.0
3 In general, would you say your health right now is:	II.7						
1 Excellent		16	16.8	3	4.8	19	12.0
2 Good		37	38.9	17	27.0	54	34.2
3 Fair		29	30.5	30	47.6	59	37.3
4 Poor		13	13.7	13	20.6	26	16.4
Missing		0	-	0	-	0	-
Total		95	100.0	63	100.0	158	100.0

XXII. INTERRELATIONSHIPS AMONG SCALES

CLASSIFICATION OF MEASURES

In the conceptual framework of coping (see Fig. 1), variables were classified into context, coping responses, and outcomes. For purposes of analyses of interrelationships among measures, this classification scheme needs some slight revisions.

Although various sociodemographic characteristics were considered as context variables, they will be separately classified here as sociodemographics.

In the process of constructing the measures, the distinction between some of the context and coping variables became less clear.

Attitudes about death were initially considered as context variables (see Fig. 1) in the sense of being attitudes or beliefs. However, three of the four actual measures (accepting the idea of one's own death, thinking about death, and thinking about dying changed views of living) will be considered coping responses, in the sense of coping with the idea of one's own death.

Initially, expressiveness of needs and feelings was considered a coping response, whereas having attachments to others was considered a context variable. However, in the measurement analyses, the distinction could not be made empirically, and these two were combined into a single measure. Close attachments/expressiveness will be considered as a context variable, in the sense that expressiveness is probably an essential part of having close attachments, and that expressiveness is probably an individual characteristic that a person "brings" to the illness situation (i.e., could have been thought of as a context variable in the first place).

As part of pleasures/benefits, some items were initially included pertaining to enjoying life more as a result of the illness (i.e. these were written because many people apparently revise their life as a result of their illness). In the measurement analyses, the measure that was empirically developed (enjoy life) included two items from the enjoy life more grouping, and two from the pleasurable activities grouping

(e.g., took time for things I enjoy). Therefore, rather than being a response to the illness, the measure is in part a general enjoyment measure. This now is as much an outcome measure, on a par with satisfaction with life, as it is a coping response. Nevertheless, because it contains elements of "taking time to enjoy," it was retained as a coping response.

SUMMARY OF MEASURES

A summary of information about all of the measures is shown in Table 99. Included are the variable name, number of items used to construct the measure, reliability coefficients (where available), and the meaning of a high score.

ASSOCIATIONS WITHIN CONCEPTS

Several of the concepts measured have more than one scale assessing a very similar concept. In these cases, it may be feasible to create a more global measure, which could be useful in multivariate analyses.

Associations Among Religious Beliefs Measures

The three religious beliefs measures were highly correlated, as follows:

Measure	1	2	3
1 Religious/spiritual perspective	1.00		
2 Religious/spiritual perspective on death	.74	1.00	
3 Belief that recovery is up to God	.75	.72	1.00

Because of these high correlations, it was decided to combine these into a single measure. A principal components analysis on the three measures yielded one factor explaining 82 percent of the variance, with the

Table 99

SUMMARY OF INFORMATION ABOUT MEASURES

Measure	Variable Name	Number of Items	Reliability Coefficient(a) Cancer Sample	MI Sample	Total Sample	Meaning of a High Score
SAMPLE CHARACTERISTICS						
Sex	SEX	1		-(b)		Female
Race	RACE	1		-		(Categorical measure)
Age	AGE	1		-		Older
Education	EDUC	1		-		More education
Income	INCOME	1		-		More income
Major role activity	ROLE	1		-		(Categorical measure)
Religious/spiritual beliefs	RELIG	1		-		More religious
BELIEFS ABOUT RECOVERY						
Thoughts and emotions affect recovery	RECEMOT	5	.84	.67	-	Believe they do affect recovery
Health habits affect recovery	RECHH	6,3(c)	.81	.50	-	Believe they do affect recovery
Recovery not up to chance	RECNOCH	2,0(c)	.57	(-)	-	Recovery not up to chance
Recovery up to medical care	RECMED	2,3(c)	.82	.61	-	Recovery up to medical care
Recovery up to God, religious faith	RECGOD	3	.89	.94	-	Recovery up to God or religious faith
ATTRIBUTION OF THIS ILLNESS						
(11 items, not combined)	-					
ATTITUDES ABOUT DEATH						
Acceptance of death	ACCDTH	5	.76	.76	.80	Accepts idea of death
Thinking about death	THDTH	3	.69	.64	.66	More thinking about death
Religious/spiritual perspective on death	RELDTH	2	.88	.79	.84	Has a religious/spiritual perspective on death
Right to die	RIGHT	2	.64	(.31)	.51	Believes in one's right to die
Thinking of dying changed views of living	VIEWS	1		-		Agrees
SENSE OF CONTROL						
Sense of control	CONTROL	6	.74	.72	.72	Greater sense of control
SELF ESTEEM/BODY IMAGE						
Self-esteem	ESTEEM	6	.71	.66	-	Greater self-esteem
Body image	BODYIM	7	.88	-	-	Better body image
SOCIAL NETWORKS						
Marital status	MARSTAT	1		-		(Categorical measure)
Married	MARRIED	1		-		Married
Live alone	LIVALONE	8		-		Lives alone
Any friends	FRIENDS	1		-		Has friends
Mate or spouse	MATESP	1		-		Has a mate or spouse
Any dependent children at home	CHILHOME	3		-		Has dependent children at home
Number of people in social network	NUMNET	13		-		Greater number
Number of dependents	NUMDEP	1		-		Greater number

Table 99--continued

Measure	Variable Name	Number of Items	Reliability Coefficient(a) Cancer Sample	MI Sample	Total Sample	Meaning of a High Score
SOCIAL NETWORKS (continued)						
Number of people in family network	FAMNET	5		-		Greater number
Number of people in professional network	PROFNET	4		-		Greater number
Number of people in peripheral network	PERNET	3		-		Greater number
Number of people in household	NUMHOUSE	1		-		Greater number
Number of children at home	NUMCHIL	1		-		Greater number
At least one extremely helpful person	ONEXHELP	13		-		Has at least one
Number of helpful people	NHELP	13		-		Greater number
Number of extremely helpful people	NXHELP	13		-		Greater number
Number of unhelpful people	NNOHELP	13		-		Greater number
Number of extremely unhelpful people	NXNOHELP	13		-		Greater number
Number of helpful minus number of unhelpful people	NETHELP	13		-		Greater number of helpful people
Total amount of helpfulness	AMTHELP	13		-		Greater amount
Total amount of unhelpfulness	AMTNHELP	13		-		Greater amount
Average amount of helpfulness	AVGHELP	13		-		Greater amount
Average amount of unhelpfulness	AVGNHELP	13		-		Greater amount
SOCIAL SUPPORT/EXPRESSIVENESS						
Close attachments/expressiveness	ATTACH	11	.87	.84	.87	More close attachments
No stigma of illness	NOSTIGMA	4	.78	.64	.71	Less stigma of illness
People who understand	PEOPLE	5	.73	.62	.68	More understanding
Cognitive guidance/advice	ADVICE	5	.64	.80	.74	More guidance/advice
Frequency of contact with others	FREQCONT	1		-		Greater frequency
Give as much support as receive	GIVESUP	1		-		Able to give support
WILL TO LIVE						
Reason to live	REASON	3	.68	.67	.70	More reason to live
Religious/spiritual perspective	RELSPIR	4	.87	.79	.83	More religious/spiritual perspective
Will to live	WILL	4	.88	.62	.79	Greater will to live
ACTIVE COPING						
Active positive thinking	ACTPOS	3	.72	(.49)	.63	More positive thinking
Relax/take it easy	RELAX	3	.66	(.42)	.64	More relaxation
Daily routine	DAILY	2	.65	(.49)	.58	Has a daily routine
Seek information	INFO	4	.62	(.35)	.61	Seeks information
ACCEPTANCE/REJECTION OF ILLNESS						
Rejection of sick role	REJECT	3	.79	.65	.76	Rejects sick role
Not bothered by illness	NBOTHER	3	.69	.68	.69	Not bothered by illness
Try to forget illness	FORGET	1		-	-	Greater trying to forget affects body

Table 99--continued

Measure	Variable Name	Number of Items	Reliability Coefficient(a) Cancer Sample	MI Sample	Total Sample	Meaning of a High Score
DOCTOR-PATIENT RELATIONSHIP						
Confidence in doctors	CONFDR	4	.76	-	-	Greater confidence
Humaneness	HUMDR	4	.81	-	-	Greater humaneness
Facilitates expression	EXPRDR	3	.88	-	-	Greater facilitation
Communication of information	COMMDR	5	.88	-	-	More open communication
Believe mind affects body	MINDDR	2	.86	-	-	Greater belief that mind
Diagnosis/outlook	DIAGDR	4	.79	-	-	Doctor has more hopeful outlook
Overall satisfaction	SATISDR	1	-	-	-	Greater satisfaction
BENEFITS/PLEASURES						
Enjoy life	ENJOY	4	.64	.56	.62	Greater enjoyment
Change resulting from illness	CHANGE	4	.50	(.38)	(.44)	Greater change
Enjoy being cared for	CARED	2	.52	.50	.50	Greater enjoyment
Busy/working	BUSY	2	.58	.75	.66	Busier, work more
POSITIVE FEELINGS						
Optimism/positive outlook	OPT	5	.77	.56	.69	More optimism
Satisfaction with life	LSAT	3	.83	.78	.81	Greater satisfaction
Satisfaction with work	WSAT	1		-		Greater satisfaction
Positive well-being	PWB	4	.90	.80	.86	Greater positive well-being
NEGATIVE FEELINGS						
Depression	DEP	5	.90	.85	.88	Greater depression
Anxiety	ANX	4	.86	.75	.80	Greater anxiety
Anger	ANGER	5	.86	.86	.86	Greater anger
Guilt	GUILT	3	.54	(.14)	(.37)	Greater guilt
FUNCTIONAL STATUS						
Personal functioning	PERSFUNC	9	.98(d)	.96(d)	.97(d)	Better functioning
Personal functioning summated scale	PFSUM	9	.80	.76	.78	Better functioning
Role functioning	ROLEFUNC	2	1.00(d)	1.00(d)	1.00(d)	Better functioning
Overall functioning	OVERFUNC	1	-	-	-	Better functioning
SYMPTOMS						
Number of symptoms	SYMPTOMS	24		-		More symptoms
PAIN AND GENERAL HEALTH						
Pain	PAIN	1		-		More pain
Health compared to month ago	HLTHCOM	1		-		Better health now
Current health	HLTHCUR	1		-		Better health

(a) Internal-consistency reliability except where noted otherwise. Coefficients in parentheses are unacceptable.
(b) Reliability estimate not available.
(c) Cancer and MI samples, respectively (different scales were constructed for the two samples).
(d) Coefficient of reproducibility (for Guttman scales).

following factor loadings and factor score coefficients:

Measure	Factor Loading	Factor Score Coefficient
Religious/spiritual perspective	0.91	0.37
Religious/spiritual perspective on death	0.90	0.36
Belief that recovery is up to God	0.90	0.37

These results indicate that scores can be given equal weight. Therefore, a single religious beliefs measure was calculated by summing the standard scores for each of these measures.

Associations Among Doctor-Patient Relationship Measures

Product-moment correlations among the doctor-patient relationship measures were presented earlier in Table 78. Correlations of the single-item overall satisfaction measure with the other measures are:

Confidence in doctors	0.57
Humaneness	0.69
Facilitates expression	0.67
Communication of information	0.70
Believes mind affects body	0.19
Diagnosis/outlook	0.42

A principal components analysis of these measures (including overall satisfaction) yielded only one factor with an eigenvalue greater than one, explaining 62 percent of the variance. Factor loadings and factor

score coefficients were:

Measure	Factor Loading	Factor Score Coefficient
Facilitates expression	0.89	.20
Communication of information	0.88	.20
Humaneness	0.86	.20
Overall satisfaction	0.80	.18
Confidence	0.76	.18
Diagnosis/outlook	0.69	.16
Believes mind affects body	0.57	.13

These are sufficiently different to require the individual scales to be weighted by the factor score coefficients in adding them into a single global index.

Associations Among Mental Health Measures

Because of the high correlations among the mental health measures, a combined score appears warranted for purposes of studying interrelationships among all coping measures. It was decided to combine the three negative feelings measures (depression, anxiety, and anger) into an overall negative feelings measure. Because positive well-being is somewhat distinct from negative feelings, it was not desirable to combine it with the negative feelings at this point.

These three measures were correlated as follows:

Measure	1	2	3
1 Depression	1.00		
2 Anxiety	.68	1.00	
3 Anger	.70	.73	1.00

To combine the three negative feeling measures, a principal components analysis of these three measures was performed. One factor resulted, explaining 81 percent of the variance. The factor loadings and factor score coefficients were as follows:

Measure	Factor Loading	Factor Score Coefficient
Anger	0.90	0.37
Anxiety	0.90	0.37
Depression	0.88	0.37

These results indicated that the three scores could be given equal weight. A total negative feelings score was therefore calculated by summing the standard scores of the three measures.

EXCLUSION OF MEASURES

For purposes of studies of the dimensionality of these measures, some measures were excluded. In some analyses, the multi-scale global measures were used instead of the separate scales.

Scales that had unacceptable relibilities in the total sample were excluded.

Because the correlation matrix to be analyzed is based on the number of people with complete data on the set of measures being analyzed, the inclusion of a measure with a small N would reduce the number of cases in the analyses. Therefore, the following measures were excluded from the analyses because of a small N (i.e., 130 or less).

Belief that recovery is not up to chance
Body image
All doctor-patient relationship measures
Satisfaction with work
Role functioning

For purposes of the interrelationships among all the coping measures, a subset of social network/social support measures were selected such that no multicolinearity existed in the measures (i.e., because some measures are subsets of other measures, all of them could not be used in such an analysis). The following measures were selected for inclusion in the interrelationship studies:

Number of people in social network
Number of children at home
Total amount of helpfulness
Total amount of unhelpfulness
Close attachments/expressiveness
No stigma of illness
People who understand
Cognitive guidance/advice
Frequency of contact with others
Give as much support as receive

The combined religious beliefs measure was used instead of the three separate measures, and the combined negative feelings measure was used instead of the three separate measures.

The personal functioning summated measure was used instead of the Guttman scale measure.

ASSOCIATIONS AMONG CONTEXT MEASURES

A summary of product-moment correlations among those measures that can be considered context measures is shown in Table 100.

A principal components analysis yielded 5 factors with eigenvalues greater than one, each explaining 5 percent or more of the variance. A scree test suggested that only three should be rotated. Evaluations of the rotated three, four, and five factor solutions suggested that four factors were interpretable and thus appropriate. The four factors explained 56 percent of the variance. Results are shown in Table 101.

The first factor is a social network/social support construct. People who score high on this factor would have helpful people, a large number of people available, feel close to others, express themselves, receive cognitive guidance and advice, and have reason to live.

Table 100

PRODUCT-MOMENT CORRELATIONS AMONG CONTEXT MEASURES: TOTAL SAMPLE (N=134)

	Measure	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Religious/spiritual beliefs[a]	1.00																	
2	Belief that thoughts and emotions can affect recovery	.45	1.00																
3	Belief that health habits affect recovery	.30	.58	1.00															
4	Belief that recovery is up to medical care	.00	.15	.11	1.00														
5	Sense of control	.09	.15	.12	-.07	1.00													
6	Self-esteem	.17	.20	.13	-.10	.57	1.00												
7	Number of people in social network	.26	.16	.15	.10	-.10	-.03	1.00											
8	Number of children at home	.20	.07	.00	-.10	-.05	.01	.26	1.00										
9	Total amount of helpfulness	.34	.26	.18	.24	.20	.21	.68	.12	1.00									
10	Total amount of unhelpfulness	-.07	-.04	-.06	-.22	-.29	-.22	.26	.06	-.34	1.00								
11	Close attachments/expressiveness	.25	.20	.13	.04	.28	.34	.41	.14	.62	-.24	1.00							
12	No stigma of illness	.00	.16	.10	-.10	.25	.26	.14	.13	.29	-.19	.32	1.00						
13	People who understand	-.01	.08	.01	.02	.36	.44	.05	-.01	.33	-.28	.49	.40	1.00					
14	Cognitive guidance/advice	.26	.28	.26	.17	.05	.04	.36	.05	.53	-.14	.52	.16	.23	1.00				
15	Frequency of contact with others	.00	.10	.04	-.08	.18	.19	.14	-.02	.23	-.10	.44	.07	.23	.24	1.00			
16	Give as much support as receives	.15	.17	.10	.13	.21	.26	-.09	-.11	.16	-.22	.16	-.01	.30	.16	.02	1.00		
17	Reason to live	.34	.27	.27	.02	.15	.31	.35	.17	.40	-.07	.58	.10	.20	.45	.22	.10	1.00	
18	Will to live	.35	.27	.30	.06	.37	.50	.07	.03	.33	-.23	.48	.14	.31	.30	.21	.18	.53	1.00

[a]Combined three-variable measure.

Table 101

CORRELATIONS OF CONTEXT MEASURES WITH ROTATED PRINCIPAL COMPONENTS: TOTAL SAMPLE (N=134)

Grouping/Measure	Component I	II	III	IV	h^2
SOCIAL NETWORK/SOCIAL SUPPORT					
Total amount of helpfulness	.82				.78
Number of people in social network	.78			-.30	.75
Close attachments/expressiveness	.72	.49			.77
Cognitive guidance/advice	.68		.26		.56
Reason to live	.50	.29	.44		.54
PERSONAL					
Self-esteem		.78	.25		.68
Sense of control		.73			.59
People who understand	.30	.66		.25	.60
Will to live		.53	.48		.56
No stigma of illness	.26	.48			.31
Frequency of contact with others	.36	.36			.27
SELF-CARE/RELIGIOUS/SPIRITUAL					
Belief that thoughts and emotions affect recovery			.78		.63
Belief that health habits affect recovery			.75		.58
Religious/spiritual beliefs			.70		.55
EFFICACY OF MEDICAL CARE					
Belief that recovery up to medical care	.27	-.33		.66	.63
Total amount of unhelpfulness		-.35		-.61	.51
Give as much support as receive		.24		.52	.38
Number of children at home	.24			-.50	.33
Percent of variance explained	17	16	13	9	

NOTE: Only coefficients above |0.23| are reported.

The second factor pertains to people's personal resources in terms of self-esteem, sense of control, and will to live, and feelings of having people who understand and who do not convey that there is a stigma associated with the illness. Close attachments/expressiveness has a high secondary loading on this factor.

The third factor is a belief in the efficacy of self-care and religious/spiritual beliefs.

The fourth factor is something of a hodgepodge, but probably is primarily a belief in the efficacy of medical care.

The measures no stigma of illness, frequency of contact with others, and number of children at home seem to have little in common with these other measures (they have low communalities).

ASSOCIATIONS AMONG COPING RESPONSES

A summary of product-moment correlations among those measures that can be considered coping responses (as opposed to context measures or outcome measures) is shown in Table 102.

A principal components analysis of these 13 measures yielded five factors with eigenvalues greater than one, each explaining more than 5 percent of the variance. However, a scree test suggested that three factors should be rotated. An evaluation of the three, four, and five factor solution for interpretability suggested that four factors should be rotated. These four factors explained 53 percent of the variance, and results are shown in Table 103.

The first factor pertains to relaxing, taking it easy, having a daily routine, and enjoying life.

The second factor suggests a concern with the illness, including a nonacceptance of death, having a changed view of living because of thinking about dying, seeking information, and being bothered by the illness (which has a secondary loading on this factor).

The third factor is an active distraction factor, including active positive thinking, trying to forget about the illness, and being busy and working to take their mind off things.

The fourth factor is a rejection of the sick role, not being bothered by the illness, and not thinking about death.

The coping responses of enjoying being cared for when ill and thinking about death are least associated with any of these other responses (these have a communality of less than 0.30).

Table 102

PRODUCT-MOMENT CORRELATIONS AMONG MEASURES OF COPING RESPONSES: TOTAL SAMPLE (N=149)

	Measure	1	2	3	4	5	6	7	8	9	10	11	12	13
1	Acceptance of death	1.00												
2	Thinking about death	.08	1.00											
3	Thinking of dying changed views of living	-.39	.12	1.00										
4	Active positive thinking	.04	-.06	.22	1.00									
5	Relax/take it easy	.15	-.09	.05	.14	1.00								
6	Daily routine	.01	-.09	-.02	.06	.35	1.00							
7	Seek information	-.25	.14	.28	.06	.06	.01	1.00						
8	Rejection of sick role	.04	-.12	-.08	.19	.00	.13	.18	1.00					
9	Not bothered by illness	.34	-.12	-.27	.05	-.09	.27	-.21	.22	1.00				
10	Try to forget I am ill	.15	-.17	-.01	.26	.11	.02	-.16	.13	.16	1.00			
11	Enjoy life	.03	.05	.20	.28	.34	.38	.19	.25	.18	.08	1.00		
12	Enjoy being cared for	.05	-.04	-.05	.18	.15	.15	-.02	.00	-.02	.06	.18	1.00	
13	Busy/working	.04	.05	.02	.15	-.08	-.18	.02	-.16	-.19	.13	-.05	-.03	1.00

Table 103

CORRELATIONS BETWEEN MEASURES OF COPING RESPONSES
AND ROTATED PRINCIPAL COMPONENTS: TOTAL SAMPLE (N=149)

Grouping/Measure	Component I	II	III	IV	h^2
RELAX/ROUTINE/ENJOY					
Relax/take it easy	.76				.59
Daily routine	.67		-.26	.26	.59
Enjoy life	.67	.26		.30	.62
Enjoy being cared for	.49				.29
CONCERN WITH ILLNESS					
Thinking of dying changed views of living		.72			.58
Seek information		.70			.51
Acceptance of death		-.69			.53
ACTIVE DISTRACTION					
Active positive thinking	.27		.67	.24	.62
Try to forget about illness			.65	.29	.56
Busy/working			.62	-.34	.52
REJECT SICK ROLE					
Rejection of sick role				.78	.65
Not bothered by illness		-.44		.63	.62
Thinking about death				-.36	.18
Percent of variance explained	14	14	11	12	

NOTE: Only coefficients above |0.23| are reported.

ASSOCIATIONS AMONG OUTCOME MEASURES

A summary of product-moment correlations among the outcome measures is shown in Table 104. A principal components analysis was performed on all these measures except role functioning and satisfaction with work, which were eliminated because of a high number of missing values. Three factors had eigenvalues greater than one, each explaining more than 5 percent of the variance. A scree test suggested that three factors should be rotated. These explained 65 percent of the variance, and results are shown in Table 105. The three factors are mental health, physical health, and optimism.

The symptoms and pain measures, although loading highest on the physical health factor, have high secondary loadings on the mental health factor.

Symptoms and optimism seem to be overall health measures, cutting across all dimensions.

COPING AND SOCIODEMOGRAPHIC CHARACTERISTICS

Product-moment correlations between the coping (and coping-related measures) and sociodemographic characteristics are presented in Table 106. Because of the large number of tests, only coefficients significant at the 0.01 level are considered significant.

Beliefs about recovery tend not to be associated with sociodemographic characteristics, although nonwhite and less educated people are more likely to believe that recovery is up to God or religious faith.

Regarding the attitudes about death measures, those people more likely to accept the idea of death are older men with less education and income. More educated people tend to think about death more. Nonwhites are more likely to have a religious or spiritual perspective on death. Nonwhites and less educated people are more likely to believe in the right to decide to die. Finally those who are more likely to agree that thinking of dying has changed their views of living are younger women with higher income.

Table 104

PRODUCT-MOMENT CORRELATIONS[a] AMONG OUTCOME MEASURES: TOTAL SAMPLE

Measure		1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Optimism/positive outlook	1.00													
2	Satisfaction with life	.52	1.00												
3	Satisfaction with work	.32	.36	1.00											
4	Positive well-being	.55	.65	.23	1.00										
5	Depression	-.52	-.54	-.15	-.70	1.00									
6	Anxiety	-.37	-.42	-.29	-.55	.68	1.00								
7	Anger	-.31	-.46	-.13	-.52	.70	.73	1.00							
8	Personal functioning[b]	.37	.22	.37	.25	-.26	-.15	-.17	1.00						
9	Role functioning	.26	.16	.48	.13	-.09	-.10	-.13	.59	1.00					
10	Overall functioning	.34	.26	.26	.18	-.21	-.10	-.15	.58	.54	1.00				
11	Number of symptoms	-.28	-.23	-.18	-.26	.34	.37	.29	-.34	-.33	-.29	1.00			
12	Pain	-.41	-.28	-.17	-.31	.37	.32	.35	-.40	-.26	-.40	.37	1.00		
13	Health compared to month	.37	.18	.12	.30	-.31	-.17	-.19	.31	.21	.18	-.13	-.26	1.00	
14	Current health	.39	.27	.33	.28	-.26	-.22	-.17	.58	.44	.49	-.32	-.32	.31	1.00

[a]Correlations based on pairwise deletion of missing data (N = 104 to 158).

[b]Summated scale.

Table 105

CORRELATIONS OF OUTCOME MEASURES WITH ROTATED PRINCIPAL COMPONENTS: TOTAL SAMPLE (N=126)

Measure	Component I	Component II	Component III	h^2
MENTAL HEALTH				
Anxiety	.86			.75
Depression	.83		-.27	.79
Anger	.83			.71
Positive well-being	-.73		.44	.74
Life satisfaction	-.61		.42	.60
PHYSICAL HEALTH				
Overall functioning		.80		.66
Personal functioning[a]		.80	.27	.71
Current health		.68	.38	.61
Pain	.33	-.62		.49
Symptoms	.41	-.58	.29	.59
OPTIMISM				
Health compared with month ago			.72	.55
Optimism/positive outlook	-.44	.38	.51	.60
Percent of variance explained	29	22	13	

NOTE: Only coefficients greater than |0.23| are shown.

[a]Summated scale.

Table 106

PRODUCT-MOMENT CORRELATIONS BETWEEN COPING AND COPING-RELATED MEASURES AND SOCIODEMOGRAPHIC CHARACTERISTICS: TOTAL SAMPLE

Measure	N	Sex (female)	Race (white)	Age	Education	Income
BELIEFS ABOUT RECOVERY						
Thoughts and emotions affect recovery	136	.11	.04	-.10	-.01	.00
Health habits affect recovery	136	-.15	.01	-.17	.06	-.09
Recovery not up to chance	92	-.11	.05	.00	-.15	-.20
Recovery up to medical care	135	.00	-.06	.02	-.07	-.06
Recovery up to God, religious faith	136	.07	-.39*	.08	-.34*	-.18
ATTITUDES ABOUT DEATH						
Acceptance of death	154	-.24*	-.20	.34*	-.30*	-.32*
Thinking about death	154	.12	.19	-.13	.24*	.09
Religious/spiritual perspective on death	154	.20	-.21*	-.14	-.10	-.06
Right to die	152	-.08	.27*	-.15	.27*	.02
Thinking of dying changed views of living	149	.33*	.18	-.32*	.16	.23*
SENSE OF CONTROL						
Sense of control	156	-.25*	-.20	.02	-.11	-.09
SELF-ESTEEM/BODY IMAGE						
Self-esteem	155	-.09	-.06	-.01	-.01	.07
Body image	93	-.21	.01	.03	.07	-.06
SOCIAL NETWORKS						
Married	158	-.12	-.08	.06	-.01	.38*
Live alone	157	-.06	.08	-.01	.12	-.15
Friends or not	156	-.04	.04	-.22*	.00	.08
Mate or spouse	156	-.10	-.02	-.17	.02	.36*
Any dependent children at home	158	.11	-.19	-.32*	.00	.08
Number of people in social network	156	.04	-.04	-.47*	.10	.23*
Number of people in family network	156	.12	-.01	-.51*	.18	.37*
Number of people in professional network	156	-.02	-.16	-.17	-.05	-.08
Number of people in peripheral network	156	-.01	.05	-.29*	.06	.12
Number of people in household	134	.05	-.37*	-.17	-.14	.03
Number of children at home	134	.03	-.28*	-.33*	-.11	.02
At least one extremely helpful person	158	.10	.14	-.10	.24*	.28*
Number of helpful people	156	.06	-.08	-.34*	.02	.21*
Number of extremely helpful people	156	.16	-.01	-.14	.12	.26*
Number of unhelpful people	156	-.02	.08	-.21*	.14	.02
Number of extremely unhelpful people	156	-.01	.08	-.10	.21	-.07
Number of helpful minus unhelpful people	156	.06	-.10	-.17	-.05	.15
Total amount of helpfulness	156	.09	-.08	-.28*	.04	.25*
Total amount of unhelpfulness	156	-.02	.08	-.19	.18	-.02
Average amount of helpfulness	156	.07	-.02	-.03	.10	.21
Average amount of unhelpfulness	156	-.06	.05	-.14	.02	-.09

Table 106--continued

Measure	N	Sex (female)	Race (white)	Age	Education	Income
SOCIAL SUPPORT/EXPRESSIVENESS						
Close attachments/expressiveness	157	.08	.00	-.21*	.10	.33*
No stigma of illness	157	-.02	-.12	.04	.02	.08
People who understand	157	.01	.06	.02	.07	.24*
Cognitive guidance/advice	157	.04	-.02	-.15	.20	.23*
Frequency of contact with others	151	-.04	.12	-.16	.10	.14
Gives as much support as receives	146	-.04	-.12	.10	-.07	.04
WILL TO LIVE						
Reason to live	153	.04	.09	-.23*	.12	.26*
Religious/spiritual perspective	158	.20*	-.23*	-.19	-.10	-.02
Will to live	154	.03	.02	-.12	.06	.16
ACTIVE COPING						
Active positive thinking	153	.00	-.10	-.13	-.02	-.02
Relax/take it easy	157	-.11	-.10	.24*	-.14	.00
Daily routine	157	-.03	-.06	.08	.03	.14
Seek information	157	.16	.25*	-.20*	.43*	.43*
ACCEPTANCE/REJECTION						
Rejection of sick role	154	-.02	.08	.00	.19	.11
Not bothered by illness	156	-.06	-.02	.11	-.10	-.08
Try to forget illness	154	.08	-.12	.26*	-.20	-.16
DOCTOR-PATIENT RELATIONSHIP						
Confidence in doctor	94	-.03	-.02	.12	-.38*	-.01
Humaneness	94	-.19	-.05	.10	-.17	-.07
Facilitates expression	95	-.22	-.12	.12	-.29*	-.10
Communication of information	95	-.19	-.03	.10	-.21	.01
Believes mind affects body	93	-.10	.01	-.02	-.18	-.20
Diagnosis/outlook	94	-.03	.12	-.04	-.12	.00
Overall satisfaction	92	-.21	-.04	.09	-.20	.02
PLEASURES/BENEFITS						
Enjoy life	156	.14	.12	-.03	.16	.07
Enjoy being cared for	156	-.05	-.25*	.02	-.25*	-.09
Busy/working	156	.06	-.14	-.01	-.12	-.19
POSITIVE FEELINGS						
Optimism/positive outlook	157	-.05	-.04	-.06	.01	.08
Satisfaction with life	154	-.04	.01	.03	.01	.19
Satisfaction with work	130	.00	.21	-.18	.24*	.16
Positive well-being	156	-.17	-.08	.06	.05	.08

Table 106--continued

Measure	N	Sex (female)	Race (white)	Age	Education	Income
NEGATIVE FEELINGS						
Depression	155	.26*	.07	-.12	.04	-.11
Anxiety	155	.12	.02	-.13	.06	-.12
Anger	155	.11	.02	-.17	.17	-.09
FUNCTIONAL STATUS						
Personal functioning	150	-.02	.14	-.30*	.27*	.22*
Personal functioning--summated scale	150	-.03	.17	-.36*	.32*	.28*
Role functioning	126	-.02	.01	-.24*	.19	.16
Overall functioning	156	.04	.11	-.08	.12	.14
SYMPTOMS						
Number of symptoms	155	.08	.02	-.01	-.03	-.16
PAIN AND GENERAL HEALTH						
Pain	157	.02	.07	-.06	-.08	-.03
Health compared to month ago	158	.02	-.08	-.09	.01	-.04
Current health	158	.08	.18	-.19	.29*	.27*

*$p < .01$.

A sense of control is greater in men, but is not associated with any other sociodemographic characteristics.

No association between self-esteem or body image was observed with any of the sociodemographics.

Regarding the social network and social support measures, almost no associations were observed with sex, race, or education (although nonwhites tend to have more people in the household and more children at home, and more educated people are more likely to have at least one extremely helpful person). Older people have fewer people in their network, get less help from others, and are less likely to have close attachments, or be expressive of their needs and feelings. People with higher income generally have more people in their network, get more help from others, are more likely to have close attachments and be expressive, have people who understand, and get cognitive guidance and advice from others.

The will to live measure is not associated with any of the sociodemographics. Younger people with more income tend to have more reason to live, and nonwhite women have a more religious or spiritual perspective on life.

Most of the active coping measures are not associated with the sociodemographic measures (although older people are more likely to relax). Seeking information, however, is more likely to be done by younger white people with more education and income.

The acceptance/rejection measures are not associated with the sociodemographics except that older people try more to forget that they are ill.

Only two associations were observed between any of the doctor-patient relationship measures and these sociodemographics. Less educated people had greater confidence in their doctors and were more likely to have a doctor who facilitated the expression of their needs and feelings.

Almost no association was observed between the pleasures/benefits measures and the sociodemographics, although nonwhite people with less education were more likely to enjoy being cared for when ill.

Positive and negative feelings did not tend to be associated with the sociodemographics, although more educated people were more satisfied with their work, and women tended to be more depressed.

Personal functioning was better in younger people and in people with more education and income. Role functioning was better in younger people.

Symptoms, pain, and health compared with the situation a month ago were not associated with any of the sociodemographics, but current health was better in those with more education and income.

ASSOCIATIONS AMONG CONTEXT AND COPING MEASURES

A summary of product-moment correlations between the context measures and the coping measures is shown in Table 107.

This matrix is large enough that visual inspection is difficult. Therefore, a principal components analysis was performed.

A principal components analysis on these measures yielded 12 factors with eigenvalues greater than one. Only four factors predicted 5 percent or more of the variance. A scree test suggested that five factors should be rotated. Because the fifth unrotated factor appeared to be a common factor, five factors were rotated. These explained 48 percent of the variance. Results are shown in Table 108.

The first factor is a general well-being and social support factor. People who score high on this factor have greater well-being, fewer negative feelings, are satisfied with life, have high self-esteem, greater sense of control, have people who understand around them, have close attachments and are expressive to those around them.

The second factor seems to indicate a concern with issues surrounding the illness, where high scores would indicate a nonacceptance of death, information-seeking, changed views of living as a result of thinking about dying, getting advice from others, and being bothered by the illness.

The third factor is a physical health factor, but includes optimism/positive outlook and rejection of the sick role.

Table 107

PRODUCT-MOMENT CORRELATIONS(a) BETWEEN CONTEXT MEASURES AND COPING RESPONSES: TOTAL SAMPLE

Context Measures	Coping Responses												
	VIEWS	ACCDTH	THDTH	ACTPOS	RELAX	DAILY	INFO	REJECT	NBOTHER	FORGET	ENJOY	CARED	BUSY
Religious/spiritual beliefs(b)	.28*	.00	.00	.42*	.24*	.09	.07	.14	-.05	.12	.23*	.28*	.02
Belief that thoughts and emotions affect recovery	.28*	-.09	-.17	.56*	.22*	.14	.13	.13	-.02	.23*	.20	.10	.06
Belief that health habits affect recovery	.12	.00	.00	.49*	.23*	.22	.13	.19	-.14	.08	.19	.11	.10
Belief that recovery up to medical care	.03	-.07	-.21	.20	.11	.03	-.09	.06	-.02	.10	.04	.08	.09
Sense of control	-.03	.28*	-.14	.19	.25*	.27*	-.15	.09	.26*	.02	.23*	.05	-.14
Self-esteem	-.02	.19	-.15	.18	.20	.28*	.04	.26*	.29*	-.02	.33*	.13	-.21*
Number of people in social network	.30*	-.31*	.08	.23*	-.04	.01	.30*	.02	-.22*	-.10	.10	.35*	-.01
Number of children at home	.06	-.20	-.05	.14	-.27*	.00	-.10	.04	-.03	-.06	-.12	.23*	.04
Total amount of helpfulness	.24*	-.12	-.14	.34*	.10	.20	.26*	.23*	.00	.08	.32*	.38*	-.18
Total amount of unhelpfulness	.11	-.26*	.20	-.05	-.11	-.22*	.02	-.29*	-.25*	-.13	-.17	-.18	.16
Close attachments/expressiveness	.26*	-.17	-.09	.17	.07	.35*	.28*	.18	.05	-.10	.41*	.38*	-.20
No stigma of illness	-.07	.12	-.17	.17	-.07	.12	.17	.07	.23*	.06	.06	.17	-.10
People who understand	.03	.09	-.12	.03	.15	.22*	.21*	.20	.21*	.01	.27*	-.01	-.22*
Cognitive guidance/advice	.23*	-.17	-.10	.29*	.15	.06	.35*	.20	-.21*	.11	.29*	.27*	-.02
Frequency of contact with others	.13	-.07	.02	.02	.04	.18	.08	.10	.10	-.10	.23*	.14	-.18
Give as much support as receive	.09	.04	-.14	.10	.30	.16	.07	.10	.05	.08	.22*	-.01	-.10
Reason to live	.28*	-.20	.04	.29*	.11	.16	.30*	.15	-.17	.01	.34*	.30*	-.02
Will to live	.16	.03	-.06	.33*	.06	.13	.21*	.24*	.09	.00	.36*	.09	-.02

* $p < .01$.

(a) Coefficients based on pairwise deletion of missing data (N=136 to 156).

(b) Combined three-variable measure.

Table 108

CORRELATIONS OF COPING AND COPING-RELATED MEASURES WITH ROTATED PRINCIPAL COMPONENTS: TOTAL SAMPLE (N=134)

Grouping/Measure	Component I	II	III	IV	V	h^2
GENERAL WELL-BEING						
Positive well-being	.80					.69
Negative feelings	-.77					.70
Satisfaction with life	.74					.63
Self-esteem	.67		.25			.53
Sense of control	.66					.50
People who understand	.60					.42
Close attachments/expressiveness	.60	.50			.39	.78
Daily routine	.49					.28
Total amount of unhelpfulness	-.49					.30
Enjoy life	.48	.29		.27		.41
Relax/take it easy	.43		-.38	.36	-.37	.60
Will to live	.48		.23	.32		.46
Gives as much support as receives	.42				-.32	.36
Busy/working	-.39			.30		.28
Frequency of contact with others	.36	.30				.28
CONCERN WITH ILLNESS						
Acceptance of death	.33	-.66				.58
Seek information		.62				.40
Thinking of dying changed views of living		.61				.43
Number of people in social network		.56			.53	.61
Cognitive guidance/advice	.23	.55		.30		.49
Reason to live	.32	.52		.26	.32	.55
Not bothered by illness	.35	-.49	.48			.59
PHYSICAL HEALTH						
Personal functioning			.81			.70
Overall functioning			.71			.55
Current health			.71			.59
Pain	-.24		-.64			.52
Optimism/positive outlook	.48		.49	.45		.72
Rejection of sick role			.46			.30
Symptoms	-.37		-.40		.33	.41
Health compared with month ago	.24		.34	.26		.27

Table 108--continued

ACTIVE POSITIVE THINKING						
Active positive thinking				.77	.26	.67
Belief thoughts and emotions affect recovery				.73		.59
Belief health habits affect recovery				.67		.50
Religious/spiritual beliefs				.56	.23	.43
Try to forget I'm ill		-.28		.47		.31
Belief recovery up to medical care				.34		.14
Thinking about death				-.18		.12
SOCIAL NETWORK						
Number of children at home					.62	.43
Enjoy being cared for when ill					.58	.44
Total amount of helpfulness	.41	.41		.26	.46	.62
No stigma of illness	.29		.25		.42	.34
Percent of variance explained	16	9	9	8	6	

NOTE: Only coefficients above |0.23| are reported, unless they were the highest loading of a measure.

The fourth factor pertains to active positive thinking, including all the beliefs that recovery is up to something, religious/spiritual beliefs, and trying to forget about illness. Optimism/positive outlook has a secondary loading on this factor.

The fifth factor is somewhat of a social network factor, including number of children, number of people in social network (which has a high secondary loading on this factor), and total amount of helpfulness.

COPING AND OUTCOME MEASURES

Product-moment correlations between the coping (and coping-related) measures and the outcome measures are shown in Table 109 for the total sample. An asterisk indicates the coefficient is significant at $p < .01$.

Beliefs about recovery measures were not associated with most of the outcome measures, except for optimism. All measures (except recovery up to medical care) were positively associated, indicating that people were more likely to be optimistic if they believed their recovery was up to thoughts, emotions, health habits, God, or religious faith, and less optimistic if they believed their recovery was up to chance.

Most of the attitudes about death measures were not associated with these outcome measures. People who accepted the idea of their own death were more optimistic, had better positive well-being, were less depressed, anxious, and angry, and had poorer personal functioning. People who think a lot about their death were less optimistic and had more symptoms. People who have a religious or spiritual perspective on death were more optimistic. People who believe in the right to decide to die were less optimistic.

Sense of control was associated with several outcomes. People who have a greater sense of control tended to be more optimistic and satisfied with their life, experienced more positive well-being, less depression, anxiety, and anger, had fewer symptoms, and felt their health was improving compared with a month ago.

Self-esteem and body image were associated with nearly all of the outcome measures. People with higher self-esteem and a more positive body image tended to be more optimistic and satisfied with life and

Table 109

PRODUCT-MOMENT CORRELATIONS BETWEEN COPING MEASURES AND OUTCOME MEASURES: TOTAL SAMPLE

Measure	N	Outcome Measure(a) OPT	LSAT	WSAT	PWB	DEP	ANX	ANGER	PERS-FUNC	PFSUM	ROLE-FUNC	OVER-FUNC	SYMP-TOMS	PAIN	HLTH-COM	HLTH-CUR
BELIEFS ABOUT RECOVERY																
Thoughts and emotions affect recovery	136	.39*	.20	.08	.10	-.02	-.01	.05	.06	.10	.12	.07	-.08	-.10	.16	.12
Health habits affect recovery	136	.29*	.02	-.04	.10	-.04	.11	.16	.12	.16	.14	.08	-.08	-.07	.23*	.16
Recovery not up to chance	92	.30*	.11	-.02	.12	-.09	-.08	-.06	-.15	-.12	-.01	-.10	.03	-.04	.13	.14
Recovery up to medical care	135	.04	-.06	.05	-.04	.02	.05	.05	-.04	-.03	.00	-.02	-.14	.03	.04	-.10
Recovery up to God, religious faith	136	.30*	.22*	-.01	.17	-.14	-.08	-.08	-.15	-.11	-.02	.04	-.05	-.11	.12	-.12
ATTITUDES ABOUT DEATH																
Acceptance of death	154	.21*	.05	-.16	.30*	-.33*	-.33*	-.37*	-.17	-.23*	-.15	-.14	.03	.03	.19	-.10
Thinking about death	154	-.23*	-.13	.11	-.18	.19	.16	.12	-.13	-.13	-.07	-.08	.24*	.18	-.10	-.01
Religious/spiritual perspective on death	154	.28*	.19	.06	.17	-.09	-.12	-.07	.00	.02	-.07	.00	-.06	-.13	.07	.04
Right to die	152	-.22*	-.12	.06	.00	.11	.00	-.01	.15	-.13	.07	.01	.10	.07	.04	.08
Thinking of dying changed views of living	149	.02	.01	.06	-.11	.06	.05	.14	.12	.15	-.03	.06	-.02	.00	.05	.09
SENSE OF CONTROL																
Sense of control	156	.38*	.41*	.10	.55*	-.51*	-.48*	-.47*	.13	.11	.18	.13	-.32*	-.20	.23*	.09
SELF-ESTEEM/BODY IMAGE																
Self-esteem	155	.49*	.53*	.12	.61*	-.60*	-.39*	-.45*	.29*	.29*	.21	.23*	-.27*	-.25*	.29*	.32*
Body-image	93	.51*	.48*	.31*	.46*	-.41*	-.43*	-.34*	.27*	.30*	.40*	.36*	-.26*	-.32*	.16	.46*
SOCIAL NETWORKS																
Married	158	.05	.15	-.05	.12	-.12	-.01	-.01	.04	.09	-.02	.13	-.14	-.03	-.18	.00
Live alone	157	.06	.02	.03	.06	.03	.02	-.01	.04	.01	.07	.05	.05	-.11	.25*	.02
Friends or not	156	.06	.05	.12	-.10	.09	.08	.10	-.04	.01	.11	-.01	.08	.08	.02	-.02
Mate or spouse	156	.03	.16	.07	.14	-.03	.02	.05	.17	.21	.08	.09	-.08	.03	-.18	.12
Any dependent children at home	158	-.02	-.05	.20	-.05	.10	.18	.15	.03	.07	.00	-.02	.11	.14	-.08	-.06
Number of people in social network	156	.05	.09	.19	-.03	.13	.11	.15	.03	.12	.07	-.05	.05	.13	.08	.09
Number of people in family network	156	.01	.12	.22	.01	.11	.11	.13	.14	.24	.14	-.02	.02	.15	-.04	.10
Number of people in professional network	156	.01	.00	-.02	-.04	.06	.08	.06	-.16	-.11	-.16	-.10	.02	.02	.11	-.01
Number of people in peripheral network	156	.08	.05	.16	-.03	.09	.04	.11	.03	.08	.10	.00	.06	.08	.14	.12
Number of people in household	134	.12	.10	.16	.02	.01	.11	.08	.02	.02	.14	.07	.05	.01	-.04	.02
Number of children at home	134	.03	-.03	.18	-.14	.18	.22	.22	.10	.10	.14	.02	.14	.14	-.09	-.02
At least one extemely helpful person	158	.28*	.34*	.21	.27*	-.15	-.11	-.06	.09	.14	.13	.06	-.03	-.04	.11	.15
Number of helpful people	156	.24*	.27*	.20	.17	-.10	-.05	-.08	.04	.12	.06	.04	-.07	-.02	.19	.14

Table 109--continued

Measure	N	Outcome Measure(a) OPT	LSAT	WSAT	PWB	DEP	ANX	ANGER	PERS-FUNC	PFSUM	ROLE-FUNC	OVER-FUNC	SYMP-TOMS	PAIN	HLTH-COM	HLTH-CUR
SOCIAL NETWORKS (continued)																
Number of extremely helpful people	156	.37*	.34*	.18	.30*	-.25*	-.22*	-.17	.09	.13	.09	.09	-.15	-.13	.16	.21*
Number of unhelpful people	156	-.33*	-.32*	-.02	-.34*	.39*	.27*	.39*	-.02	-.01	.02	-.16	.21	.27*	-.19	-.09
Number of extremely unhelpful people	156	-.18	-.22*	-.01	-.15	.22*	.18	.23*	-.04	-.01	.04	-.10	.13	.23*	-.10	-.06
Number of helpful minus unhelpful people	156	.33*	.35*	.16	.28*	-.25*	-.16	-.24*	.04	.10	.03	.10	-.14	-.14	.23*	.15
Total amount of helpfulness	156	.37*	.38*	.24*	.31*	-.24*	-.18	-.18	.11	.17	.11	.09	-.12	-.10	.22*	.21*
Total amount of unhelpfulness	156	-.30*	-.31*	-.02	-.29*	.36*	.25*	.36*	-.03	-.01	.03	-.15	.19	.28*	-.17*	-.08
Average amount of helpfulness	156	.43*	.44*	.23*	.42	-.34*	-.32*	-.25*	.15	.17	.18	.15	-.15	-.15	.19	.22
Average amount of unhelpfulness	156	-.16	-.26*	-.03	-.19	.29*	.14	.24*	-.10	-.08	-.01	-.16	.21*	.24*	-.13	-.09
SOCIAL SUPPORT/EXPRESSIVENESS																
Close attachments/expressiveness	157	.36*	.62*	.33*	.44*	-.41*	-.29*	-.26*	.14	.21	.18	.23*	-.22*	-.17	.18	.27*
No stigma of illness	157	.32*	.22*	.10	.28*	-.23*	-.18	-.20	.09	.10	.20	.18	-.15	-.17	.19	.32*
People who understand	157	.30*	.42*	.20	.38*	-.40*	-.25*	-.39*	.20	.19	.19	.23*	-.23*	-.16	.17	.23*
Cognitive guidance/advice	157	.21*	.29*	.10	.17	-.04	.00	.05	.08	.12	.09	.20	-.09	.06	.04	.15
Frequency of contact with others	151	.11	.34*	.26*	.28*	-.25*	-.10	-.13	.22*	.23*	.15	.13	-.07	-.13	.07	.18
Give as much support as receive	146	.17	.20	-.06	.25*	-.30*	-.19	-.26*	-.06	-.05	-.10	.06	-.20	-.03	.02	-.03
WILL TO LIVE																
Reason to live	153	.36*	.42*	.30*	.31*	-.17	-.03	.06	.10	.14	.08	.20	-.05	.07	.06	.24
Religious/spiritual perspective	158	.24*	.25*	.07	.13	-.04	.01	.03	-.05	.01	-.02	.03	.00	.01	.09	.03
Will to live	154	.55*	.46*	.19	.53*	-.49*	-.22*	-.20	.23*	.26*	.07	.24*	-.18	-.12	.30*	.29*
ACTIVE COPING																
Active positive thinking	153	.49*	.09	.04	.20	-.05	.03	.06	.07	.12	.09	.02	.03	-.02	.27*	.10
Relax/take it easy	157	.09	.15	-.18	.24*	-.23*	-.16	-.14	-.16	-.18	-.28*	-.14	-.14	.06	.08	-.19
Daily routine	157	.25*	.29*	.12	.37*	-.29*	-.27*	-.24*	.13	.14	.11	.12	-.32*	-.21*	.13	.18
Seek information	157	.04	.10	.08	.02	.00	-.01	.03	.05	.13	-.01	.14	-.05	.03	.06	.18
ACCEPTANCE/REJECTION																
Rejection of sick role	154	.41*	.23*	.23*	.26*	-.25*	-.11	-.10	.34*	.38*	.14	.32*	-.11	-.32*	.08	.27*
Not bothered by illness	156	.44*	.31*	.25*	.36*	-.39*	-.36*	-.46*	.28*	.29*	.22	.32*	-.22*	-.44*	.23*	.25*
Try to forget illness	154	.23*	-.02	.00	.02	-.02	-.04	-.02	-.01	-.05	-.09	.07	-.04	-.20	.07	-.02
DOCTOR-PATIENT RELATIONSHIP																
Confidence in doctor	94	.30*	.16	.02	.27*	-.32*	-.26	-.31*	-.05	-.06	-.08	-.03	-.15	.01	.25	.19
Humaneness	94	.27*	.22	.02	.24	-.28*	-.29*	-.20	-.05	-.09	.06	-.01	-.24	-.05	.28*	.05
Facilitates expression	95	.26*	.22	.13	.24	-.32*	-.38*	-.29*	-.12	-.14	.00	.08	-.29*	-.12	.21	.10
Communication of information	95	.29*	.28*	.17	.32*	-.41*	-.39*	-.34*	.02	.01	.02	.05	-.32*	-.06	.26	.20
Believes mind affects body	93	.46*	.10	.10	.21	-.12	-.08	.05	-.04	-.03	.04	.08	-.07	-.12	.32*	.08
Diagnosis/outlook	94	.44*	.20	.15	.29*	-.26*	-.18	-.17	.18	.14	.20	.04	-.10	-.08	.39*	.24
Overall satisfaction	92	.22	.25	.05	.17	-.28*	-.30*	-.28*	.09	.08	.15	.01	-.23	-.09	.31*	.24
PLEASURES/BENEFITS																
Enjoy life	156	.35*	.43*	.28*	.47*	-.31*	-.11	-.12	.21	.26*	.04	.25*	-.13	-.12	.21	.20
Enjoy being cared for	154	.07	.22*	-.02	.08	-.14	-.02	.01	-.01	.00	.06	.07	.09	.08	.15	.08
Busy/working	156	-.14	-.25*	-.17	-.25*	.35*	.32*	.25*	-.14	-.12	-.11	-.10	.35*	.16	-.04	-.23*

(a) See Table 99 for description of measure.

* $p < .01$.

work, experienced more positive well-being, less depression, anxiety, and anger, had better functional status, fewer symptoms, less pain, and better health than those with less self-esteem and a less favorable body image.

The size of the social network was unrelated to any of the outcome measures (e.g., number of people in the network, whether they live alone or are married).

The helpfulness of people in the network was associated with several outcomes.

An interesting finding is that the number of helpful people is associated with only two outcomes (optimism/positive outlook and satisfaction with life), whereas the number of extremely helpful people is associated with six outcomes (additionally, positive well-being, depression, anxiety, and current health). Those who have more unhelpful people in their network tend to experience more pain.

Those who have greater amounts of helpfulness available tend to be more optimistic, are more satisfied with their life and work, and experience more positive well-being, less depression, and better health.

Having close attachments and people who understand is associated with more optimism, life satisfaction, better mental health, better overall functioning, and fewer symptoms, and better current health.

Feeling a stigma of the illness is associated with less optimism and satisfaction with life, less positive well-being, more depression, and poorer current health.

Having cognitive guidance or advice available is associated with greater optimism and life satisfaction, but none of the other outcomes.

People who have greater frequency of contact with others are more satisfied with their lives and work, have greater positive well-being, less depression, and better personal functioning.

Being able to give as much support to others as one receives is associated with more positive well-being and less depression and anger.

The will to live measures are associated with several outcomes. People who have more reason to live are more optimistic, satisfied with life and work, and have greater positive well-being than those with less reason to live. People with a religious or spiritual perspective on

life are more optimistic and more satisfied with life than those without such a perspective. People with a stronger will to live are more optimistic and satisfied with life, have greater positive well-being, experience less depression and anxiety, have better personal and overall functioning, have better health compared with a month ago, and have better current health than those with a weaker will to live.

Some of the active coping measures are associated with these outcomes. Seeking information is not associated with any of the outcomes, and active positive thinking is associated only with optimism and health compared with a month ago (people who think positively are more optimistic and tend to have better health now than a month ago). People who relax more have greater positive well-being and less depression, but have poorer role functioning. People who tend to follow a daily routine (in terms of eating well-balanced meals and getting a good night's sleep) were more optimistic, more satisfied with life, had greater positive well-being and less depression, anxiety, and anger, had fewer symptoms and less pain than those who did not do so.

The acceptance/rejection measures had a mixture of associations. Trying to forget about the illness (a single-item measure) was not associated with any outcomes except optimism (those who tried to forget were more optimistic). Those who rejected the sick role were more optimistic, more satisfied with life and work, had greater positive well-being and less depression, had better personal and overall functioning and less pain. Not being bothered by their illness is associated with all outcomes except role functioning. People who are less bothered are more optimistic, satisfied with life and work, have better mental health, better functional status, fewer symptoms, less pain, and better health than those who are more bothered by their illness.

Regarding the doctor-patient relationship measures, having a doctor who believes one's mind affects one's body is least associated with these outcomes (the more their doctor so believes, the more optimistic they are and the better is their health is now compared with a month ago). The measure associated with the most outcomes is the communication of information. If more communication occurs, people tend to be more optimistic, satisfied with life, have better mental health (on all mental health measures), and have fewer symptoms than if less

communication occurs. On the whole, high scores on the other measures tend to be associated with more optimism and less negative feelings.

The pleasure/benefits measures are not associated with very many outcomes. Enjoying life more is associated with more optimism, satisfaction with life and work, greater positive well-being, less depression, and better personal and overall functioning. Enjoying being cared for is associated with more satisfaction with life. Being busy and working a lot is associated with less satisfaction with life, less positive well-being, more negative feelings, more symptoms, and poorer current health.

PHYSICIAN'S EVALUATION AND COPING

A summary of product-moment correlations between six of the physician's evaluation measures and all the measures is shown in Table 110. Physician evaluation forms were available for only 62 of the cancer patients. The evaluation measures are scored so that a high score indicates any metastases, better prognosis, better health, greater compliance, better coping, and greater optimism.

Beliefs about recovery and attitudes about death were not associated with any of the ratings.

A sense of control and high self-esteem were associated with patient optimism. High self-esteem was also associated with better current health and coping.

Virtually none of the social network/social support measures were associated with any of the ratings, except people with any friends were rated as more compliant; people who had more helpful people in their network were rated higher on coping; and people who experienced no stigma of illness had better health.

A will to live was associated with better health and optimism as rated by the physician, and active positive thinking was associated with greater optimism.

Rejection of the sick role and not being bothered by the illness were associated with better health, coping, and optimism.

None of the doctor-patient relationship measures were associated with the physician ratings.

Table 110

PRODUCT-MOMENT CORRELATION OF PHYSICIAN'S EVALUATION MEASURES WITH COPING AND COPING-RELATED MEASURES

Coping Measure	Physician's Evaluation (N-62)					
	Any Metastases	Prognosis	Current Health	Patient's Compliance	Patient's Coping	Patient's Optimism
BELIEFS ABOUT RECOVERY						
Thoughts and emotions affect recovery	-.02	-.12	.09	-.04	.05	.18
Health habits affect recovery	-.04	-.14	.06	.01	.09	.19
Recovery not up to chance	.07	-.06	.03	.03	.05	.18
Recovery up to medical care	.02	-.26	-.09	.03	.01	.02
Recovery up to God, religious faith	-.14	-.14	-.17	.09	-.07	.05
ATTITUDES ABOUT DEATH						
Acceptance of death	.02	.01	-.08	-.07	.08	.02
Thinking about death	.00	-.21	-.10	-.27	-.27	-.22
Religious/spiritual perspective on death	-.07	.02	.00	-.06	-.06	.05
Right to die	.09	.26	.23	-.08	.09	-.06
Thinking of dying changed views of living	.04	-.17	-.08	-.16	-.22	.05
SENSE OF CONTROL						
Sense of control	.02	.15	.16	.03	.32	.35*
SELF-ESTEEM/BODY IMAGE						
Self-esteem	-.09	.26	.35*	.18	.33*	.45*
Body image	-.13	.24	.22	-.03	.26	.24
SOCIAL NETWORKS						
Married	-.09	.14	-.10	-.02	-.10	-.09
Live alone	-.04	.04	.22	-.08	.06	-.08
Friends or not	-.22	-.02	.07	.54*	-.02	-.12
Mate or spouse	-.10	.10	.04	-.09	-.07	-.01
Any dependent children at home	-.01	-.06	-.16	.15	.17	.16
Number of people in social network	-.18	.02	.09	.24	-.08	-.13
Number of people in family network	-.06	.00	.03	.14	.03	.03
Number of people in professional network	-.20	.01	.07	.08	-.16	-.20
Number of people in peripheral network	-.14	.04	.10	.23	-.06	-.14
Number of people in household	.00	.06	.08	.21	.23	.17
Number of children at home	-.12	.20	.08	.19	.14	.18
At least one extremely helpful person	-.01	-.02	-.06	.10	.18	.07
Number of helpful people	-.10	-.04	.11	.26	.10	.01
Number of extremely helpful people	.08	-.08	.08	.16	.21	.09
Number of unhelpful people	-.17	.10	-.04	-.02	-.31	-.25
Number of extremely unhelpful people	-.17	.09	.07	.04	-.12	-.04
Number of helpful minus unhelpful people	.00	-.07	.11	.21	.21	.12
Total amount of helpfulness	.00	-.07	.15	.25	.23	.09
Total amount of unhelpfulness	-.18	.10	-.01	.01	-.27	-.20
Average amount of helpfulness	.11	-.02	.09	.14	.33*	.16
Average amount of unhelpfulness	-.23	.22	.02	.07	.13	.06

Table 110--continued

Coping Measure	Physician's Evaluation (N-62)					
	Any Metastases	Prognosis	Current Health	Patient's Compliance	Patient's Coping	Patient's Optimism
SOCIAL SUPPORT/EXPRESSIVENESS						
Close attachments/expressiveness	-.08	.00	.12	.28	.20	.15
No stigma of illness	-.18	.11	.40*	.17	.21	.12
People who understand	-.03	.24	.24	.26	.18	.04
Cognitive guidance/advice	.07	-.12	.05	.12	.01	.06
Frequency of contact with others	.05	.01	.16	.14	.22	.12
Gives as much support as receives	.00	-.07	-.07	.07	-.17	-.09
WILL TO LIVE						
Reason to live	-.12	.10	.20	.08	.02	.15
Religious/spiritual perspective	-.08	-.10	.05	-.02	.02	.24
Will to live	-.16	.18	.34*	.07	.24	.34*
ACTIVE COPING						
Active positive thinking	-.13	-.09	.09	.08	.18	.36*
Relax/take it easy	.00	-.16	-.22	.19	-.11	-.12
Daily routine	.02	-.08	.00	.02	.07	.17
Seek information	-.12	.13	.14	.19	.06	.04
ACCEPTANCE/REJECTION						
Rejection of sick role	-.22	.29	.41*	.09	.36*	.38*
Not bothered by illness	-.14	.15	.34*	-.08	.42*	.37*
Try to forget illness	-.16	-.10	-.01	-.14	-.05	.00
DOCTOR-PATIENT RELATIONSHIP						
Confidence in doctor	-.04	-.19	-.03	.28	.03	.13
Humaneness	.25	-.21	-.15	.07	-.02	.01
Facilitates expression	.14	-.20	-.18	.12	.03	.03
Communication of information	.12	-.04	-.05	.08	.06	.00
Believes mind affects body	-.17	-.09	.13	.00	.13	.08
Diagnosis/outlook	-.12	.08	.17	.00	.25	.12
Overall satisfaction	.18	-.07	-.21	.01	-.10	-.04
PLEASURES/BENEFITS						
Enjoy life	-.20	-.16	.31	.01	.35*	.42*
Enjoy being cared for	-.27	-.20	.06	.31	-.05	.03
Busy/working	-.14	-.01	.03	-.02	.04	-.03
POSITIVE FEELINGS						
Optimism/positive outlook	-.16	.22	.35*	.19	.47*	.46*
Satisfaction with life	.02	-.01	.07	.06	.30	.26
Satisfaction with work	-.11	.10	.27	.07	.41*	.33
Positive well-being	.10	.14	.19	-.03	.29	.33

Table 110--continued

Coping Measure	Physician's Evaluation (N-62)					
	Any Metastases	Prognosis	Current Health	Patient's Compliance	Patient's Coping	Patient's Optimism
NEGATIVE FEELINGS						
Depression	.07	-.08	-.16	-.13	-.24	-.32
Anxiety	-.03	-.15	-.08	-.08	-.18	-.22
Anger	-.01	-.07	-.06	-.02	-.12	-.17
FUNCTIONAL STATUS						
Personal functioning	-.18	.39*	.65*	-.15	.44*	.40*
Personal functioning--summated scale	-.26	.40*	.67*	-.15	.43*	.45*
Role functioning	-.14	.44*	.56*	-.09	.40*	.40*
Overall functioning	-.36*	.30	.60*	-.04	.35*	.34*
SYMPTOMS						
Number of symptoms	-.14	.01	-.16	.00	-.16	-.21
PAIN AND GENERAL HEALTH						
Pain	-.04	-.22	-.28	.18	-.21	-.15
Health compared to month ago	-.04	.10	.29	.00	.21	.26
Current health	-.24	.33	.65*	-.11	.27	.30

*p < .01.

Enjoying life was associated with better coping and optimism.

Optimism/positive outlook was positively associated with the physician's rating of the patient's health, coping, and optimism, and satisfaction with work was positively associated with the physician's rating of the patient's coping.

None of the negative feelings were associated with the physician's ratings.

Functional status was positively associated with physician ratings of prognosis, health, coping, and optimism, but the number of symptoms, pain, and health compared with a month ago were not.

The patient's evaluation of their current health was positively associated with the physician's rating.

Having metastases or not was not associated with any of the measures except overall functioning (people with metastases had poorer functioning). Prognosis was only associated with functional status; people with a better prognosis had better personal and role functioning.

XXIII. DISCUSSION OF MEASURES

This discussion section examiness on methodological issues and the adequacy of the measures. Results are discussed here that pertain to reliability and validity issues that might help in improving the quality of the measures. A more general discussion of the findings of this study is presented in the following section, with emphasis on relating the results to the model of coping and to the literature, implications, and suggestions for further research.

Overall, this set of measures can be considered fairly useful in the sense that the majority were of acceptable reliability and reasonable validity. Even in the myocardial infarction sample, where reliability tended to be lower than in the cancer sample, the measures nevertheless contained useful information.

Nearly all of the measures can be improved. The extent of revision needed ranges from straightforward lengthening (i.e. the addition of a few items to improve the reliability) to major reconceptualizing. The results here provide a solid basis for improving the next set of measures.

No new important contents were identified in the open-ended questions asking respondents if the questionnaire had covered their experiences in dealing with their illness.

METHODOLOGICAL PROBLEMS

There are a few general methodological issues that should be kept in mind when considering the results.

Response bias may be a problem, in terms of both socially desirable responding and acquiescence. Many of the questions deal with behaviors and feelings that have socially desirable responses (e.g., "eating well-balanced meals"). However, because the questionnaire is self-administered, this should be less of a problem than if personal interviews had been the primary method of data collection. If socially desirable responding is occurring in these data, it is probably of a more subtle nature--that of trying to appear to be coping well. Such

responding may be because of the unspoken pressure put on victims to cope well with crisis (see Silver and Wortman, 1980, or Wortman and Dunkel-Schetter, 1979).

The tendency to agree with statements regardless of their content (acquiescent response set) is possible; although items were written to be balanced within each hypothesized construct, in many cases the final scales were unbalanced. If a scale is composed of items worded all in the same direction, and if acquiescence is occurring, the intercorrelations among the items (and in turn the reliabilities) would be artificially inflated. Acquiescence usually occurs when items are ambiguous or complex, or in people that have difficulty understanding the items (e.g. those with low education). One would expect, therefore, that if this were occurring here, it would be more likely in the MI sample. Because reliabilities were generally lower in the MI sample (i.e. do not appear to be spuriously inflated), acquiescence may not be a serious problem in this study. Further, when counts of agree and strongly agree responses were made, no indication of acquiescence was ever observed. Nevertheless, it is important to improve the balance of items in each scale when using these measures in subsequent studies, and to be aware of possible problems when unbalanced scales are used.

All data are self-reported. The only non-self-report measures are the ratings by the physicians, and these are available only on 62 people. When all data are collected using the same method, correlations may be spuriously inflated (e.g. a person may consistently self-report the extent of his or her depression as less severe than a friend or observer would rate it). When there is considerable shared variance among items because of method, reliabilities may be spuriously inflated. Ideally one would like to develop these measures using several methods (e.g. reports by friends or family) using the multitrait-multimethod technique (see Campbell and Fiske, 1959).

All measures are based on stuctured responses. Alternatively, data can be collected using more open-ended methods, allowing the respondent to more freely respond to each issue. Open-ended responding is generally more time-consuming and more difficult to code into reliable scores. Nevertheless, if adequate resources were available, such open-ended data would provide an excellent test of the validity of these

structured measures. That is, by comparing the open-ended responses regarding a particular subject to the content of the structured items, information on the extent to which the items covered the same issues might lead to suggestions for broadening the item content. Data from open-ended interviews are available on about 20 of these people. At a later time, these can be compared with the structured data to further evaluate the validity of the results.

ADEQUACY OF MEASURES

The following criteria were used to assess the adequacy of each of the final measures:

(1) Measures should have sufficient variability to detect differences in the concept being measured and should be (roughly) normally distributed.
(2) Measures should be substantially free of random error (reliability) to make comparisons between different groups of people.
(3) Measures should be substantially free of systematic error (response bias)
(4) Measures should provide information about the concepts they were intended to measure (validity) without duplicating information from other measures.
(5) There should be only a small percentage of missing data.

In the case of single-item measures, only the variability, validity, and missing data criteria can be evaluated. Essentially, all single-item measures will be judged questionable in the sense that reliability is unknown and response bias is not controlled for. Thus it is recommended that items be added to all of the important single-item measures so that scales can be constructed.

If a measure has low reliability, its validity is limited (i.e. the reliability essentially establishes an upper limit to validity). In some cases, however, the validity of a measure appeared good despite low reliability (using internal-consistency criteria). This may indicate a heterogeneous concept that is nevertheless a good predictor.

Each multi-item measure was evaluated according to these five criteria. The following basic steps can be taken to improve deficiencies on any of the criteria:

(1) variability--new items can be added or existing items can be reworded to assess a broader range of the concept being measured.
(2) reliability--the number of items can either be increased or the conceptualization of the concept can be improved. Generally a minimum of four items seems to be necessary to achieve adequate reliability. Items with low item-scale correlations or that were not scaling successes can be reevaluated for clarity and relevance to the concept.
(3) response bias--by using a balance of positively and negatively worded items, acquiescent response bias is minimized. Item wording should be such that it minimizes value connotation, thus minimizing socially desirable responding.
(4) validity--the conceptualization can be improved and items reworded.
(5) missing data--item wording should be evaluated for clarity.

If a scale needs reevaluation, some general suggestions for evaluating items can be used. Item distributions should be checked and those with very skewed distributions considered for rewording. New items can be added from recent literature. Some item distribution problems could be due to sampling, i.e. a more representative sample would perhaps provide less skewed distributions. Items that were difficult to understand (as evidenced by written comments on the questionnaire) can be reworded.

Some summary comments regarding the adequacy of each of the measures are shown in Table 111. For each measure, information is presented on the number of items, the distribution of the final score (in terms of normality), reliability, whether socially desirable item wording is a problem, whether there is a balance of positively and negatively worded items, and a rough evaluation of its validity. More

Table 111

SUMMARY OF ADEQUACY MEASURES

Measure	No. of Items	Distribution	Reliability(a)	Socially Desirable Item Wording	Unbalanced Items	Validity
BELIEFS ABOUT RECOVERY: CANCER SAMPLE						
Thoughts and emotions affect recovery	5	skewed	moderate	(b)	yes	good
Health habits affect recovery	6	(b)	moderate	yes	(b)	good
Recovery not up to chance	2	skewed	low	(b)	(b)	not tested
Recovery up to medical care	2	very skewed	moderate	(b)	yes	uncertain
Recovery up to God, religious faith	3	skewed	high	(b)	yes	good
BELIEFS ABOUT RECOVERY: MI SAMPLE						
Thoughts and emotions affect recovery	5	(b)	marginal	(b)	yes	good
Health habits affect recovery	3	slightly skewed	very low	yes	(b)	good
Recovery not up to chance	2	not scored	unacceptable	(b)	(b)	not tested
Recovery up to medical care	3	slightly skewed	marginal	(b)	(b)	uncertain
Recovery up to God, religious faith	3	very skewed	high	(b)	yes	good
ATTITUDES ABOUT DEATH						
Acceptance of death	5	skewed	moderate	(b)	yes	good
Thinking about death	3	(b)	marginal	(b)	(b)	poor
Religious/spiritual perspective on death	2	skewed	moderate	(b)	yes	good
Right to die	2	skewed	very low	(b)	(b)	uncertain
Thinking of dying changed views	1	(b)	(c)	(b)	(c)	good
SENSE OF CONTROL						
Sense of control	6	(b)	moderate	(b)	(b)	good
SELF-ESTEEM: CANCER SAMPLE						
Self-esteem	6	(b)	moderate	(b)	(b)	good
Body image	7	(b)	high	(b)	(b)	good
SELF-ESTEEM: MI SAMPLE						
Self-esteem	6	(b)	marginal	(b)	(b)	good
SOCIAL SUPPORTS						
Close attachments/expressiveness	11	flat	moderate	(b)	yes	good
No stigma of illness	4	(b)	moderate	(b)	yes	good
People who understand	5	slightly skewed	marginal	(b)	yes	good
Cognitive guidance/advice	5	(b)	moderate	(b)	yes	good
Frequency of contact with others	1	(b)	(c)	(b)	(c)	good
Gives as much support as receives	1	(b)	(c)	(b)	(c)	poor
WILL TO LIVE						
Reason to live	3	very skewed	moderate	(b)	yes	good
Religious/spiritual perspective	4	slightly skewed	moderate	(b)	yes	good
Will to live	4	very skewed	moderate	yes	(b)	good
ACTIVE COPING						
Active positive thinking	3	slightly skewed	marginal	(b)	yes	good
Relax/take it easy	3	very skewed	marginal	(b)	yes	good
Daily routine	2	very skewed	low	yes	yes	good
Seek information	4	slightly skewed	marginal	(b)	(b)	good

Table 111--continued

Measure	No. of Items	Distribution	Reliability(a)	Socially Desirable Item Wording	Unbalanced Items	Validity
ACCEPTANCE/REJECTION						
Rejection of sick role	3	very skewed	moderate	yes	yes	good
Not bothered by illness	3	flat	marginal	(b)	yes	good
Try to forget I am ill	1	slightly skewed	(c)	(b)	(c)	good
DOCTOR-PATIENT RELATIONSHIP: CANCER SAMPLE						
Confidence in doctors	4	skewed	moderate	(b)	yes	good
Humaneness	4	bimodal	moderate	(b)	(b)	good
Facilitates expression	3	bimodal	high	(b)	(b)	good
Communication of information	5	bimodal	high	(b)	(b)	good
Doctors believe mind affects body	2	bimodal	moderate	(b)	yes	good
Diagnosis/outlook	4	bimodal	moderate	(b)	(b)	good
Overall satisfaction	1	skewed	(c)	(b)	(c)	good
PLEASURES/BENEFITS						
Enjoy life	4	slightly skewed	marginal	(b)	yes	good
Change resulting from illness	4	(b)	unacceptable	(b)	yes	untested
Enjoy being cared for	2	(b)	very low	(b)	yes	poor
Busy/working	2	(b)	marginal	(b)	(b)	good
POSITIVE FEELINGS						
Optimism/positive outlook	6	(b)	marginal	(b)	(b)	good
Satisfaction with life	4	(b)	moderate	(b)	yes	good
Positive well-being	4	(b)	moderate	(b)	yes	good
Satisfaction with work	1	(b)	(c)	(b)	(c)	good
NEGATIVE FEELINGS						
Depression	4	skewed	high	(b)	yes	good
Anxiety	4	slightly skewed	moderate	(b)	yes	good
Anger	5	slightly skewed	moderate	(b)	yes	good
Guilt	3	very skewed	unacceptable	(b)	yes	untested
FUNCTIONAL STATUS						
Personal functioning	9	skewed	very high	(b)	(c)	good
Personal functioning, summated	9	slightly skewed	(c)	(b)	(c)	good
Role functioning	2	skewed	very high	(b)	(c)	good
Overall functioning	1	(c)	(c)	(b)	(c)	good
SYMPTOMS						
Number of symptoms	24	skewed	(c)	(b)	(b)	good
PAIN AND GENERAL HEALTH						
Pain	1	(b)	(c)	(b)	(c)	good
Health compared to month ago	1	slightly skewed	(c)	(b)	(c)	poor
Current health	1	(b)	(c)	(b)	(c)	good

(a) Reliability coefficients were summarized as follows:
.00-.49 unacceptable
.50-.54 very low
.55-.59 low, but acceptable for group-level analyses
.60-.69 marginal
.70-.87 moderate
.88-.94 high
.95+ very high
Reliability is summarized for the total sample, unless otherwise specified.
(b) Satisfactory in these samples.
(c) Could not be assessed.

detailed discussion of each of the measures follows.

Beliefs about Recovery

The two measures regarding beliefs in personal control over recovery (thoughts and emotions, and health habits) were reasonably valid, i.e., they related to other measures in expected ways. For example, both were significantly positively associated with active positive thinking. However, they were not significantly associated with a sense of control. Their reliability was moderate in the cancer sample (r_{tt}=0.84 and 0.81 for thoughts and emotions and health habits, respectively) but marginal to very low in the MI sample (r_{tt}=0.67 and 0.50, respectively). These findings in the cancer sample compare favorably with those of other investigators, who found internal consistency reliability coefficients of scales measuring personal control over health of 0.65 (Lau and Ware, 1981), 0.70 (Mechanic, 1979), and 0.86 (Wallston and Wallston, 1978). The reliabilities in the MI sample compare less favorably.

The belief in health habits scale needs considerable improvement in the MI sample. Several items had to be eliminated that would have broadened the kinds of health habits in this measure (e.g. well-balanced meals, getting enough sleep). People in the MI sample had difficulty understanding that these questions assessed beliefs rather than actual behaviors. For example, the item "it's harder for me to get better if I don't get enough sleep" prompted many of them to say "but I do get enough sleep." Thus, in revising this measure, items need to be written that more clearly indicate that these are beliefs.

The belief that recovery is up to God has not traditionally been included as a dimension of health locus of control (e.g. Lau and Ware, 1981; Wallston and Wallston, 1978). The fact that it had high reliability in this sample and good validity indicates that this may be an important dimension to include in subsequent studies of health locus of control.

The belief that recovery was up to chance had a low reliability in the cancer sample (r_{tt}=0.57) and could not even be scored in the MI sample. Lau and Ware (1981) developed a six-item "chance health

outcomes" scale with an internal consistency reliability of 0.71 in a general population, and Wallston and Wallston (1978) developed one with r_{tt}=0.84. It is possible that beliefs in chance are conceptually different in people with serious illness than in general populations, i.e., because of the increased salience of health, people's beliefs about chance are less clear, hence the lower reliability. For example, people who before their illness believed they had personal control over their health (and thus did not believe in chance) may now be more likely to attribute their recovery to chance (i.e. their belief is undergoing change).

The belief that recovery was up to medical care measure was of moderate reliability in the cancer sample (r_{tt}=0.82) and of marginal reliability in the MI sample (r_{tt}=0.61). Lau and Ware developed an eight-item provider locus of control scale in a general population with an internal consistency reliability of 0.67. Thus, the reliability of these measures compares favorably with Lau and Ware's findings. The validity of this measure was questionable, as it did not relate to other measures in expected ways (e.g., it was only related to one outcome measure). One way this measure could probably be improved is to add items pertaining to several aspects of provider control. The scales now contain only two and three items (cancer and MI sample, respectively). Items could be added to assess whether people believe their recovery is up to the treatments they receive, to the continued monitoring by their physician, or to the medications they take.

The belief that recovery is affected by medical care was not associated with either of the beliefs that recovery was under personal control (i.e. recovery affected by health habits or by thoughts and emotions). This is consistent with previous findings that attributions of provider control over health are independent of beliefs in personal control over health outcomes (Lau and Ware, 1981). It might be interesting to develop an additive measure of beliefs about what affects recovery, with the highest score being given to people who believe <u>both</u> in personal control and provider control, and the lowest score indicating a belief that <u>neither</u> personal behavior nor providers can affect recovery.

It might be useful to ask all of these questions regarding beliefs about recovery in a more open-ended way, and ask the reason for each belief in order to better understand their nature. This might aid in understanding where beliefs about recovery differ from concepts of health locus of control in general populations.

Attribution of This Illness

The items assessing attributions were not combined in any way and therefore were not included in any of the studies of interrelationships. Therefore, no conclusions can be drawn regarding their adequacy until further analyses are conducted.

Attitudes about Death

The acceptance of death and religious/spiritual perspective on death both were generally good measures. Their reliabilities were moderate, and they appear to be valid (i.e., relate to other measures in expected ways). One curious finding was that people are more accepting of their death if they have poorer personal functioning. Because the religious/spiritual perspective on death measure ultimately was combined into an overall religious beliefs measure, it is probably unnecessary to retain it as a unique concept.

The right to die measure has lower reliability than the other attitudes about death measures and does not seem to be related to many of the other context, coping, and outcome measures. In retrospect, this concept seems superfluous in a study of coping and probably is a poor use of limited measurement resources.

The single-item measure "thinking of dying has changed views of living" seems to be an important measure and warrants additional attention. Items should be added to assess this concept reliably, so that its validity can be studied further. This item is an important aspect of the concern with illness dimension of coping. This item is positively associated with the reason to live scale, which suggests that a changed view of one's life seems to give people a stronger sense of why they want to live. When the dimensionality of context and coping measures was studied, the reason to live scale and the "thinking of

dying..." item both loaded on the concern with illness factor. These findings all suggest that this item might ultimately become a part of a reason to live measure.

The thinking about death measure has marginal reliability and is of questionable validity (e.g. it is not associated with rejection of the sick role). It doesn't contribute much in any of the studies of dimensionality, is not related to any of the context measures, and is related to only two outcome measures (people who think more about death are less optimistic and have more symptoms). One result pertaining to this measure suggests one way it might be improved. In the cancer sample, people tended to agree with all items, even though one item indicated thinking a lot about death and the other two indicated avoidance of such thoughts. Normally, such a result would indicate acquiescence. However, acquiescence usually occurs only when items are ambiguous or lengthy or otherwise difficult to understand, which is not the case here. Another explanation may be that people may have spent a lot of time thinking about their death in the past (e.g. when first diagnosed) but eventually choose not to do so. Thus, people could agree with the statement that they "have thought a lot about my own death," and also agree that "I find it best not to think too much about dying." This did not occur to a great extent here, as these items are negatively correlated. However, it could account for the marginal reliability. This measure could probably be improved by having all items refer to the same time period (e.g. during the past month).

Sense of Control

The sense of control measure was of moderate reliability in both samples, had good validity, is related to many outcomes, and is an important part of one of the context dimensions. Thus, this is one of the better measures developed in this study.

In the traditional typologies of control (e.g. Averill, 1973; Thompson, 1981), this measure would be considered primarily a measure of behavioral control, i.e. it assesses control in terms of solving problems and being able to do things. It would be useful to expand this measure to include aspects of cognitive control such as calming self-talk, selective attention, and cognitive reappraisal (see Langer, Janis, and Wolfer, 1975).

Thompson describes cognitive control in terms of believing that "one has a cognitive strategy that can mitigate the aversiveness of an event" (p. 93). This definition is very similar to the cognitive restructuring dimension identified by Felton et al. (1980), which contained a considerable mixture of concepts (e.g. being optimistic, enjoying life more, keeping busy/working). In constructing items to assess cognitive control, one must be careful to limit them to the feeling of control provided by knowing that one has a strategy. The actual strategy itself should be assessed separately.

Self-Esteem/Body Image

Self-esteem turned out to be an important measure in terms of the number of variables it was associated with. It was the most important measure in the personal context dimension, was associated with several coping responses, and with nearly all of the outcome measures. This measure was of moderate reliability in the cancer sample and marginal reliability in the MI sample.

One improvement in the scale in the MI sample might improve the reliability of self-esteem in this sample. The item "I feel that I am an attractive person" did not correlate as well with the other items in the MI sample as it did in the cancer sample. Because the goal was to make the scales as comparable as possible in the two samples, this item was retained. It may be that feeling attractive is distinct from the other aspects of self-esteem assessed here (e.g. liking myself, feeling satisfied with myself) for people of lower socioeconomic groups, or for older people (both of which were characteristics of the MI sample). By deleting this item, the reliability of this scale could probably be improved in the MI sample.

The body image scale had high reliability in the cancer sample, the only sample in which it was measured. The validity of the body image scale was not assessed at length, because of the small N; however it was associated with nearly all of the outcome measures and should probably be included in further studies.

Social Networks/Social Supports

The reliability of the various social network measures could not be studied. Very few of these were associated with any of the outcome measures. However, the reliabilities of the social support measures were mostly moderate, and their validity was good on the whole. The least important measure was the single item pertaining to giving as much support as received.

In terms of positive mental states, the size of the social network and the frequency of contact with others both seem fairly unimportant. Repeatedly, it seems that having close attachments, expressiveness, and helpful people are the important aspects of the social support, i.e., the quality is more important than the quantity. If resources were limited, the size of the network is probably fairly unimportant, and emphasis should be placed on the measures of quality.

Having people who understand appears to be an important concept. This measure was highly correlated with other social support measures, as well as with self-esteem and sense of control. It is curious that in the study of the dimensionality of context measures, this measure loaded highest on the personal factor instead of on the social support factor. The people who understand measure pertains largely to being able to fully express feelings to people who will accept and listen to the feelings. This suggests that being in an environment in which one is free to be expressive is somehow translated into a feeling of personal resources. This finding also points up the value of conceptualizing having people who understand as distinct from having close attachments.

The distinction between the total amount of helpfulness and the total amount of unhelpfulness appears to be somewhat useful. Rather than being opposite ends of the same dimension (their correlation is only -0.34), they seem to be somewhat distinct. The distinction may be important, because helpful people are beneficial, whereas unhelpful people are a hindrance to coping. As Porritt (1979) suggests, having unhelpful people in one's social network may negate some of the beneficial effects of helpful people.

Self-sufficiency was discussed in the literature review as potentially important because a self-sufficient person may cope well without as many social supports. In this study, items were written pertaining to desire for support to assess this (see Table 47). However, results did not support scoring this as a unique concept. Ultimately, one item became part of the close attachments/expressiveness scale and the other two were deleted. It is possible that the self-sufficiency/dependency dimension is so closely intertwined with close attachments that it cannot be distinguished. However, this concept warrants further attention, possibly by writing a larger set of items to assess both extremes of this dimension, and trying to construct a unique measure.

Will to Live

The religious/spiritual perspective measure was of moderate reliability. It was combined with other religious/spiritual measures with an overall religious/spiritual beliefs measure, which was an important concept in all analyses.

The reason to live measure is of moderate reliability in both samples. Two of the three items pertain to being important to someone or depended on by someone (the third item pertains to having tasks to accomplish). Thus, it tends to be associated with social support measures and doesn't seem to contribute much unique information. Curiously, it is not significantly associated with the number of children at home but is with the number of people in the social network. This suggests that the "someone" in being important to someone or being needed by someone is not as likely to be one's children as another relationship. The reason to live measure should be expanded to include more items pertaining to other "reasons" such as work, creative efforts, or goals.

In the literature review, a sense of purpose and sense of meaning were discussed as distinct concepts. In this study, these were hypothesized as distinct and items were written to assess reason to live (i.e. purpose) and meaning in living. However, in the scaling studies, only one of these could be developed into a scale (reason to live). Of

the two meaning in living items, one became part of the will to live scale and the other became part of religious beliefs. These results actually support the distinction between purpose and meaning; however, they also suggest that a sense of meaning is more elusive than purpose, and needs to be given more conceptual consideration.

A sense of meaning may derive from having a scheme within which events have meaning (e.g. a religious or spiritual perspective, a particular philosophical point of view), i.e. from a sense of coherence (see Antonovsky, 1979). Additionally, a sense of meaning may come from love, work, family, or other things people like about their lives. In developing a sense of meaning measure, items should be included assessing these aspects of coherence as well as things that give satisfaction. It is possible that a sense of meaning is a higher order construct with components of coherence and life satisfaction.

The will to live measure has high reliability in the cancer sample and moderate reliability in the MI sample. It is associated with many outcome measures and is an important aspect of the personal context dimension. The finding that the item "life is empty and has no meaning" ended up in the will to live scale suggests that will to live and sense of meaning are closely related. It would be interesting to see if the two concepts could be empirically distinguished when equal numbers of items are included to assess each one.

Active Coping

The four active coping measures (active positive thinking, relax/take it easy, daily routine, seek information) appear to be important and warrant considerable further study and improvement. All four measures had unacceptable reliabilities in the MI sample, which merits attention as to how to reconceptualize them. (Because their reliabilities were acceptable in the total sample, they were included in all analyses.) The active coping measures were associated with many outcomes, and were all important aspects of several dimensions of coping. They did not go together as a dimension of active coping, rather three dimensions were reflected by these concepts.

Originally, all items pertaining to health habits were included in one hypothesized item grouping. This was not empirically feasible, however. Results thus suggest that different aspects of health habits need to be separately grouped. Apparently, people may practice one health habit or another, but there does not seem to be a tendency to practice all of them. In subsequent studies, several items should be included to assess each aspect of health habits (e.g. physical activity, relaxation, sleep, eating well). In this way, the different effects of these could be assessed in relation to outcomes.

The fact that the active coping measures were of unacceptable reliability in the MI sample probably indicates a difference in life style. The MI sample was older and had less education and income and were more likely to be working than the cancer sample. Thus, concepts of active positive thinking, avoiding stressful situations, and relaxing and taking it easy are probably more difficult to relate to for people in this sample. It might be useful to backtrack and conduct some open-ended interviews with ill people with lower socioeconomic groups to determine how they do think about these issues. The low reliabilities obtained here may simply be a good example of a conceptual scheme developed by researchers of a middle socioeconomic class and imposed upon members of a lower class.

Acceptance/Rejection of Illness

The two scales rejection of the sick role and not being bothered by the illness were of moderate and marginal reliability in both samples and were of reasonable validity. The single item "try to forget about illness" relates well to other measures and is an important aspect of one of the coping dimensions.

The rejection of the sick role measure needs to have negatively worded items included. This is especially important in this measure, because besides all being positively worded (i.e. in favor of rejecting the sick role), these items carry a value connotation. That is, it is conceivable that people respond positively to these items partly because it seems like the "desirable" or socially valued response. If any type of response set were occurring in this measure, it would tend to

spuriously inflate the reliability. Because the reliability is not high, this may not be a problem here. It is possible that the reliability is not higher because these items assess fairly vague concepts (e.g. I avoid letting illness interfere with my life). Items could be written to be both more specific and less value-laden, e.g. asking what, if any, types of activities have been interfered with as a result of the illness with some questions as to the nature of the interference.

The not bothered by illness measure was associated with several context variables and outcome measures, despite its marginal reliability. These findings suggest that it is an important measure and attention should be given to improving its reliability. There are no obvious problems with the way it is currently conceptualized. Thus the addition of items might improve the reliability most simply.

Doctor-Patient Relationship

The seven doctor-patient relationship measures were highly reliable in the one sample they were measured in, and highly related to each other. Their distributions were fairly similar, indicating that a lot of people were extremely satisfied with all of these aspects of the doctor-patient relationship. These measures are all important, as they were associated with many outcome measures.

There seems to be a "halo" effect occurring, in which respondents rate their physicians favorably on all aspects of the relationship. One explanation is that seriously ill patients have a need to attribute favorable characteristics to their physicians. Another is that the respondents did not truly believe the explanation by the researcher that their physicians would not see their individual responses, and feared some consequences of a less-than-favorable rating. Finally, it may actually be the case that these patients were extremely satisfied. Because only a few physicians were represented by these patients (because many patients were recruited through a few physicians), then such true satisfaction is quite plausible (if these were good physicians). Many patients expressed such extreme satisfaction in personal conversations. If this is the case, it may be that better distributions would occur if a more representative sample were obtained, i.e. one in which more physicians were represented.

Benefits/Pleasures

The benefits/pleasures items pertaining to enjoying life more, having benefits of illness, and undertaking pleasurable activities or diversions presented the most problems in developing the measures. The measures that were finally developed had generally low reliabilities in both samples. These items were originally included to assess the extent to which people change their life as a result of the illness, take time for more pleasurable activities, and attempt to reduce some of the stresses in their life. Even though the reliabilities were poor, these measures warrant further study, as they were associated with many outcomes and are an important aspect of one of the dimensions of coping. Further, these issues are important to people facing a serious illness, as they were discussed repeatedly in open-ended interviews and are described in the popular literature.

The busy/working measure is something of a surprise. The item "too busy to take time for fun" was originally considered as a negatively worded aspect of engaging in pleasurable activities. The concept of coping by keeping busy and working turned out to be important. It is associated with poorer mental health, however it was positively associated with active positive thinking as part of a dimension of coping. Clearly, this is a complex concept and merits further attention.

The enjoy being cared for when ill measure is of poor reliability and validity. It had low communalities in studies of interrelationships. This was originally conceived as a "benefit" of illness, which if identified might help therapists assist patients in obtaining such benefits in other ways. The findings presented here suggest that enjoying being cared for is not a concept of importance.

Outcome Measures

Virtually all of the outcome measures had moderate to high reliabilities (where studied) and had good validity. The only exception is the guilt measure, which had unacceptable reliability in the total sample. Guilt does not seem to be a particularly clear feeling to assess (e.g. not as clear as depression), and one may need a fairly large number of items to begin to tap this. However, it did not

spontaneously come up in the open-ended interviews, thus it may not warrant extensive measurement resources.

The validity of all of the outcome measures is supported by the interrelationships studies. First, the factor structure of the outcome measures conforms to theory, i.e., that there are dimensions of health such as physical and mental health (e.g. Ware, Davies-Avery, and Brook, 1980). Pain and symptoms, although clearly being associated with physical health, also have a psychosomatic element, i.e., can be indicative of psychological distress, as evidenced by their association with several of the psychological states.

Further, the validity of both the current health and optimism/positive outlook measure is supported by the comparison of these with the physician ratings of the same (although one cannot consider the physician rating as a criterion measure). The only correlation that did not conform to logic was that optimism/positive outlook was not significantly associated with prognosis as evaluated by the physician. This could be interpreted in terms of optimism/positive outlook being an individual characteristic rather than based on information about the illness.

The health compared with a month ago item appears fairly useless; it did not correlate with very many of the measures, and when it did, the association was not easily interpretable. This measure could probably be eliminated.

XXIV. GENERAL DISCUSSION

Several issues will be discussed here, as follows: (1) the relationship of the measurement findings to the model of coping presented in the introduction, (2) the relationship of the findings of this study to the literature, (3) some questions will be suggested for future research, (4) generalizability, (5) comparisons between cancer and MI patients, (6) what "good" coping is, (7) suggested therapeutic interventions, and (8) how this study contributes to the field.

RELATIONSHIP OF MEASUREMENT FINDINGS TO MODEL OF COPING

A model of coping was presented in the introduction. Coping responses occur within the context of the person's life and illness situation, and can be evaluated according to a variety of outcomes (see Fig. 1).

In this study, coping responses, context variables, and outcomes were assessed in terms of their various components, measures were constructed representing these components, and the higher-order dimensionality of these was evaluated. When speaking of the dimensionality of coping measures, context variables, and outcomes, one must keep in mind which "level" of structure is being referred to. In each measurement analysis, the dimensionality of a set of items was assessed. These first-level dimensions formed the basis for scale construction. Once the scales were developed, the dimensionality of the scales was assessed. This represents a second-level higher-order dimensionality.

The context within which a person's coping occurs was defined in terms of four higher-order dimensions: (1) the person's personal resources including self-esteem, sense of control, will to live, and connectedness to other people; (2) the social network/social support (i.e. how helpful the people in that network are); (3) the person's beliefs about positive thinking, and their religious or spiritual beliefs, and (4) the person's confidence in medical care and extent of thinking about death.

Coping responses were defined in terms of four dimensions: (1) extent of relaxing, taking it easy, having a daily routine, and enjoying life; (2) extent of concern with the illness, manifested in terms of seeking information, acceptance of death, and whether thinking about death has changed their views of living; (3) extent of active distraction, i.e., actively thinking positively, trying to forget about the illness, keeping busy, and working to take their mind off things; and (4) rejecting the sick role.

Outcomes were defined in terms of three dimensions, mental health (e.g. anxiety, depression), physical health (e.g. functional status), optimism/positive outlook (e.g. optimistic that life will work out).

When the dimensionality of all of the measures was evaluated, the first dimension was basically a combination of the personal resources, relaxing, and mental health dimensions. The remaining overall dimensions roughly corresponded to the other dimensions of context, coping, and outcome measures (although optimism combined with physical health and confidence in medical care combined with active distraction).

Two studies were described earlier in which the dimensionality of coping was assessed (Adler and Penman, personal communication, and Felton et al, 1980). These studies both evaluated the dimensionality of a set of items, thus their results represent first-level dimensions.

Adler and Penman observed five dimensions (the corresponding dimension in this study is shown in parentheses, with an indication of whether it is higher-order (HO) or lower-order (LO):

reordering life priorities	(enjoy life--LO)
mobilizing social support	(social network/social support-HO)
positive outlook	(optimism/positive outlook--LO)
avoiding the sick role	(reject sick role--HO)
reliance on religion	(religious/spiritual beliefs--HO)

Slightly less correspondence exists between the findings of this study and those of Felton et al. (1980); however, many similarities were observed. They found six factors (the corresponding factor in this study is shown in parentheses):

cognitive restructuring (efforts to find positive aspects of illness)	(enjoy life--LO)
affective expression	(social network/social support--HO) (social support/expressiveness-LO)
wish-fulfilling fantasy	(no corresponding dimension)
self-blaming denial	(no corresponding dimension)
information seeking	(concern with illness--HO) (seek information--LO)
minimization of threat	(active distraction--HO)

Of the Felton et al. dimensions, wish-fulfilling fantasy and self-blaming denial were not identified in this study because only one or two items were included to assess these concepts. Their cognitive restructuring dimension contained items pertaining to finding positive aspects of the illness, rediscovering what is important in life, finding new faith, turning to work or other things, looking on the bright side of things, doing something new, and taking a vacation. Although the most correspondence exists between this dimension and the enjoy life scale (which pertains to enjoying things more and living more for today), other elements of this dimension appeared in this study in several other measures such as optimism/positive outlook (looked on the bright side of things), religious/spiritual perspective (more aware of what is important and meaningful), and busy/working (turned to work and other activities). These findings suggest that cognitive restructuring may be a higher-order dimension composed of several lower-order concepts such as enjoying life more, having a religious/spiritual perspective, and looking on the positive side of things. Because Felton et al. included only one or two items assessing each of these concepts, they identified only the higher-order dimension. When more items are

included pertaining to each concept (as was done in this study), they can be identified as distinct concepts.

The reasonable correspondence between results of this study and the other two studies on the dimensionality of coping suggests that the conceptual approach presented here is fruitful and should be pursued. There is sufficient agreement among the three studies to suggest that there are basic dimensions of coping responses. However, the finding that slightly different dimensions are observed depending on what other items are included in the analyses suggests that caution should be used when interpreting these dimensions. That is, a particular set of dimensions may be replicated in subsequent studies if the same items are used, and eventually taken to be true dimensions, when in fact those dimensions may only represent the best empirical solution to that particular set of items. This point is well illustrated by the comparison of dimensions identified in this study with those identified by other investigators using different items. When more items were included assessing the various concepts included in the cognitive restructuring dimension of Felton et al., as was done in this study, several lower-order dimensions (i.e. measures) were identified instead of just one cognitive restructuring dimension.

Nevertheless, continued research efforts should be focused on further identification of the dimensions of coping, because by understanding them more clearly (i.e., by conducting more studies to assess this in different populations, with increasingly refined measures), we should be able to describe coping responses more parsimoniously. That is, if one had limited measurement resources in a study of coping, one could focus those resources on these dimensions, selecting two or three measures from each dimension.

The distinction between context variables and coping responses appears to be useful when the dimensionality of context and coping were evaluated separately, more dimensions were identified than when their combined dimensionality was assessed (as was done by other investigators studying dimensionality). For example, in this study the following dimensions were obscured when the dimensionality of all measures combined was studied: personal resources, self-care/religious/spiritual, relax/routine/enjoy, active distraction,

and rejection of the sick role. These are important and useful dimensions. Thus the conceptual framework that allows their identification should be retained.

RELATIONSHIP OF FINDINGS TO LITERATURE

A number of findings here contribute new information to the field, as no previous work was reported in the literature. Some add information to an existing literature. These contributions to the literature will be described here.

As noted in the introduction, very little is known about the relationship between the various aspects of health locus of control and health. (Health locus of control was assessed in terms of beliefs about recovery in this study.) Thus these findings contribute new information. People who believe in personal control over recovery and people who believe that their recovery is not up to chance, or that it is up to God or religious faith, are more optimistic. However, none of the beliefs about recovery measures were associated with any of the other health outcomes, with one exception; the exception is that people who believe that health habits affect recovery are more likely to report improvement in their health compared with the situaion a month ago. It is possible that people who have made changes in their health habits attribute their improved health to the changes. Although no previous studies of these relationships were found in the literature, one might have expected some association to occur. For example, if people believe something affects their recovery (themselves or medical care) one might expect them to feel less depressed and anxious and have a greater sense of well-being (see Thompson, 1981).

Neither beliefs that recovery was up to one's thoughts and emotions nor beliefs that one's health habits could affect recovery were correlated with a sense of control. This suggests that a general sense of control may be distinct from health locus of control; a similar finding was observed by Lau and Ware (1981): using factor analysis, they found that a measure of self-control over health loaded on a separate factor than any of their measures of general locus of control.

A sense of control turned out to be an important concept in terms of the number of measures it was related to, as was expected given the amount of attention in the literature that this concept has received (e.g. Averill, 1973; Lefcourt, 1976; Rotter, Seeman, and Liverant, 1962; Thompson, 1981). It was an important component of the personal context dimension. People who have a greater sense of control are more accepting of their death, are more likely to relax and have a daily routine, are less bothered by their illness, enjoy life more, are more optimistic, satisfied with life, have more positive feelings and fewer negative feelings, and fewer symptoms. These findings are consistent with those in the literature. For example, patients who were allowed to make choices about daily matters (essentially giving them a sense of control) had a heightened sense of well being (Langer and Rodin, 1976); hospital patients who felt a lack of control sometimes became angry or anxious (Taylor, 1979); people with a greater sense of control had less illness (Kobasa, 1977); and people with a greater sense of control had fewer symptoms (Janis, 1958; Pennebaker et al., 1977). One explanation of all of these findings is described by Thompson in terms of the minimax hypothesis: People who have a sense of control know that the situation will not become so aversive that they cannot handle it (1981, p. 97). Thus, people with a sense of control can relax, enjoy, and experience less anxiety and depression because they know that the aversiveness of their situation (in this case the serious illness) will not become unbearable.

It would be interesting to determine whether a person's sense of control remains stable over the course of coping with illness, or varies as a function of the "stage" of coping, if there are such stages. It is conceivable that people's sense of control diminishes at the beginning, but is regained as they think about the illness and adjust.

Not assessed here, but suggested in the introduction, was the possibility that sense of control changes as a result of the illness, and that the important feature to assess is the degree of change from the level of control before the illness. This would still be of interest to evaluate, although it probably is difficult to assess pre-illness sense of control retrospectively (i.e. after the onset of the

illness). Thus, to assess such change requires a longitudinal study beginning just at diagnosis, if one can assume that a sense of control assessed at diagnosis is representative of the person's pre-illness sense of control.

Self-esteem was highly related to a sense of control. Thompson (1981) suggests that the effects of control may in fact operate through self-image, e.g., feelings of a lack of control in turn result in feelings of incompetence or lowered self-esteem. Self-esteem was negatively correlated with the number of symptoms, depression, and anxiety, as was also found by Rosenberg (1965) in a sample of soldiers.

It has been well documented that people with serious illnesses have a high need for social support and that many benefits accrue from such support (e.g. Berkman and Syme, 1979; Linn, Ware, and Greenfield, 1980; Moos and Solomon, 1965; Visotsky et al., 1961; Weisman and Worden, 1976; and Wortman and Dunkel-Schetter, 1979). This was overwhelmingly supported by these results. People who have more extremely helpful people in their network, fewer unhelpful people, greater helpfulness of others, less unhelpfulness, more close attachments and expressiveness, more people who understand, less stigma of illness, and more frequent contact with others have greater positive well-being, fewer negative feelings, more optimism, and more life satisfaction. None of the indicators of the <u>size</u> of the social network were associated with any of these outcomes. This has implications for future studies of social support in seriously ill people. Social support is commonly measured in terms of its quantity (social networks) and quality (perceived support) (e.g. Murawski, Penman, and Schmitt, 1978; Porritt, 1979; and Schaefer, Coyne, and Lazarus, 1981). Although this may be necessary in some studies, it appears that in studies of social support and serious illness, one might focus resources on the quality measures.

It had been suggested that the crucial distinction is between having no friends and having one or more (Langner and Michael, 1960; see also Kaplan, Cassel, and Gore, 1977). This was not supported by these results, as the measure "friends or not" (having any friends) was not associated with any of the outcome measures.

Porritt (1979) suggested that the supportive reactions of others can be canceled out by unsupportive reactions. Porritt's hypothesis was supported in this study. A measure of the number of helpful minus the number of unhelpful people was positively associated with positive well-being and negatively associated with depression and anger, whereas a measure of the number of helpful people was not associated with any of these. Further, the magnitude of the association between the helpful minus unhelpful measure and optimism and life satisfaction was greater than between the helpful only measure and these outcomes. These results suggest that Porritt has a good point, i.e., that in evaluating a person's support system, one needs to look at both helpfulness (coping resource) and unhelpfulness (coping hindrance).

Almost all aspects of the doctor-patient relationship were important, in that they were associated with many of the outcomes, especially the psychological states. (Recall that the doctor-patient relationship measures were only available on the cancer sample.) For example, five of the six doctor-patient relationship measures were positively associated with optimism/positive outlook and negatively associated with depression. This suggests that having a satisfactory relationship with the physician may be an especially important context that facilitates positive psychological states. It may be that patients with cancer are especially in need of being under competent medical care before they can adjust to their illness and continue their lives. Confirmed by this study is that people seem to do better if they have information about their illness (i.e. the strongest associations were observed between communication of information and the various outcomes). This corresponds to the findings of others that having information is beneficial (e.g. Johnson, 1975; Krantz and Schultz, 1979; and Taylor, 1979). Having a hopeful diagnosis/outlook and having confidence in their doctor were the next most important correlates of positive outcomes. Although humaneness and facilitation of expression were also correlated with positive outcomes, these variables do not seem as important as the communication of information, confidence, and diagnosis/outlook measures.

Seeking information has received considerable attention in the literature (e.g. Averill, 1973; Lazarus, 1979; Lipowski, 1979; Krantz and Schulz, 1979; Moos, 1979a; Silver and Wortman, 1980; Weisman and Worden, 1976). Some suggested reasons for its beneficial effects were to regain a sense of control (e.g. Lazarus, 1979; Moos, 1979a), to give the person something to do (e.g. Moos, 1979a), and to question the facts and continue to search for more acceptable answers (e.g. Silver and Wortman, 1980; Weisman and Worden, 1976). In this study, seeking information was an important aspect of the concern with illness dimension, and several significant associations were observed: people who seek information tend to report that thinking about dying has changed their views of living, to not accept the idea of their own death, and to be bothered by their illness. These findings support the hypothesis that people seek information to question the facts and search for acceptable answers. Seeking information was not associated with keeping busy, so it does not seem to be undertaken simply to give the person something to do. It was not correlated with a sense of control, thus the hypothesis is not confirmed that it may restore a sense of control. Further, the lack of an association between seeking information and a sense of control suggests that "informational control" (see Averill, 1973; Krantz and Schulz, 1979; or Thompson, 1981) may not be an important aspect of a general sense of control. Seeking information was not associated with any of the outcome measures, nor with any of the physician ratings. This suggests that it may not be a very important coping response other than to indicate an active concern with the illness.

A provocative finding is that if people report having better communication with their physician (e.g. doctor explains things, doctor discusses decisions about treatment), they experience better psychological states and fewer symptoms. However, seeking information is not associated with any of these outcomes. It may be that having open communication with the physician is beneficial, but people who feel compelled to seek information from other sources do so because they are not satisfied with the physician's explanation, i.e., they may be searching for alternative explanations (as was suggested above). The

correlations between seeking information and the various doctor-patient measures (not reported here) suggest this may be true. People who seek information are less satisfied with their doctors and find their doctors do not facilitate the expression of their feelings.

Denial and avoidance of the illness received considerable attention in the literature (e.g. Cohen and Lazarus, 1979; Hackett and Cassem, 1974; Janis, 1958; Lipowski, 1970; Moos 1979a). Although denial as such was not assessed in this study (because of the many difficulties of measuring it), avoidance was assessed in terms of acceptance/rejection of the illness. Avoidance can also be considered to be defined in terms of the active distraction dimension (active positive thinking, try to forget about illness, keep busy to take mind off things).

In this sample, avoidance in terms of active distraction does not appear to be a beneficial response (i.e. two of the measures of this dimension are not associated with any of the psychological states and one is negatively associated with positive psychological states and positively associated with negative psychological states). Previous studies are inconsistent regarding these findings, i.e., some find beneficial effects and some find detrimental effects of avoidance (see Thompson, 1981). Thompson suggests that avoidant and nonavoidant strategies may have different effects depending on the "stage" of coping, e.g. that avoidance may be beneficial at the beginning and less beneficial later.

Although one would think that denial and acceptance of illness are bipolar (i.e. opposite ends of a single dimension), results of this study suggest that their relationship may be more complicated. The best measure of denial is trying to forget about the illness, and the best measure of acceptance is not being bothered by the illness. In the scaling analyses, these could not be included in the same measure, indicating that these may not be bipolar. In fact, although these measures are not significantly correlated, the sign of the coefficient is positive. It is possible that both denial and acceptance occur periodically, i.e. people may experience denial for a few days and then acceptance and then return to denial. This would account for the inability to detect their bipolar nature, i.e. in a given time period people report both occurring.

Maintaining a sense of optimism or positive outlook was believed to be strongly influenced by those in the patient's environment (Visotsky et al., 1961). In this study, optimism was associated with all of the aspects of the doctor-patient relationship and with nearly all of the measures of helpfulness of people and social supports, thus the hypothesis of Visotsky et al. is supported. This finding has implications for further research and for interventions, which will be discussed below.

Giving up, or the concepts of hopelessness and helplessness, are discussed at length in the literature (e.g. Engel, 1968; Schmale, 1972; Sweeney, Tinling, and Schmale, 1970; Seligman, 1975). These were not assessed directly in this study. Indirectly, these are assessed here in terms of a sense of control and a will to live. In other studies, both helplessness and hopelessness were associated with depression (Schmale, 1972), and hopelessness was associated with low self-esteem (Schmale and Iker, 1970). In this study a sense of control and will to live were both negatively associated with depression, and positively associated with self-esteem. Thus, these may well be good indicators of helplessness/hopelessness. Nevertheless, these concepts should receive more direct attention in subsequent studies. Helplessness, for example, is defined in terms of the person waiting for something in the environment to change (Sweeney, Tinling, and Schmale, 1970). In the case of serious illness, this could be studied in relation to the person's beliefs about the progression of their disease (e.g. one might expect feelings of helplessness to dissipate if they learn they are in remission, or if they find a doctor who believes a certain treatment will cure them). Hopelessness is defined in terms of the person assuming personal responsibility for the inability to cope, i.e. the person believes no one can help (Sweeney, Tinling, and Schmale, 1970). This may occur when a person believes he or she is going to die and no one can change it.

A topic of increasing interest is the possible benefit of mental imagery (e.g. Jacobson, 1938; Simonton and Simonton, 1975; Strosahl and Ascough, 1981; Thompson, 1981). Thompson discusses mental imagery as one form of cognitive control, i.e. believing that one has a cognitive

strategy to minimize the aversiveness of an event. She notes that different forms of cognitive control have different levels of effectiveness. Mental imagery is believed to help a person feel better and behave in more optimistic ways. The use of mental imagery was not directly assessed in this study. Indirectly, it may be related to the active positive thinking measure, i.e. this measure includes items pertaining to thinking positive thoughts and telling oneself things to feel better. Active positive thinking, however, was not associated with any of the psychological states except optimism. Because there are few empirical studies of mental imagery in relation to psychological and physical health outcomes, this finding contributes some important information. Even though active distraction is an indirect measure, one would expect some association with some of the psychological states if the theory is to stand up. One should keep in mind, however, that the active positive thinking measure was of unacceptable reliability in the MI sample (although it was acceptable in the total sample). This suggests that part of the problem may be that it is difficult to measure. It is possible that the concept is foreign to people in lower socioeconomic groups.

Adopting the sick role may be appropriate or not (e.g. it is more appropriate if the person is recovering from surgery and less appropriate if the person is experiencing no symptoms). If it is inappropriate, it may indicate an attempt to obtain benefits not otherwise available. The appropriateness of rejecting the sick role was not assessed in this study. However, rejection of the sick role was not associated with enjoying being cared for when ill, thus it does not appear that people are adopting the sick role in order to be cared for. In fact, the opposite seemed to occur: rejection of the sick role was positively associated with total amount of helpfulness, indicating that helpfulness of others may enable a person to avoid sick role behavior.

The will to live was hypothesized in the introduction as a possible higher order construct. This was not confirmed in the results. Visotsky et al. (1961) suggest that the will to live can be significantly influenced by people in the environment. This suggestion is supported by results here. Although the will to live was a part of the personal dimension of context variables, it was also associated with

many of the social support measures. It is also highly associated with reason to live, which was one of its definitions (Frankl, 1963).

The associations between the physician ratings and the patient's measures were somewhat surprising. (The physician rated the patient's prognosis, coping, health, diagnosis, etc.) The most unexpected findings were that metastases were not related to anything and prognosis was only related to functional status and nothing else. If metastases and prognosis can be considered as indicators of the severity of the illness, these findings suggests that coping responses and outcomes do not depend on the seriousness of the illness. Another possibility is that coping responses and outcomes do depend on the severity of the illness, but only as perceived by the patient, and that perhaps patients do not know their diagnosis or prognosis, or do not believe it. If the patients perceived their illness as severe, one would expect them to have more negative feelings, and be less optimistic. Although there was a tendency in this direction, it was not as strong as it should logically be (although no previous empirical studies are known).

The pattern of associations between the physician's rating of current health and all the patients' measures is remarkably similar to the pattern of the patients' rating of current health with the other measures. This lends support to the validity of both measures of current health. There is one exception to the similarity, however. Patients who work and keep busy to take their mind off things (busy/working measure) have poorer current health as rated by themselves, but there is no association between being busy and current health as rated by the physician. If patients' ratings of current health can be considered as more subjective than physician ratings, it is possible that by working and keeping busy, patients are generating tension, which increases their sensitivity to pain and symptoms, thus causing them to experience themselves as less healthy. This possibility is supported by the finding that keeping busy is positively associated with anxiety and with symptoms.

The physician's rating of the patient's coping, optimism, and current health seems to follow a pattern, indicating that these three may represent an underlying dimension of the physician's overall perception of the patient. Similarly, metastases and prognosis might

indicate an underlying dimension of severity of illness. Factor analysis of these ratings would be interesting for future studies. It appears that the physician's perception is strongly influenced by the patient's self-esteem, rejection of the sick role, not being bothered by the illness, optimism/positive outlook, and functional status (i.e. all of these measures are significantly associated with the physician's rating of coping, optimism, and current health).

The physician's rating of the patient's compliance was only associated with one measure, whether the person has any friends or not. In fact, although they were not significant, most of the highest associations of compliance were observed between compliance and other measures of social support, suggesting that people may be more compliant if they have such support. It is also possible that physicians cannot accurately rate their patients' compliance, i.e. are unaware of compliant or noncompliant behavior. This possibility is supported by the unexpected lack of correlation between the belief that recovery is up to medical care and physician's rating of compliance. One would expect people to be more compliant if they held such a belief.

QUESTIONS FOR FUTURE RESEARCH

A number of questions were raised by the findings reported here. When an association was observed between two measures, because of the cross-sectional nature of the data, one is left to hypothesize the direction of causality. These hypotheses can form the basis for prospective studies designed to assess the direction of causality.

Of particular interest is the finding that although people have more pain if they have more unhelpful people around or if they experience a greater amount of unhelpfulness, no association was observed between pain and any of the other social support measures. This suggests a couple of hypotheses warranting further study. One is that people in pain elicit a lack of empathy or helpfulness from others (e.g. pain might make other people feel vulnerable or inadequate) (see, for example, Wortman and Dunkel-Schetter, 1979). Another hypothesis is that a generally unsupportive environment creates tension and negative feelings which exacerbate pain. This hypothesis is supported by one study cited in the literature review; Linn, Ware, and Greenfield (1980)

found that people seeking emergency care for chest pain were more likely to get relief from the pain if they were accompanied by someone. Both could be true, occurring more or less at the same time. That is, the expression of pain might alienate people in the social network, and the lack of available support in turn exacerbates the pain.

A closely related question derives from the finding that pain and symptoms are greater in people experiencing more depression, anxiety, and anger. Either pain and symptoms are physiological responses to the psychological distress, or people with more pain and symptoms experience more distress as a result.

Greater self-esteem was associated with better physical and mental health, less pain, fewer symptoms, and greater optimism and satisfaction. Does self-esteem decline when people are faced with increasing symptoms and pain and declining health? Or does low self-esteem make a person more vulnerable to declining health? Or do both occur?

The finding that optimism/positive outlook is not influenced by diagnosis or prognosis but is associated with social support and most aspects of the doctor-patient relationship suggests that this may be a fruitful area for further research. It would be interesting to determine in greater depth the nature of optimism and positive outlook, evaluate its stability over the course of the illness, and assess its relation to social support in more depth.

One broad category of hypotheses has received a great deal of attention recently--whether coping responses that create positive emotions and mental states may enhance other outcomes (e.g., physical, physiological, survival). This idea is based on the premise that there is a mind-body link, that one's emotions and thoughts affect the physiological workings of the body. There is considerable evidence that this is true with respect to negative emotions and thoughts. For example, the perception of stress has been shown to increase the secretion of corticosteroids, which in turn inhibit the immune response (Totman, 1979). Feelings of helplessness and depression have been linked to adrenalin depletion (Seligman, 1975). Depressed patients are at greater risk of operative death (Kimball, 1968; see Krantz and Schulz, 1979). Sad emotions are believed to predispose a person to

malignancies (Simonton and Simonton, 1975; LeShan, 1959). Anxiety and tension are related to shorter survival time in cancer patients (West, Blumberg, and Ellis, 1952; see LeShan, 1959). Depression has been shown to retard recovery from influenza (Imboden, Canter, and Cluff, 1961).

The idea that positive thoughts and emotions can be beneficial is more recent, and evidence of such effects is more anecdotal than empirical (Cousins, 1979; Frank, 1975; Jaffe, 1980; Moody, 1978; Pelletier, 1979; Simonton, Simonton, and Creighton, 1978). For example, Frank (1975), Jaffe (1980), and Cousins (1979) have suggested that positive mental states such as hope, faith, and laughter can enhance a person's recuperative powers, and as such are an integral part of the healing process.

These questions are beyond the scope of this study to adequately address. The only indicators of physical health here are functional status, pain, symptoms, and current health. Some of the positive mental states were positively associated with physical health (e.g., optimism/positive outlook, positive well-being, depression, anxiety, and anger). However, religious/spiritual beliefs, active positive thinking, and the belief that thoughts and emotions affect recovery were not associated with any of the physical health measures.

These hypotheses regarding the effect of positive mental states on illness outcomes need to be studied prospectively, and by assessing a variety of illness outcomes (e.g. survival, tumor size). One must also be able to account for the effects of the nature of the illness, the type of treatment, and constitutional factors such as age and genetic makeup, all of which will have powerful effects on illness outcomes.

An interesting issue arose when I was talking to these cancer patients that suggests a general approach for subsequent research. People in this study repeatedly said that the most helpful thing was for someone just to be there, to listen to their feelings, especially their negative feelings. They did not want to be cheered up or admonished that others are worse off. They did want to be free to express all of their feelings to a nonjudgmental listener. Apparently so little is known about the responses of very ill people that we all are forced to imagine what those should be. Patients attempt to conform to these expectations, both their own and of those around them. These

expectations tend to be such things as looking on the bright side, staying cheerful, not talking about the illness or the negative feelings surrounding it (see Wortman and Dunkel-Schetter, 1979 for an excellent review of this problem). If as researchers we design studies to predict "good" outcomes and thus define "good" coping, are we not contributing to this problem?

The point of this is to suggest that descriptive studies on coping with serious illness could be especially useful in sensitizing the reader (health professionals, family, and friends of patients) to the variety of feelings and reactions of the seriously ill. As Silver and Wortman put it, "it behooves the health-care professional to legitimize the feelings and reactions that commonly occur among people who have encountered negative life events" (1980, p. 339). With the set of measures developed here, improved according to the suggestions made below, such large-scale descriptive studies could be undertaken.

GENERALIZABILITY

There are both favorable and unfavorable elements of this study with respect to the generalizability of the findings.

In favor of the generalizability, the measures were developd to be reliable and valid in the total sample, thus they are appropriate to both cancer and myocardial infarction patients. This suggests that these measures may also be useful in studies of people with other life-threatening diseases. Nevertheless, because different diseases have different implications for coping, the use of these measures in studying people with other diseases should be done with caution. Another element in favor is that the sample on which the measures were developed represents a fairly broad range of age, education, and income. Thus, results should be roughly generalizable to a range of socioeconmic groups.

One limitation in terms of generalizability is that this study population is not a random sample of people with serious illnesses. In fact, these people probably represent a unique group in terms of coping styles. For example, they are all actively involved in medical care, they are willing to consider their illness in depth, and many are actively seeking outside support (13 percent were participants in a self-

help group of some type). This sample thus might be expected to have different mean scores than a random sample on many of the aspects of coping assessed here. It is less likely, however, that the interrelationships among the items would be affected, thus the scaling results should be fairly generalizable. Nevertheless, the scaling results should be tested in other populations to assess their generalizability.

Finally, the associations observed here also may not generalize to other undesirable situations, i.e., they may be specific to coping with serious illness. For example, active distraction (keeping busy, working) is not associated with negative feelings in rape victims.

CANCER VERSUS MI PATIENTS

The differences between cancer patients and MI patients would be of interest, to assess whether coping responses and outcomes differ as a function of these two diseases.

To briefly summarize the differences in coping responses and outcomes, people in the cancer sample were less willing to make attributions as to the cause of their illness, less accepting of death, more likely to think about death, less likely to relax and take it easy, more likely to seek information, enjoy life more, had more depression, had fewer limitations in personal functioning and more limitations in role functioning.

These differences could possibly be due not only to the type of disease (cancer or MI), but to a host of other variables such as age, sex, education, income, how severe the disease is, pain, nature of symptoms, not to mention the many context variables assessed here. For example, in this study, cancer patients were younger, more likely to be female, were more educated, had higher income, had a lower sense of control, had more close attachments, more reason to live, and greater religious/spiritual perspective. Therefore, to study differences in coping responses in greater depth requires extensive multivariate analyses, predicting each measure of interest as a function of disease, controlling for all other relevant variables. These were beyond the resources of this study at this time.

The finding that cancer patients were less willing than MI patients to make attributions regarding the cause of their illness is consistent with another study comparing cancer to noncancer patients (Linn, Linn, and Stein, 1982). The explanation suggested by these researchers is that cancer patients may need to defend themselves against self-blame. However, MI patients should have a similar need to defend themselves, thus this explanation does not seem as plausible in comparing cancer and MI patients. Given that cancer patients had a lower sense of control, they may feel less need to attribute their disease to something. That is, one reason such an attribution is likely to be made is to develop a theory of the cause of the illness so the person can attempt to change the cause. If people feel less in control, they may be less likely to search for causes.

Only two coping responses were associated with both education and income, indicators of socioeconomic status (SES): acceptance of death and seeking information (persons of high SES were less likely to accept death and more likely to seek information). Only one context variable was associated with both indicators of SES: Persons of high SES were more likely to have at least one extremely helpful person. These findings suggest that mean differences in coping responses and context variables observed between groups on most of the measures in this study are not confounded by differences in SES.

Several coping responses and context variables were associated with age, however, thus age should definitely be controlled for when comparing specific groups on these measures. This is especially important with respect to measures of social networks (because older people have fewer social networks).

WHAT IS GOOD COPING?

What is good coping? This study was not designed to address this question directly. There are some issues to be considered before one can determine what "good" is, such as imposing value judgments on coping and on outcomes. A good review of the complexities of this issue is provided by Silver and Wortman (1980). Nevertheless, a few suggestions can be made based on the findings here, if one is willing to define

effective coping as a response that is associated with positive psychological states. People in this study who reported greater optimism, satisfaction with life, and positive well-being also were more likely to accept the idea of death, were more expressive, were more likely to have a daily routine, were not bothered by their illness, had a more satisfactory relationship with their physician on several dimensions, and were less likely to try to distract themselves with work or other activities. These findings thus suggest that being expressive, practicing a daily routine, trying not to be bothered by the illness, finding a physician that one feels satisfied with, and not keeping busy simply as a distraction from the illness are all good coping responses.

This simple model, however, needs to be expanded to account for factors that influence these coping responses, i.e. the many context variables that describe the person's life and illness situation. In this study, several context variables were associated with these "effective" coping responses. People who were more likely to respond in effective ways (i.e. in ways that were associated with positive psychological states) had a greater sense of control and self-esteem, had more close attachments and were more expressive, had fewer unhelpful people and more people who understood, experienced less stigma of their illness, and received less cognitive guidance or advice.

In this model, it is especially important to control for the severity of the illness (e.g. prognosis, pain, symptoms, type of treatment). It is highly probable that people are able to respond in these "effective" ways because they are experiencing a less severe disease status. The effect of disease status may operate directly on coping responses (e.g. being in remission makes it possible to not be bothered by the illness) or indirectly through the other context measures (e.g. people in remission feel a greater sense of control and self-esteem, have more social contact, and thus in turn can cope more effectively).

SUGGESTED THERAPEUTIC INTERVENTIONS

Ignoring the difficulties in defining good coping for the moment, a number of interventions are suggested pertaining to those things that are associated with positive psychological states.

The findings of this study confirm that a sense of control is an important area to design interventions around, because it is positively associated with most of the positive psychological states and negatively associated with the number of symptoms and with the negative feelings. If people with a low sense of control could be identified and helped to improve their sense of control, their physical and mental health might in turn improve. For example, a sense of control could be restored by helping the patient cognitively reappraise the situation (e.g. Langer, Janis, and Wolfer, 1975) or by providing information (e.g. Andrew, 1970; Egbert et al., 1964; Janis, 1958; Johnson, 1975; Langer, Janis, and Wolfer, 1975). Anecdotes from the author's personal interviews with cancer patients lend weight to the benefits of a changed sense of control. Many people reported being happier now than before their cancer, because they had reevaluated their lives and decided to do more things they wanted to do and less things that other people expected them to do. In other words, these people were taking more control over their lives. Thus, the suggestion to patients to consider whether they feel in control of their lives and suggestions of ways they might assume more control may serve as a catalyst for change.

People who cope by actively distracting themselves (e.g., keep busy, turn to work on other activities to take their mind off things) might be helped to slow down and consider their lives and what they want. People who spontaneously slow down and take it a little easier report feeling happier. Thus this may be a fruitful intervention point.

Closely related to this is the suggested benefit of a daily routine, although this seems less subject to intervention. Nevertheless, if people can be encouraged to eat regular meals and get regular sleep, no harm will probably be done and their feelings of well-being may be improved (see Vaillant, 1977).

People without close attachments or helpful people around them may risk problems with coping and should be the focus of intervention efforts. It is clear in this study as well as many others that people do better by all standards if they have good social supports. Such interventions could take the form of individual counseling (e.g. Bloom, Ross, and Burnell, 1978) activating the support of family and friends (e.g. Finlayson, 1976), or peer-group therapy (Yalom and Greaves, 1977). The finding that the quality of social support is more important than the quantity has implications for assessing people's needs for psychosocial assistance. Social workers and others assessing such needs should not assume just because a patient is married or reports having friends that adequate support is being provided. Assessment should be made of perceived support.

It may be that the value of all interventions is primarily to provide an opportunity for patients to express themselves. For example, Putt (1970) found that having a nurse listen to patients' problems and explore the patients' feelings was as effective as another intervention involving giving extensive information, compared with standard nursing care (see Taylor, 1979).

This raises another issue, however, that of helping those people who have difficulty expressing their feelings, especially the painful feelings aroused by having a serious illness. The findings here showed that people experiencing the most depression, anxiety, and anger have fewer close attachments, fewer people who understand, less of a daily routine, are bothered a lot by their illness, have poor communication with their doctor, and tend to keep busy to take their mind off things. Although the severity of the illness is probably one of the largest predictors of these negative feelings, there may be a residual of these feelings that is accounted for by some of these other factors. These other factors seem to indicate that people experiencing negative feelings may be the people who do not ask for help, but are "going it on their own." If these people could be identified, it is possible they could be helped to consider their feelings. This is not to suggest that interventions be designed to change these people's responses, but rather that time be taken to help them describe their reactions and feelings.

CONTRIBUTIONS OF THIS STUDY

This study is unique in the current field of studying coping with serious illness because of its breadth in assessing a variety of context variables, coping responses, and outcomes. Over 75 measures were developed, 60 of which are multi-item scales. By assessing such a variety of aspects of coping in one study, and evaluating their interrelationships and dimensionality, a first step has been taken toward understanding the essence of coping. This in turn allows other researchers to focus measurement resources on these dimensions; thus parsimony is possible without fear of missing some important aspect of coping.

Another advantage of this study is that the measures were developed in a sample that represented two illnesses and a range of ages, education, and income. Thus the measures are likely to be useful in a variety of settings, possibly even for people with diseases other than cancer and heart disease.

Because the use of reliable and valid measures is so crucial to conducting good research, the development of such measures warrants considerable effort and resources. However, many investigators are faced with limited time and money, and are forced either to select from measures previously developed by others, even if the measures are not exactly suited to the purpose of the study, or to develop their own measures in a short time before fielding their study. Rarely do researchers have the time or resources to devote to full-scale measurement studies. This measurement study contributes to the field a large pool of pretested measures from which other researchers may select those most appropriate to their study. By following the guidelines presented here, users can be assured of reasonably reliable and valid measures at the outset.

This study may also be used as a guideline to others for constructing reliable and valid measures. Researchers who are not highly skilled in measurement development can construct their own measures by following the procedures described here. Rarely is such a document available, as most measurement development is not reported in such step-by-step detail.

The development of a framework within which coping can be viewed is another unique contribution of this study. Although this framework was based on ideas of others (e.g. Antonovsky, 1979; Pearlin and Schooler, 1978), it was expanded considerably and represents a clear and yet comprehensive way to view coping with serious illness. The framework was developed based on a synthesis of findings in the literature and its usefulness was empirically supported by the results reported here. By distinguishing between context variables and coping responses, several dimnensions were identified that otherwise might have been obscured.

APPENDIX A

ITEM FREQUENCY DISTRIBUTIONS

Table A.1

BELIEFS ABOUT RECOVERY ITEM FREQUENCY DISTRIBUTIONS

Item[a]	Questionnaire Item Number	Cancer Sample (N=95)						MI Sample (N=44)					
		1	2	3	4	5	Number Missing	1	2	3	4	5	Number Missing
1	V.8	41[b] (44.1)	25 (26.9)	20 (21.5)	4 (4.3)	3 (3.2)	2	14 (33.3)	20 (47.6)	3 (7.1)	1 (2.4)	4 (9.5)	2
2	V.14	42 (45.6)	33 (35.9)	14 (15.2)	2 (2.2)	1 (1.1)	3	16 (38.1)	19 (45.2)	5 (11.9)	1 (2.4)	1 (2.4)	2
3	V.18	36 (39.6)	33 (36.3)	19 (20.9)	2 (2.2)	1 (1.1)	4	11 (26.2)	24 (57.1)	4 (9.5)	2 (4.8)	1 (2.4)	2
4	V.22	27 (30.0)	35 (38.9)	15 (16.7)	9 (10.0)	4 (4.4)	5	5 (12.2)	20 (48.8)	5 (12.2)	3 (7.3)	8 (19.5)	3
5	V.1	11 (12.0)	10 (10.9)	14 (15.2)	30 (32.6)	27 (32.6)	3	9 (21.4)	3 (7.1)	4 (9.5)	5 (11.9)	21 (50.0)	2
6	V.38	2 (2.2)	9 (9.9)	19 (20.9)	34 (37.4)	27 (29.7)	4	4 (9.5)	9 (21.4)	2 (4.8)	4 (9.5)	23 (54.8)	2
7	V.2	64 (68.8)	21 (22.6)	7 (7.5)	0 (0.0)	1 (1.1)	2	26 (61.9)	14 (33.3)	1 (2.4)	1 (2.4)	0 (0.0)	2
8	V.31	38 (41.3)	32 (34.8)	16 (17.4)	5 (5.4)	1 (1.1)	3	17 (40.5)	22 (52.4)	1 (2.4)	2 (4.8)	0 (0.0)	2
9	V.12	7 (7.5)	15 (16.1)	14 (15.0)	33 (35.5)	24 (25.8)	2	1 (2.4)	6 (14.3)	2 (4.8)	9 (21.4)	24 (57.1)	2
10	V.28	18 (20.0)	39 (43.3)	14 (15.6)	16 (17.8)	3 (3.3)	5	4 (10.8)	16 (43.2)	8 (21.6)	5 (13.5)	4 (10.8)	7
11	V.36	22 (23.9)	37 (40.2)	21 (22.8)	9 (9.8)	3 (3.3)	3	8 (19.5)	28 (68.3)	3 (7.3)	0 (0.0)	2 (4.9)	3
12	V.32	3 (3.3)	4 (4.3)	8 (8.7)	31 (33.7)	46 (50.0)	3	3 (7.1)	7 (16.7)	2 (4.8)	3 (7.1)	27 (64.3)	2
13	V.25	18 (19,8)	24 (26.4)	29 (31.9)	13 (14.3)	7 (7.7)	4	11 (26.2)	13 (31.0)	7 (16.7)	2 (4.8)	9 (21.4)	2
14	V.15	5 (5.5)	12 (13.2)	19 (20.9)	35 (38.5)	20 (22.0)	4	2 (4.8)	10 (23.8)	6 (14.3)	7 (16.7)	17 (40.5)	2
15	V.20	21 (23.1)	44 (48.4)	17 (18.7)	6 (6.6)	3 (3.3)	4	8 (19.5)	28 (68.3)	2 (4.9)	1 (2.4)	2 (4.9)	3
16	V.3	8 (8.7)	31 (33.7)	18 (19.6)	16 (17.4)	19 (20.6)	3	4 (9.5)	9 (21.4)	8 (19.0)	4 (9.5)	17 (40.5)	2
17	V.10	39 (42.8)	28 (30.8)	13 (14.3)	9 (9.9)	2 (2.2)	4	17 (40.5)	19 (45.2)	3 (7.1)	2 (4.8)	1 (2.4)	2
18	V.5	27 (29.0)	18 (19.4)	24 (25.8)	13 (14.0)	11 (11.8)	2	14 (33.3)	12 (28.6)	3 (7.1)	4 (9.5)	9 (21.4)	2
19	V.26	29 (31.5)	17 (18.5)	24 (26.1)	9 (9.8)	13 (14.1)	3	17 (40.5)	13 (31.0)	2 (4.8)	1 (2.4)	9 (21.4)	2
20	V.35	16 (17.8)	15 (16.7)	22 (24.4)	16 (17.8)	21 (23.3)	5	18 (42.8)	11 (26.2)	1 (2.4)	0 (0.0)	12 (28.6)	2

[a] Item number from Tables 4 and 5.

[b] Number (percent in parentheses).

Table A.2

ATTRIBUTION OF ILLNESS ITEM FREQUENCY DISTRIBUTIONS

Item[a]	Questionnaire Item Number	Cancer Sample (N=95)						MI Sample (N=63)						Total Sample (N=158)					
		1	2	3	4	5	Number Missing	1	2	3	4	5	Number Missing	1	2	3	4	5	Number Missing
1	V.6	5[b] (5.4)	9 (9.7)	10 (10.8)	25 (26.9)	44 (47.3)	2	7 (11.7)	8 (13.3)	3 (5.0)	11 (18.3)	31 (51.7)	3	12 (7.8)	17 (11.1)	13 (8.5)	36 (23.5)	75 (49.0)	5
2	V.11	5 (5.4)	15 (16.3)	25 (27.2)	20 (21.7)	27 (29.3)	3	15 (25.0)	17 (28.3)	8 (13.3)	9 (15.0)	11 (18.3)	3	20 (13.2)	32 (21.0)	33 (21.7)	29 (19.1)	38 (25.0)	6
3	V.17	6 (6.5)	25 (27.2)	46 (50.0)	9 (9.8)	6 (6.5)	3	9 (14.8)	15 (24.6)	20 (32.8)	4 (6.6)	13 (21.3)	2	15 (9.8)	40 (26.1)	66 (43.1)	13 (8.5)	19 (12.4)	5
4	V.21	11 (12.1)	20 (22.0)	33 (36.3)	16 (17.6)	11 (12.1)	4	9 (15.2)	22 (37.3)	14 (23.7)	6 (10.2)	8 (13.6)	4	20 (13.3)	42 (28.0)	47 (31.3)	22 (14.7)	19 (12.7)	8
5	V.24	3 (3.3)	7 (7.7)	26 (28.6)	20 (22.0)	35 (38.5)	4	3 (5.0)	6 (10.0)	7 (11.7)	14 (23.3)	30 (50.0)	3	6 (4.0)	13 (8.6)	33 (21.8)	34 (22.5)	65 (43.0)	7
6	V.29	2 (2.2)	0 (0.0)	10 (11.0)	23 (25.3)	56 (61.5)	4	3 (5.1)	11 (18.6)	7 (11.9)	10 (16.9)	28 (47.4)	4	5 (3.3)	11 (7.3)	17 (11.3)	33 (22.0)	84 (56.0)	8
7	V.40	5 (5.6)	10 (11.2)	23 (25.8)	14 (15.7)	37 (41.6)	6	12 (20.3)	14 (23.7)	4 (6.8)	6 (10.2)	23 (39.0)	4	17 (11.5)	24 (16.2)	27 (18.2)	20 (13.5)	60 (40.5)	10
8	V.33	2 (2.2)	0 (0.0)	4 (4.3)	14 (15.2)	72 (78.3)	3	0 (0.0)	1 (1.7)	0 (0.0)	4 (6.7)	55 (91.7)	3	2 (1.3)	1 (0.6)	4 (2.6)	18 (11.8)	127 (83.6)	6
9	V.41	0 (0.0)	5 (5.4)	23 (25.0)	12 (13.0)	52 (56.5)	3	3 (5.1)	8 (13.6)	6 (10.2)	4 (6.8)	38 (64.4)	4	3 (2.0)	13 (8.6)	29 (19.2)	16 (10.6)	90 (59.6)	7
10	V.42	34 (37.4)	36 (39.6)	9 (9.9)	10 (11.0)	2 (2.2)	4	21 (35.6)	15 (25.4)	4 (6.8)	9 (15.2)	10 (16.9)	4	55 (36.7)	51 (34.0)	13 (8.7)	19 (12.7)	12 (8.0)	8
11	V.44	0 (0.0)	8 (8.8)	28 (30.8)	16 (17.6)	39 (42.8)	4	2 (3.3)	5 (8.3)	1 (1.7)	9 (15.0)	43 (71.7)	3	2 (1.3)	13 (8.6)	29 (19.2)	25 (16.6)	82 (54.3)	7

[a] Item number from Table 17.

[b] Number (percent in parentheses).

Table A.3

ATTITUDES ABOUT DEATH ITEM FREQUENCY DISTRIBUTIONS

Item[a]	Questionnaire Item Number	Cancer Sample (N=95)						MI Sample (N=63)						Total Sample (N=158)					
		1	2	3	4	5	Missing	1	2	3	4	5	Missing	1	2	3	4	5	Missing
1	V.4	14[b] (15.4)	25 (27.5)	8 (8.8)	27 (29.7)	17 (18.7)	4	8 (13.3)	8 (13.3)	4 (6.7)	17 (28.3)	23 (38.3)	3	22 (14.6)	33 (21.8)	12 (7.9)	44 (29.1)	40 (26.5)	7
2	V.19	6 (6.7)	10 (11.1)	13 (14.4)	40 (44.4)	21 (23.3)	5	2 (3.3)	2 (3.3)	1 (1.7)	14 (23.3)	41 (78.3)	3	8 (5.3)	12 (8.0)	14 (9.3)	54 (36.0)	62 (41.3)	8
3	V.34	8 (8.7)	33 (35.9)	10 (10.9)	28 (30.4)	13 (14.1)	3	5 (8.5)	8 (13.6)	4 (6.8)	7 (11.9)	35 (59.3)	4	13 (8.6)	41 (27.2)	14 (9.3)	35 (23.2)	48 (31.8)	7
4	V.39	12 (13.2)	33 (36.3)	21 (23.1)	19 (20.9)	6 (6.6)	4	14 (23.7)	36 (61.0)	4 (6.8)	3 (5.1)	2 (3.4)	4	26 (17.3)	69 (46.0)	25 (16.7)	22 (14.7)	8 (5.3)	8
5	V.43	5 (5.4)	17 (18.5)	14 (15.2)	33 (35.9)	23 (25.0)	3	2 (3.3)	4 (6.7)	0 (0.0)	9 (15.0)	45 (75.0)	3	7 (4.6)	21 (13.8)	14 (9.2)	42 (27.6)	68 (44.7)	6
6	V.7	27 (29.3)	38 (41.3)	9 (9.8)	14 (15.2)	4 (4.3)	3	24 (41.4)	16 (27.6)	1 (1.7)	10 (17.2)	7 (12.1)	5	51 (34.0)	54 (36.0)	10 (6.7)	24 (16.0)	11 (7.3)	8
7	V.27	10 (11.0)	30 (33.0)	10 (11.0)	34 (37.4)	7 (7.7)	4	14 (23.3)	24 (40.0)	2 (3.3)	9 (15.0)	11 (18.3)	3	24 (15.9)	54 (35.8)	12 (7.9)	43 (28.5)	18 (11.9)	7
8	V.37	12 (13.2)	40 (44.0)	9 (9.9)	23 (25.3)	7 (7.7)	4	1 (1.7)	14 (23.3)	1 (1.7)	24 (40.0)	20 (33.3)	3	13 (8.6)	54 (35.8)	10 (6.6)	47 (31.1)	27 (17.9)	7
9	V.9	36 (39.6)	20 (22.0)	16 (17.6)	7 (7.7)	12 (13.2)	4	16 (26.7)	13 (21.7)	11 (18.3)	6 (10.0)	14 (23.3)	3	52 (34.4)	33 (21.8)	27 (17.9)	13 (8.6)	26 (17.2)	7
10	V.13	28 (30.8)	27 (29.7)	16 (17.6)	12 (13.2)	8 (8.8)	4	22 (37.3)	13 (22.0)	5 (8.5)	5 (8.5)	14 (23.7)	4	50 (33.3)	40 (26.7)	21 (14.0)	17 (11.3)	22 (14.7)	8
11	V.16	36 (39.6)	32 (35.2)	11 (12.1)	7 (7.7)	5 (5.5)	4	23 (38.3)	18 (30.0)	9 (15.0)	6 (10.0)	4 (6.7)	3	59 (39.1)	50 (33.1)	20 (13.2)	13 (8.6)	9 (6.0)	7
12	V.30	9 (9.9)	7 (7.7)	20 (22.0)	25 (27.5)	30 (33.0)	4	11 (18.3)	6 (10.0)	9 (15.0)	8 (13.3)	26 (43.3)	3	20 (13.2)	13 (8.6)	29 (19.2)	33 (21.8)	56 (37.1)	7
13	V.23	24 (26.7)	32 (35.6)	16 17.8)	12 (13.3)	6 (6.7)	5	2 (3.4)	18 (30.5)	12 (20.3)	7 (11.9)	20 (33.9)	4	26 (17.4)	50 (33.6)	28 (18.8)	19 (12.8)	26 (17.4)	9

[a] Item number from Table 19.

[b] Number (percent in parentheses).

Table A.4

SENSE OF CONTROL ITEM FREQUENCY DISTRIBUTIONS

Item[a]	Questionnaire Item Number	Cancer Sample (N=95)							MI Sample (N=63)							Total Sample (N=158)						
		1	2	3	4	5	N/A[b]	Missing	1	2	3	4	5	N/A[b]	Missing	1	2	3	4	5	N/A[b]	Missing
1	VI.1F	17 (18.5)	47 (51.1)	18 (19.6)	10 (10.9)	0 (0.0	1	2	8 (13.3)	39 (65.0)	5 (8.3)	7 (11.7)	1 (1.7)	0	3	25 (16.4)	86 (56.6)	23 (15.1)	17 (11.2)	1 (0.6)	1	5
2	VI.5	0 (0.0)	19 (20.2)	41 (43.6)	21 (22.3)	13 (13.8)	0	1	2 (3.3)	6 (9.8)	12 (19.7)	13 (21.3)	28 (45.9)	0	2	2 (1.3)	25 (16.1)	53 (34.2)	34 (21.9)	41 (26.4)	0	3
3	VI.1W	9 (9.8)	54 (58.7)	19 (20.6)	9 (9.8)	1 (1.1)	0	3	3 (5.0)	33 (55.0)	11 (18.3)	8 (13.3)	5 (8.3)	0	3	12 (7.9)	87 (57.2)	30 (19.7)	17 (11.2)	6 (3.9)	6	6
4	VI.4	2 (2.1)	13 (13.8)	19 (20.2)	41 (43.6)	19 (20.2)	0	1	2 (3.3)	3 (5.0)	10 (16.7)	17 (28.3)	28 (46.7)	0	3	4 (2.6)	16 (10.4)	29 (18.8)	58 (37.7)	47 (30.5)	0	4
5	VI.1P	23 (24.7)	55 (59.1)	9 (9.7)	5 (5.4)	1 (1.1)	0	2	13 (21.7)	44 (73.3)	1 (1.7)	2 (3.3)	0 (0.0)	0	3	36 (23.5)	99 (64.7)	10 (6.5)	7 (4.6)	1 (0.6)	0	5
6	VI.7	7 (7.5)	8 (8.6)	18 (19.4)	24 (25.8)	36 (38.7)	0	2	4 (6.4)	1 (1.6)	8 (12.9)	14 (22.6)	35 (56.4)	0	1	11 (7.1)	9 (5.8)	26 (16.8)	38 (24.5)	71 (45.8)	0	3
7	IV.7K	43 (46.9)	38 (41.3)	9 (9.8)	1 (1.1)	1 (1.1)	0	3	11 (19.6)	38 (67.8)	3 (5.4)	2 (3.6)	2 (3.6)	2	5	54 (36.5)	76 (51.4)	12 (8.1)	3 (2.0)	3 (2.0)	2	8

[a]Item number from Table 29.

[b]Not applicable.

Table A.5

SELF ESTEEM/BODY IMAGE ITEM FREQUENCY DISTRIBUTIONS

Item[a]	Questionnaire Item Number	Cancer Sample (N=95)						MI Sample (N=44)					
		1	2	3	4	5	Number Missing	1	2	3	4	5	Number Missing
1	VI.9C	0[b] (0.0)	2 (2.2)	21 (23.3)	12 (13.3)	55 (61.1)	5	4 (6.8)	7 (11.9)	10 (16.9)	6 (10.2)	32 (54.2)	4
2	VI.9A	2 (2.2)	9 (9.9)	24 (26.4)	30 (33.0)	26 (28.6)	4	1 (1.6)	3 (4.9)	18 (29.5)	14 (23.0)	25 (41.0)	2
3	VI.1A	31 (33.3)	53 (57.0)	6 (6.4)	3 (3.2)	0 (0.0)	2	19 (32.2)	35 (59.3)	2 (3.4)	3 (5.1)	0 (0.0	4
4	VI.2A	9 (9.8)	44 (47.8)	28 (30.4)	6 (6.5)	5 (5.4)	3	13 (22.0)	26 (44.1)	14 (23.7)	3 (5.1)	3 (5.1)	4
5	VI.1U	12 (13.2)	46 (50.5)	16 (17.6)	10 (11.0)	7 (7.7)	4	3 (5.0)	41 (68.3)	5 (8.3)	6 (10.0)	5 (8.3)	3
6	VI.1V	12 (13.0)	47 (51.9)	13 (14.1)	18 (19.6)	2 (2.2)	3	4 (6.7)	46 (76.7)	3 (5.0)	6 (10.0)	1 (1.7)	3
7	VI.1Q	12 (12.9)	24 (25.8)	18 (19.4)	33 (35.5)	6 (6.4)	2			[c]			
8	VI.1B	18 (19.4)	40 (43.0)	14 (15.0)	17 (18.3)	4 (4.3)	2			[c]			
9	VI.1H	15 (16.7)	38 (42.2)	10 (11.1)	16 (17.8)	11 (12.2)	5			[c]			
10	VI.1E	16 (17.2)	35 (37.6)	5 (5.4)	24 (25.8)	13 (14.0)	2			[c]			
11	VI.1M	16 (17.2)	23 (24.7)	11 (11.8)	24 (25.8)	19 (20.4)	2			[c]			
12	VI.1O	3 (3.2)	11 (11.8)	9 (9.7)	36 (38.7)	34 (36.6)	2			[c]			
13	VI.1S	9 (9.7)	22 (23.6)	7 (7.5)	38 (40.9)	17 (18.3)	2			[c]			

[a] Item number from Table 35.

[b] Number (percent in parentheses).

[c] Not asked.

Table A.6

SOCIAL NETWORK ITEM FREQUENCY DISTRIBUTIONS

Item[a]	Questionnaire Item Number	Cancer Sample (N=95)							MI Sample (N=63)							Total Sample (N=158)						
		1	2	3	4	5	N/A[b]	Missing	1	2	3	4	5	N/A[b]	Missing	1	2	3	4	5	N/A[b]	Missing
1	IV.1A	44[c] (65.7)	10 (14.9)	7 (10.4)	2 (3.0)	4 (6.0)	27	1	16 (47.0)	9 (26.5)	3 (8.8)	5 (14.7)	1 (2.9)	24	5	60 (59.4)	19 (18.8)	10 (9.9)	7 (6.9)	5 (5.0)	51	6
2	IV.1B	46 (50.0)	25 (27.2)	15 (16.3)	2 (2.2)	4 (4.3)	2	1	18 (29.5)	30 (49.2)	9 (14.8)	3 (4.9)	1 (1.6)	0	2	64 (41.8)	55 (35.9)	24 (15.7)	5 (3.3)	5 (3.3)	2	3
3	IV.1C	26 (34.2)	25 (32.9)	20 (26.3)	5 (6.6)	0 (0.0)	16	3	10 (18.9)	26 (49.0)	13 (24.5)	3 (5.7)	1 (1.9)	6	4	36 (27.9)	51 (39.5)	33 (25.6)	8 (6.2)	1 (0.8)	22	7
4	IV.1D	17 (23.0)	18 (24.3)	23 (31.1)	13 (17.6)	3 (4.0)	20	1	4 (9.3)	13 (30.2)	18 (41.9)	7 (16.3)	1 (2.3)	16	4	21 (17.9)	31 (26.5)	41 (35.0)	20 (17.1)	4 (3.4)	36	5
5	IV.1E	16 (17.2)	35 (37.6)	5 (5.4)	24 (25.8)	13 (14.8)	0	2	2 (9.1)	4 (18.2)	1 (4.5)	7 (31.8)	8 (36.4)	0	41	18 (15.6)	39 (33.9)	6 (5.2)	31 (27.0)	21 (18.3)	0	43
6	IV.1F	38 (43.2)	26 (29.5)	19 (21.6)	5 (5.7)	0 (0.0)	7	0	9 (17.0)	22 (41.5)	18 (34.0)	4 (7.5)	0 (0.0)	7	3	47 (33.3)	48 (34.0)	37 (26.2)	9 (6.4)	0 (0.0)	14	3
7	IV.1G	16 (36.4)	12 (27.3)	11 (25.0)	5 (11.4)	0 (0.0)	45	6	3 (15.8)	10 (52.6)	2 (10.5)	1 (5.3)	3 (15.8)	39	5	19 (30.2)	22 (34.9)	13 (20.6)	6 (9.5)	3 (4.8)	84	11
8	IV.1H	25 (40.3)	18 (29.0)	12 (19.4)	6 (9.7)	1 (1.6)	27	6	15 (35.7)	15 (35.7)	7 (16.7)	4 (9.5)	1 (2.4)	19	2	40 (38.5)	33 (31.7)	19 (18.3)	10 (9.6)	2 (1.9)	46	8
9	IV.1I	15 (26.8)	19 (33.9)	17 (30.4)	5 (8.9)	0 (0.0)	32	7	2 (6.2)	10 (31.2)	14 (43.8)	4 (12.5)	2 (6.2)	26	5	17 (19.3)	29 (33.0)	31 (35.2)	9 (10.2)	2 (2.3)	58	12
10	IV.1J	21 (42.0)	12 (24.0)	7 (14.0)	5 (10.0)	5 (10.0)	37	8	2 (22.2)	4 (44.4)	1 (11.1)	2 (22.2)	0 (0.0)	46	8	23 (39.0)	16 (27.1)	8 (13.6)	7 (11.9)	5 (8.5)	83	16
11	IV.1K	10 (35.7)	6 (21.4)	7 (25.0)	3 (10.7)	2 (7.1)	56	11	0 (0.0)	1 (33.3)	1 (33.3)	1 (33.3)	0 (0.0)	52	8	10 (12.2)	7 (22.6)	8 (25.8)	4 (12.9)	2 (6.4)	108	19
12	IV.1L	26 (36.6)	14 (19.7)	20 (28.2)	7 (9.8)	4 (5.6)	20	4	5 (20.8)	9 (37.5)	6 (25.0)	4 (16.7)	0 (0.0)	33	6	31 (32.6)	23 (24.2)	26 (27.4)	11 (11.6)	4 (4.2)	53	10
13	IV.1M	18 (42.8)	10 (23.8)	7 (16.7)	3 (7.1)	4 (9.5)	45	8	3 (13.0)	11 (47.8)	6 (26.1)	3 (13.0)	0 (0.0)	35	5	21 (32.3)	21 (32.3)	13 (20.0)	6 (9.2)	4 (6.2)	80	13

[a] Item number from Table 43.

[b] Not applicable.

[c] Number (percent in parentheses).

Table A.7

SOCIAL SUPPORT/EXPRESSIVENESS ITEM FREQUENCY DISTRIBUTIONS

Item[a]	Questionnaire Item Number	Cancer Sample (N=95)							MI Sample (N=63)							Total Sample (N=158)						
		1	2	3	4	5	N/A	Missing	1	2	3	4	5	N/A	Missing	1	2	3	4	5	N/A	Missing
1	IV.9E	8 (8.6)[b]	22 (23.6)	32 (34.4)	24 (25.8)	7 (7.5)	0	2	6 (10.0)	27 (45.0)	13 (21.7)	5 (8.3)	9 (15.0)	1	2	14 (9.2)	49 (32.0)	45 (29.4)	29 (19.0)	16 (10.4)	1	4
2	IV.9C	5 (5.7)	14 (15.9)	26 (29.5)	35 (39.8)	8 (9.1)	6	1	4 (8.2)	15 (30.6)	12 (24.5)	13 (26.5)	5 (10.2)	12	2	9 (6.6)	29 (21.2)	38 (27.7)	48 (35.0)	13 (9.5)	18	3
3	IV.9A	9 (9.9)	43 (47.2)	23 (25.3)	11 (12.1)	5 (5.5)	2	2	7 (11.7)	22 (36.7)	14 (23.3)	5 (8.3)	12 (20.0)	1	2	16 (10.0)	65 (43.0)	37 (24.5)	16 (10.6)	17 (11.2)	3	4
4	IV.6	48 (52.2)	32 (34.8)	8 (8.7)	4 (4.3)	-	-	3	16 (26.7)	21 (35.0)	11 (18.3)	12 (20.0)	-	-	3	64 (42.1)	53 (34.9)	19 (12.5)	16 (10.5)	-	-	6
5	IV.8D	16 (21.9)	16 (21.9)	2 (2.7)	19 (26.0)	20 (27.4)	22	0	16 (40.0)	8 (20.0)	6 (15.0)	4 (10.0)	6 (15.0)	22	1	32 (28.3)	24 (21.2)	8 (7.1)	23 (20.4)	26 (23.0)	44	1
6	IV.7A	18 (19.8)	35 (38.5)	4 (4.4)	17 (18.7)	17 (18.7)	1	3	22 (37.3)	28 (47.4)	0 (0.0)	6 (10.2)	3 (5.1)	1	3	40 (26.7)	63 (42.0)	4 (2.7)	23 (15.3)	20 (13.3)	2	6
7	IV.9B	8 (8.6)	34 (36.6)	34 (36.6)	12 (12.9)	5 (5.4)	1	1	3 (5.4)	20 (35.7)	18 (32.1)	8 (14.3)	7 (12.5)	5	2	11 (7.4)	54 (36.2)	52 (34.9)	20 (13.4)	12 (8.0)	6	3
8	IV.9H	8 (9.0)	13 (14.6)	34 (38.2)	24 (27.0)	10 (11.2)	6	8	3 (5.3)	10 (17.5)	7 (12.3)	13 (22.8)	24 (42.1)	4	2	11 (7.5)	23 (15.8)	41 (28.1)	37 (25.3)	34 (23.3)	10	2
9	IV.8B	18 (19.4)	25 (26.9)	6 (6.4)	34 (36.6)	10 (10.8)	1	1	24 (38.7)	19 (30.6)	3 (4.8)	4 (6.4)	12 (19.4)	0	1	42 (27.1)	44 (28.4)	9 (5.8)	38 (24.5)	22 (14.2)	1	2
10	III.5G	11 (11.7)	32 (34.0)	2 (2.1)	35 (37.2)	14 (14.9)	0	1	17 (27.9)	26 (42.6)	2 (3.3)	9 (14.8)	7 (11.5)	0	2	28 (18.1)	58 (37.4)	4 (2.6)	44 (28.4)	21 (13.5)	0	3
11	IV.3A	35 (37.6)	48 (51.6)	8 (8.6)	2 (2.2)	0 (0.0)	1	1	31 (55.4)	16 (28.6)	5 (8.9)	3 (5.4)	1 (1.8)	5	2	66 (44.3)	64 (43.0)	13 (8.7)	5 (3.4)	1 (0.7)	6	3
12	IV.3B	2 (2.2)	5 (5.4)	11 (11.8)	30 (32.2)	45 (48.4)	0	2	2 (3.7)	2 (3.7)	7 (13.0)	14 (25.9)	29 (53.7)	5	4	4 (2.7)	7 (4.8)	18 (12.2)	44 (29.9)	74 (50.3)	5	6
13	IV.8A	7 (7.5)	24 (25.8)	9 (9.7)	35 (37.6)	18 (19.4)	0	2	8 (13.1)	17 (27.9)	8 (13.1)	13 (21.3)	15 (24.6)	1	1	15 (9.7)	41 (26.6)	17 (11.0)	48 (31.2)	33 (21.4)	1	3
14	IV.7H	9 (10.0)	22 (24.4)	3 (3.3)	24 (26.7)	32 (35.6)	1	4	10 (18.2)	25 (45.4)	1 (1.8)	6 (10.9)	13 (23.6)	4	4	19 (13.1)	47 (32.4)	4 (2.8)	30 (20.7)	45 (31.0	5	8
15	IV.7D	13 (15.5)	25 (29.8)	3 (3.6)	23 (27.4)	20 (23.8)	8	3	6 (13.6)	11 (25.0)	2 (4.5)	7 (15.9)	18 (40.9)	15	4	19 (14.8)	36 (28.1)	5 (3.9)	30 (23.4)	38 (29.7)	23	7
16	IV.7F	8 (8.7)	7 (7.6)	2 (2.2)	15 (16.3)	60 (65.2)	1	2	7 (12.5)	12 (21.4)	0 (0.0)	9 (16.1)	28 (50.0)	3	4	15 (10.1)	19 (12.8)	2 (1.4)	24 (16.2)	88 (59.4)	4	6
17	IV.10B	3 (3.3)	15 (16.7)	35 (38.9)	19 (21.1)	18 (20.0)	4	1	1 (1.7)	12 (20.0)	15 (25.0)	11 (18.3)	21 (35.0)	2	1	4 (2.7)	27 (18.0)	50 (33.3)	30 (20.0)	39 (26.0)	6	2
18	IV.10A	3 (3.3)	4 (4.4)	25 (27.5)	36 (39.6)	23 (25.3)	3	1	0 (0.0)	4 (6.8)	7 (11.9)	12 (20.3)	36 (61.0)	3	1	3 (2.0)	8 (5.3)	32 (21.3)	48 (32.0)	59 (39.3)	6	2
19	IV.8C	8 (8.5)	15 (16.0)	7 (7.4)	38 (40.4)	26 (27.7)	0	1	11 (17.7)	14 (22.6)	4 (6.4)	13 (21.0)	20 (32.2)	0	1	19 (12.2)	29 (18.6)	11 (7.0)	51 (32.7)	46 (29.5)	0	2
20	IV.9G	39 (41.5)	28 (29.8)	18 (19.1)	8 (8.5)	1 (1.1)	1	0	22 (37.3)	24 (40.7)	6 (10.2)	2 (3.4)	5 (8.5)	2	2	61 (39.9)	52 (34.0)	24 (15.7)	10 (6.5)	6 (3.9)	3	2

Table A.7 (continued)

Item[a]	Questionnaire Item Number	Cancer Sample (N=95)							MI Sample (N=63)							Total Sample (N=158)						
		1	2	3	4	5	N/A	Missing	1	2	3	4	5	N/A	Missing	1	2	3	4	5	N/A	Missing
21	IV.7J	34 (39.5)	27 (31.4)	12 (14.0	6 (7.0)	7 (8.1)	7	2	7 (14.6)	20 (41.7)	10 (20.8)	4 (8.3)	7 (14.6)	11	4	41 (30.6)	47 (35.1)	22 (16.4)	10 (7.5)	14 (10.4)	18	6
22	III.1C	12 (12.9)	11 (11.8)	0 (0.0)	34 (36.6)	36 (38.7)	0	2	4 (6.4)	14 (22.6)	1 (1.6)	16 (25.8)	27 (43.5)	0	1	16 (10.3)	25 (16.1)	1 (0.6)	50 (32.2)	63 (40.6)	0	3
23	III.3H	24 (25.5)	35 (37.2)	6 (6.4)	23 (24.5)	6 (6.4)	0	1	6 (10.0)	25 (41.7)	1 (1.7)	17 (28.3)	11 (18.3)	0	3	30 (19.5)	60 (39.0)	7 (4.5)	40 (26.0)	17 (11.0)	0	4
24	VI.2F	43 (46.2)	28 (30.1)	9 (9.7)	12 (12.9)	1 (1.1)	-	2	16 (27.6)	23 (39.6)	10 (17.2)	1 (1.7)	8 (13.8)	-	5	59 (39.1)	51 (33.8)	19 (12.6)	13 (8.6)	9 (6.0)	-	7
25	IV.7C	46 (50.0)	29 (31.5)	3 (3.3)	5 (5.4)	9 (9.8)	1	2	16 (29.1)	24 (43.6)	1 (1.8)	5 (9.1)	9 (16.4)	4	4	62 (42.1)	53 (36.0)	4 (2.7)	10 (6.8)	18 (12.2)	5	6
26	IV.7G	57 (62.6)	22 (24.2)	1 (1.1)	5 (5.5)	6 (6.6)	1	3	17 (30.9)	27 (49.1)	0 (0.0)	4 (7.3)	7 (12.7)	4	4	74 (50.7)	49 (33.6)	1 (0.7)	9 (6.2)	13 (8.9)	5	7
27	VI.2L	2 (2.2)	13 (14.0)	19 (20.4)	26 (28.0)	33 (35.4)	-	2	7 (11.5)	4 (6.6)	14 (23.0)	11 (18.0)	25 (41.0)	-	2	9 (5.8)	17 (11.0)	33 (21.4)	37 (24.0)	58 (37.7)	-	4
28	IV.9D	43 (70.5)	11 (18.0)	2 (3.3)	2 (3.3)	3 (4.9)	34	0	27 (57.4)	13 (27.7)	1 (2.1)	2 (4.2)	4 (8.5)	15	1	70 (64.8)	24 (22.2)	3 (2.8)	4 (3.7)	7 (6.5)	49	1
29	IV.9F	39 (46.4)	22 (26.2)	9 (10.7)	9 (10.7)	5 (6.0)	11	0	20 (37.7)	18 (34.0)	2 (3.8)	3 (5.7)	10 (18.9)	8	2	59 (43.1)	40 (29.2)	11 (8.0)	12 (8.8)	15 (10.9)	19	2
30	IV.4	22 (23.4)	33 (35.1)	24 (25.5)	15 (16.0)	-	-	1	19 (31.7)	10 (16.7)	12 (20.0)	19 (31.7)	-	-	3	41 (26.6)	43 (27.9)	36 (23.4)	34 (22.1)	-	-	4
31	IV.7B	22 (27.2)	25 (30.9)	5 (6.2)	16 (19.8)	13 (16.0)	11	3	5 (9.2)	17 (31.5)	1 (1.8)	5 (9.2)	26 (48.1)	5	4	27 (20.0)	42 (31.1)	6 (4.4)	21 (15.6)	39 (28.9)	16	7
32	IV.7L	65 (70.6)	22 (23.9)	2 (2.2)	2 (2.2)	1 (1.1)	0	3	21 (38.2)	31 (56.4)	2 (3.6)	0 (0.0)	1 (1.8)	4	4	86 (58.5)	53 (36.0)	4 (2.7)	2 (1.4)	2 (1.4)	4	7
33	IV.7I	47 (56.6)	24 (28.9)	1 (1.2)	7 (8.4)	4 (4.8)	10	2	8 (16.7)	29 (60.4)	1 (2.1)	5 (10.4)	5 (10.4)	11	4	55 (42.0)	53 (40.4)	2 (1.5)	12 (9.2)	9 (6.9)	21	6
34	IV.3C	48 (52.2)	23 (25.0)	6 (6.5)	11 (12.0)	4 (4.3)	0	3	32 (59.2)	13 (24.1)	2 (3.7)	2 (3.7)	5 (9.2)	5	4	80 (54.8)	36 (24.6)	8 (5.5)	13 (8.9)	9 (6.2)	5	7
35	IV.5	6 (6.5)	34 (37.0)	24 (26.1)	15 (16.3)	13 (14.1)	-	3	11 (18.6)	10 (16.9)	11 (18.6)	10 (16.9)	11 (18.6)	6[c] (10.2)	4	17 (11.2)	44 (29.1)	35 (23.2)	25 (16.6)	24 (15.9)	6[c] (4.0)	7
36	IV.7E	26 (29.2)	45 (50.6)	10 (11.2)	3 (3.4)	5 (5.6)	3	3	17 (29.8)	31 (54.4)	5 (8.8)	3 (5.3)	1 (1.8)	0	6	43 (29.4)	76 (52.0)	15 (10.3)	6 (4.1)	6 (4.1)	3	9

[a] Item number from Table 47.

[b] Percentages are in parentheses.

[c] This represents an acceptable written-in response of 6 (never).

Table A.8

WILL TO LIVE ITEM FREQUENCY DISTRIBUTIONS

Item[a]	Questionnaire Item Number	Cancer Sample (N=95)							MI Sample (N=63)							Total Sample (N=158)						
		1	2	3	4	5	Number Missing	(Percent)	1	2	3	4	5	Number Missing	(Percent)	1	2	3	4	5	Number Missing	(Percent)
1	VI.1X	48[b] (52.2)	34 (37.0)	5 (5.4)	4 (4.3)	1 (1.1)	3	(3)	14 (23.3)	33 (55.0)	1 (1.7)	7 (11.7)	5 (8.3)	3	(5)	62 (40.8)	67 (44.1)	6 (3.9)	11 (7.2)	6 (3.9)	6	(4)
2	VI.1L	13 (14.0)	25 (26.9)	15 (16.1)	26 (28.0)	14 (15.0)	2	(2)	10 (16.7)	31 (51.7)	3 (5.0)	9 (15.0)	7 (11.7)	3	(5)	23 (15.0)	56 (36.6)	18 (11.8)	35 (22.9)	21 (13.7)	5	(3)
3	VI.1K	63 (69.2)	21 (23.1)	6 (6.6)	1 (1.1)	0 (0.0)	4	(4)	34 (56.7)	20 (33.3)	1 (1.7)	2 (3.3)	3 (5.0)	3	(5)	97 (64.2)	41 (27.2)	7 (4.6)	3 (2.0)	3 (2.0)	7	(4)
4	VI.1R	33 (35.9)	44 (47.8)	4 (4.3)	9 (9.8)	2 (2.2)	3	(3)	16 (26.7)	27 (45.0)	5 (8.3)	6 (10.0)	6 (10.0)	3	(5)	49 (32.2)	71 (46.7)	9 (5.9)	15 (9.9)	8 (5.3)	6	(4)
5	III.5F	29 (31.2)	41 (44.1)	14 (15.0)	7 (7.5)	2 (2.2)	2	(2)	17 (27.4)	29 (46.8)	4 (6.4)	7 (11.3)	5 (8.1)	1	(2)	46 (29.7)	70 (45.2)	18 (11.6)	14 (9.0)	7 (4.5)	3	(2)
6	VI.1J	1 (1.1)	5 (5.4)	4 (4.3)	23 (25.0)	59 (64.1)	3	(3)	1 (1.7)	5 (8.5)	2 (3.4)	11 (18.6)	40 (67.8)	4	(6)	2 (1.3)	10 (6.6)	6 (4.0)	34 (22.5)	99 (65.6)	7	(4)
7	III.5M	54 (59.3)	26 (28.6)	6 (6.6)	3 (3.3)	2 (2.2)	4	(4)	15 (24.6)	31 (50.8)	5 (8.2)	6 (9.8)	4 (6.6)	2	(3)	69 (45.4)	57 (37.5)	11 (7.2)	9 (5.9)	6 (3.9)	6	(4)
8	III.5E	20 (21.7)	25 (27.2)	17 (18.5)	18 (19.6)	12 (13.0)	3	(3)	9 (14.8)	12 (19.7)	3 (4.9)	12 (19.7)	25 (41.0)	2	(3)	29 (19.0)	37 (24.2)	20 (13.1)	30 (19.6)	37 (24.2)	5	(3)
9	VI.1D	36 (39.1)	23 (25.0)	18 (19.6)	9 (9.8)	6 (6.5)	3	(3)	23 (38.3)	18 (30.0)	3 (5.0)	5 (8.3)	11 (18.3)	3	(5)	59 (38.8)	41 (30.0)	21 (13.8)	14 (9.2)	17 (11.2)	6	(4)
10	I.13	42 (45.2)	28 (30.1)	12 (12.9)	11 (11.8)	-	2	(2)	30 (48.4)	14 (22.6)	9 (14.5)	9 (14.5)	-	1	(2)	72 (46.4)	42 (27.1)	21 (13.5)	20 (12.9)	-	3	(2)
11	VI.1T	1 (1.1)	3 (3.3)	4 (4.3)	25 (27.2)	59 (64.1)	3	(3)	1 (1.7)	4 (6.7)	3 (5.0)	16 (26.7)	36 (60.0)	3	(5)	2 (1.3)	7 (4.6)	7 (4.6)	41 (27.0)	95 (62.5)	6	(4)
12	VI.1I	58 (62.4)	28 (30.1)	7 (7.5)	0 (0.0)	0 (0.0)	2	(2)	21 (35.0)	33 (55.0)	2 (3.3)	4 (6.7)	0 (0.0)	3	(5)	79 (51.6)	61 (39.9)	9 (5.9)	4 (2.6)	0 (0.0)	5	(3)
13	VI.1C	63 (68.5)	23 (25.0)	4 (4.3)	2 (2.2)	0 (0.0)	3	(3)	33 (54.1)	23 (37.7)	3 (4.9)	2 (3.3)	0 (0.0)	2	(3)	96 (62.7)	46 (30.1)	7 (4.6)	4 (2.6)	0 (0.0)	5	(3)

[a] Item number from Table 54.

[b] Number (percent in parentheses).

Table A.9

ACTIVE COPING ITEM FREQUENCY DISTRIBUTIONS

Item[a]	Questionnaire Item Number	Cancer Sample (N=95)						MI Sample (N=63)						Total Sample (N=158					
		1	2	3	4	5	Missing	1	2	3	4	5	Missing	1	2	3	4	5	Missing
1	III.4B	43[b] (46.7)	31 (33.7)	11 (12.0)	6 (6.5)	1 (1.1)	3	16 (27.6)	31 (53.4)	8 (13.8)	1 (1.7)	2 (3.4)	5	59 (39.3)	62 (41.3)	19 (12.7)	7 (4.7)	3 (2.0)	8
2	III.4G	13 (13.8)	28 (30.1)	30 (32.2)	11 (11.8)	11 (11.8)	2	2 (3.4)	35 (60.3)	8 (13.8)	5 (8.6)	8 (13.8)	5	15 (9.9)	63 (41.7)	38 (25.2)	16 (10.6)	19 (12.6)	7
3	III.4I	36 (39.1)	42 (45.6)	9 (9.8)	3 (3.3)	2 (2.2)	3	15 (25.0)	34 (56.7)	6 (10.0)	0 (0.0)	5 (8.3)	3	51 (33.6)	76 (50.0)	15 (9.9)	3 (2.0)	7 (4.6)	6
4	III.4H	2 (2.2)	2 (2.2)	22 (23.9)	45 (48.9)	21 (22.8)	3	1 (1.7)	8 (13.6)	10 (16.9)	14 (23.7)	26 (44.1)	4	3 (2.0)	10 (6.6)	32 (21.2)	59 (39.1)	47 (31.1)	7
5	III.2A	72 (78.3)	6 (6.5)	3 (3.3)	5 (5.4)	6 (6.5)	3	50 (82.0)	6 (9.8)	4 (6.6)	1 (1.6)	0 (0.0)	2	122 (79.7)	12 (7.8)	7 (4.6)	6 (3.9)	6 (3.9)	5
6	III.3E	14 (14.9)	17 (18.1)	12 (12.8)	22 (23.4)	29 (30.8)	1	5 (8.2)	21 (34.4)	3 (4.9)	17 (27.9)	15 (24.6)	2	19 (12.2)	38 (24.5)	15 (9.7)	39 (25.2)	44 (28.4)	3
7	III.2C	65 (69.1)	17 (18.1)	8 (8.5)	4 (4.2)	0 (0.0)	1	45 (75.0)	5 (8.3)	6 (10.0)	2 (3.3)	2 (3.3)	3	110 (71.4)	22 (14.3)	14 (9.1)	6 (3.9)	2 (1.3)	4
8	III.2D	48 (50.5)	31 (32.6)	11 (11.6)	3 (3.2)	2 (2.1)	0	41 (66.1)	13 (21.0)	5 (8.1)	1 (1.6)	2 (3.2)	1	89 (56.7)	44 (28.0)	16 (10.2)	4 (2.5)	4 (2.5)	1
9	III.2B	31 (33.0)	22 (23.4)	23 (24.5)	8 (8.5)	10 (10.6)	1	39 (63.9)	10 (16.4)	4 (6.6)	2 (3.3)	6 (9.8)	2	70 (45.2)	32 (20.6)	27 (17.4)	10 (6.4)	16 (10.3)	3
10	III.5H	22 (24.2)	42 (46.2)	5 (5.5)	20 (22.0)	2 (2.2)	4	19 (30.6)	38 (61.3)	2 (3.2)	3 (4.8)	0 (0.0)	1	41 (26.8)	80 (52.3)	7 (4.6)	23 (15.0)	2 (1.3)	5
11	III.3D	36 (37.9)	36 (37.9)	5 (5.3)	11 (11.6)	7 (7.4)	0	29 (46.8)	28 (45.2)	0 (0.0)	4 (6.4)	1 (1.6)	1	65 (41.4)	64 (40.8)	5 (3.2)	15 (9.6)	8 (5.1)	1
12	III.1A	50 (53.2)	26 (27.7)	8 (8.5)	8 (8.5)	2 (2.1)	1	18 (30.0)	19 (31.7)	3 (5.0)	10 (16.7)	10 (16.7)	3	68 (44.2)	45 (29.2)	11 (7.1)	18 (11.7)	12 (7.8)	4
13	III.1B	10 (10.8)	16 (17.2)	1 (1.1)	20 (21.5)	46 (49.5)	2	11 (18.0)	24 (39.3)	0 (0.0)	13 (21.3)	13 (21.3)	2	21 (13.6)	40 (26.0)	1 (0.6)	33 (21.4)	59 (38.3)	4
14	III.1D	3 (3.2)	9 (9.6)	5 (5.3)	13 (13.8)	64 (68.1)	1	3 (4.8)	12 (19.4)	5 (8.1)	16 (25.8)	26 (41.9)	1	6 (3.8)	21 (13.5)	10 (6.4)	29 (18.6)	90 (57.7)	2
15	III.1E	32 (33.7)	26 (27.4)	4 (4.2)	18 (18.9)	15 (15.8)	0	7 (11.5)	12 (19.7)	1 (1.6)	17 (27.9)	24 (39.3)	2	39 (25.0)	38 (24.4)	5 (3.2)	35 (22.4)	39 (25.0)	2

[a] Item number from Table 62.
[b] Number (percent in parentheses).

Table A.10

ACCEPTANCE/REJECTION ITEM FREQUENCY DISTRIBUTIONS

Item[a]	Questionnaire Item Number	Cancer Sample (N=93)							MI Sample (N=63)							Total Sample (N=158)						
		1	2	3	4	5	N/A	Missing	1	2	3	4	5	N/A	Missing	1	2	3	4	5	N/A	Missing
1	II.24A	30 (32.2)	37 (39.8)	5 (5.4)	10 (10.8)	11 (11.8)	1	1	20 (32.8)	32 (52.4)	0 (0.0)	8 (13.1)	1 (1.6)	0	2	50 (32.5)	69 (44.8)	5 (3.2)	18 (11.7)	12 (7.8)	1	3
1	II.22	5 (5.3)	11 (11.6)	47 (49.5)	27 (28.4)	5 (5.3)	0	0	9 (14.8)	7 (11.5)	16 (26.2)	16 (26.2)	13 (21.3)	0	2	14 (9.0)	18 (11.5)	63 (40.4)	43 (27.6)	18 (11.5)	0	2
3	II.24B	25 (27.8)	26 (28.9)	2 (2.2)	18 (20.0)	19 (21.1)	3	2	13 (21.7)	16 (26.7)	2 (3.3)	17 (28.3)	12 (20.0)	0	3	38 (25.3)	42 (28.0)	4 (2.7)	35 (23.3)	31 (20.7)	3	5
4	II.24D	58 (61.7)	30 (31.9)	2 (2.1)	2 (2.1)	2 (2.1)	1	0	23 (38.3)	34 (56.7)	0 (0.0)	3 (5.0)	0 (0.0)	0	3	81 (52.6)	64 (41.6)	2 (1.3)	5 (3.2)	2 (1.3)	1	3
5	II.23	21 (22.1)	24 (25.3)	30 (31.6)	20 (21.0)	-	0	0	13 (21.3)	8 (13.1)	15 (24.6)	25 (41.0)	-	0	2	34 (21.8)	32 (20.5)	45 (28.8)	45 (28.8)	-	0	2
6	II.24E	52 (55.9)	31 (33.3)	5 (5.4)	2 (2.2)	3 (3.2)	1	1	23 (39.0)	32 (54.2)	0 (0.0)	4 (6.8)	0 (0.0)	0	4	75 (49.3)	63 (41.4)	5 (3.3)	6 (3.9)	3 (2.0)	1	5
7	II.24C	51 (55.4)	31 (33.7)	1 (1.1)	6 (6.5)	3 (3.3)	2	1	24 (40.0)	34 (56.7)	1 (1.7)	1 (1.7)	0 (0.0)	0	3	75 (49.3)	65 (42.8)	2 (1.3)	7 (4.6)	3 (2.0)	2	4

[a]Item number from Table 68.

[b]Number (percent in parentheses).

Table A.11

DOCTOR PATIENT RELATIONSHIP ITEM FREQUENCY DISTRIBUTIONS: CANCER SAMPLE (N=95)

Item[a]	Questionnaire Item Number	Response 1	2	3	4	5	Number Missing
1	VII.5A	41[b] (45.6)	33 (36.7)	12 (13.3)	3 (3.3)	1 (1.1)	5
2	VII.5H	28 (30.8)	43 (47.2)	17 (18.7)	2 (2.2)	1 (1.1)	4
3	VII.4A	36 (39.1)	33 (35.9)	15 (16.3)	5 (5.4)	3 (3.3)	3
4	VII.4B	70 (76.1)	18 (19.6)	3 (3.3)	0 (0.0)	1 (1.1)	3
5	VII.5E	44 (47.8)	36 (39.1)	6 (6.5)	2 (2.2)	4 (4.3)	3
6	VII.5I	5 (5.5)	8 (8.8)	7 (7.7)	45 (49.4)	26 (28.6)	4
7	VII.5D	33 (36.3)	41 (45.0)	10 (11.0)	3 (3.3)	4 (4.4)	4
8	VII.5U	2 (2.2)	7 (7.6)	9 (9.8)	37 (40.2)	37 (40.2)	3
9	VII.5M	28 (30.4)	47 (51.1)	10 (10.9)	4 (4.3)	3 (3.3)	3
10	VII.5O	25 (27.8)	41 (45.6)	13 (14.4)	9 (10.0)	2 (2.2)	5
11	VII.5F	0 (0.0)	3 (3.3)	4 (4.4)	36 (39.6)	48 (52.7)	4
12	VII.5R	31 (34.1)	49 (53.8)	7 (7.7)	2 (2.2)	2 (2.2)	4
13	VII.5Q	2 (2.2)	2 (2.2)	9 (9.8)	33 (35.9)	46 (50.0)	3
14	VII.5J	37 (40.2)	37 (40.2)	5 (5.4)	6 (6.5)	7 (7.6)	3
15	VII.5L	1 (1.1)	7 (7.6)	5 (5.4)	32 (34.8)	47 (51.1)	3
16	VII.5B	38 (41.3)	33 (35.9)	13 (14.1)	5 (5.4)	3 (3.3)	3
17	VII.5W	31 (34.4)	26 (28.9)	27 (30.0)	4 (4.4)	2 (2.2)	5
18	VII.5S	29 (31.5)	38 (41.3)	22 (23.9)	3 (3.3)	0 (0.0)	3
19	VII.5K	30 (32.6)	42 (45.6)	10 (10.9)	7 (7.6)	3 (3.3)	3
20	VII.5V	4 (4.4)	4 (4.4)	14 (15.4)	33 (36.3)	36 (39.6)	4
21	VII.5T	7 (7.7)	9 (9.9)	6 (6.6)	35 (38.5)	34 (37.4)	4
22	VII.5G	33 (36.7)	36 (40.0)	9 (10.0)	7 (7.8)	5 (5.6)	5
23	VII.5C	6 (6.6)	5 (5.5)	5 (5.5)	34 (37.4)	41 (45.0)	4
24	VII.5N	28 (39.8)	39 (42.8)	6 (6.6)	15 (16.5)	3 (3.3)	4
25	VII.5P	15 (16.7)	44 (48.9)	15 (16.7)	13 (14.4)	3 (3.3)	5
26	VII.1	65 (71.4)	18 (11.8)	2 (2.2)	3 (3.3)	3 (3.3)	4

[a] Item number from Table 73.

[b] Number (percent in parentheses).

Table A.12

PLEASURES/BENEFITS ITEM FREQUENCY DISTRIBUTIONS

Item[a]	Questionnaire Item Number	Cancer Sample (N=95)							MI Sample (N=63)							Total Sample (N=158)						
		1	2	3	4	5	N/A	Missing	1	2	3	4	5	N/A	Missing	1	2	3	4	5	N/A	Missing
1	III.5B	37[b] (40.2)	38 (41.3)	8 (8.7)	8 (8.7)	1 (1.1)	0	3	12 (19.7)	34 (55.7)	7 (11.5)	7 (11.5)	1 (1.6)	0	2	49 (32.0)	72 (47.0)	15 (9.8)	15 (9.8)	2 (1.3)	0	5
2	III.3A	8 (8.4)	28 (29.5)	8 (8.4)	28 (29.5)	23 (24.2)	0	0	3 (4.9)	15 (24.6)	1 (1.6)	17 (27.9)	25 (41.0)	0	2	11 (7.0)	43 (27.6)	9 (5.8)	45 (28.8)	48 (30.8)	0	2
3	III.5C	21 (22.6)	35 (37.6)	3 (3.2)	27 (29.0)	7 (7.5)	0	2	9 (14.5)	20 (32.2)	1 (1.6)	15 (24.2)	17 (27.4)	0	1	30 (19.4)	55 (35.5)	4 (2.6)	42 (27.1)	24 (15.5)	0	3
4	III.5J	23 (25.3)	32 (35.2)	13 (14.3)	17 (18.7)	6 (6.6)	0	4	8 (13.3)	18 (30.0)	10 (16.7)	13 (21.7)	11 (18.3)	0	3	31 (20.5)	50 (33.1)	23 (15.2)	30 (19.9)	17 (11.2)	0	7
5	III.5L	10 (11.2)	20 (22.5)	5 (5.6)	26 (29.2)	28 (31.5)	1	5	6 (4.8)	16 (26.2)	5 (8.2)	21 (34.4)	13 (21.3)	0	2	16 (10.7)	36 (24.0)	10 (6.7)	47 (31.3)	41 (27.3)	1	7
6	III.5K	5 (5.6)	8 (8.9)	8 (8.9)	15 (16.7)	54 (60.0)	0	5	4 (6.6)	12 (19.7)	4 (6.6)	17 (27.9)	24 (39.3)	0	2	9 (6.0)	20 (13.2)	12 (7.9)	32 (21.2)	78 (51.6)	0	7
7	III.5N	14 (15.4)	31 (34.1)	7 (7.7)	19 (20.9)	20 (22.0)	0	4	10 (16.4)	35 (57.4)	0 (0.0)	11 (18.0)	4 (6.6)	0	3	24 (15.9)	66 (43.7)	7 (4.6)	30 (19.9)	24 (15.9)	0	7
8	III.5A	10 (10.9)	31 (33.7)	5 (5.4)	27 (29.3)	19 (20.6)	0	3	16 (26.2)	22 (36.1)	1 (1.6)	9 (14.8)	13 (21.3)	0	2	26 (17.0)	53 (34.6)	6 (3.9)	36 (23.5)	32 (20.9)	0	5
9	III.5I	17 (18.3)	31 (33.3)	14 (15.0)	25 (26.9)	6 (6.4)	0	2	11 (18.0)	26 (42.0)	5 (8.2)	12 (19.7)	7 (11.5)	0	2	28 (18.2)	57 (37.0)	19 (12.3)	37 (24.0)	13 (8.4)	0	4
10	III.3F	28 (30.1)	38 (40.9)	5 (5.4)	19 (20.4)	3 (3.2)	0	2	9 (14.8)	35 (57.4)	2 (3.3)	14 (23.0)	1 (1.6)	0	2	37 (24.0)	73 (47.4)	7 (4.5)	33 (21.4)	4 (2.6)	0	4
11	III.3B	6 (6.5)	20 (21.7)	7 (7.6)	30 (32.6)	29 (31.5)	1	2	8 (13.1)	15 (24.6)	2 (3.3)	19 (31.1)	17 (27.9)	0	2	14 (9.2)	35 (22.9)	9 (5.9)	49 (32.0)	46 (30.1)	1	4
12	III.3C	18 (19.6)	31 (33.7)	8 (8.7)	18 (19.6)	17 (18.5)	0	3	12 (19.7)	25 (41.0)	2 (3.3)	13 (21.3)	9 (14.8)	0	2	30 (19.6)	56 (36.6)	10 (6.5)	31 (20.3)	26 (17.0)	0	5
13	III.5D	35 (38.9)	24 (26.7)	2 (2.2)	13 (14.4)	16 (17.8)	0	5	9 (14.8)	9 (14.8)	0 (0.0)	10 (16.4)	33 (54.1)	0	2	44 (29.1)	33 (21.8)	2 (1.3)	23 (15.2)	49 (32.4)	0	7
14	III.4E	13 (13.8)	14 (14.9)	30 (31.9)	15 (16.0)	22 (23.4)	0	1	5 (8.6)	15 (25.9)	10 (17.2)	6 (10.3)	22 (37.9)	0	5	18 (11.8)	29 (19.1)	40 (26.3)	21 (13.8)	44 (28.9)	0	6
15	III.3G	38 (40.9)	37 (39.8)	3 (3.2)	12 (12.9)	3 (3.2)	1	1	16 (26.3)	34 (55.7)	1 (1.6)	7 (11.5)	3 (4.9)	0	2	54 (35.1)	71 (46.1)	4 (2.6)	19 (12.3)	6 (3.9)	1	3

[a]Item number from Table 79.

[b]Number (percent in parentheses).

Table A.13

POSITIVE AND NEGATIVE FEELINGS ITEM FREQUENCY DISTRIBUTIONS

Item[a]	Questionnaire Item Number	Cancer Sample (N=95)						MI Sample (N=63)						Total Sample (N=158)					
		1	2	3	4	5	Number Missing	1	2	3	4	5	Number Missing	1	2	3	4	5	Number Missing
1	VI.1G	26[b] (28.3)	45 (48.9)	18 (19.6)	3 (3.3)	0 (0.0)	3	10 (17.2)	38 (65.5)	6 (10.3)	2 (3.4)	2 (3.4)	5	36 (24.0)	83 (55.3)	24 (16.0)	5 (3.3)	2 (1.3)	8
2	VI.1N	46 (49.5)	36 (38.7)	10 (10.8)	1 (1.1)	0 (0.0)	2	28 (47.4)	29 (49.2)	1 (1.7)	1 (1.7)	0 (0.0)	4	74 (48.7)	65 (42.8)	11 (7.2)	2 (1.3)	0 (0.0)	6
3	VI.9B	1 (1.1)	7 (7.7)	16 (17.6)	16 (17.6)	51 (56.0)	4	1 (1.7)	2 (3.3)	9 (15.0)	7 (11.7)	41 (68.3)	3	2 (1.3)	9 (6.0)	25 (16.6)	23 (15.2)	92 (60.9)	7
4	III.4F	1 (1.1)	6 (6.4)	18 (19.4)	34 (36.6)	34 (36.6)	2	1 (1.7)	8 (13.6)	15 (25.4)	10 (16.9)	25 (42.4)	4	2 (1.3)	14 (9.2)	33 (21.7)	44 (28.9)	59 (38.8)	6
5	III.4D	31 (33.3)	46 (49.5)	10 (10.8)	4 (4.3)	2 (2.2)	2	17 (28.3)	31 (51.7)	10 (16.7)	1 (1.7)	1 (1.7)	3	48 (31.4)	77 (50.3)	20 (13.1)	5 (3.3)	3 (2.0)	5
6	III.4C	5 (5.4)	10 (10.8)	30 (32.2)	30 (32.2)	18 (19.4)	2	6 (10.2)	12 (20.3)	11 (18.6)	12 (20.3)	18 (30.5)	4	11 (7.2)	22 (14.5)	41 (27.0)	42 (27.6)	36 (23.7)	6
7	III.4A	31 (33.3)	23 (24.7)	23 (24.7)	9 (9.7)	7 (7.5)	2	11 (18.6)	21 (35.6)	14 (23.7)	5 (8.5)	8 (13.6)	4	42 (27.6)	44 (28.9)	37 (24.3)	14 (9.2)	15 (9.9)	6
8	VI.6B	11 (12.0)	48 (52.2)	19 (20.6)	12 (13.0)	2 (2.2)	3	3 (4.9)	37 (60.6)	7 (11.5)	6 (9.8)	8 (13.1)	2	14 (9.2)	85 (55.6)	26 (17.0)	18 (11.8)	10 (6.5)	5
9	VI.6A	8 (9.8)	29 (35.4)	22 (26.8)	12 (14.6)	11 (13.4)	13[b]	6 (12.5)	10 (20.8)	5 (10.4)	3 (6.2)	24 (50.0)	15[b]	14 (10.8)	39 (30.0)	27 (20.8)	15 (11.5)	35 (26.9)	28[b]
10	VI.6C	25 (26.9)	42 (45.2)	16 (17.2)	9 (9.7)	1 (1.1)	2	10 (16.7)	32 (53.3)	5 (8.3)	7 (11.7)	6 (10.0)	3	35 (22.9)	74 (48.4)	21 (13.7)	16 (10.4)	7 (4.6)	5
11	VI.6D	12 (13.0)	40 (43.5)	19 (20.6)	15 (16.3)	6 (6.5)	3	7 (11.7)	22 (36.7)	12 (20.0)	13 (21.7)	6 (10.0)	3	19 (12.5)	62 (40.8)	31 (20.4)	28 (18.4)	12 (7.9)	6
12	VI.8	32 (34.4)	35 (37.6)	17 (18.3)	7 (7.5)	2 (2.2)	2	25 (40.3)	17 (27.4)	9 (14.5)	6 (9.7)	5 (8.1)	1	57 (36.8)	52 (33.5)	26 (16.8)	13 (8.4)	7 (4.5)	3
13	VI.9D	4 (4.4)	55 (60.4)	25 (27.5)	7 (7.7)	0 (0.0)	4	8 (13.1)	40 (65.6)	11 (18.0)	2 (3.3)	0 (0.0)	2	12 (7.9)	95 (62.5)	36 (23.7)	9 (5.9)	0 (0.0)	6
14	VI.2G	3 (3.2)	51 (54.8)	31 (33.3)	7 (7.5)	1 (1.1)	2	6 (10.0)	39 (65.0)	9 (15.0)	5 (8.3)	1 (1.7)	3	9 (5.9)	90 (58.8)	40 (26.1)	12 (7.8)	2 (1.3)	5
15	VI.2J	6 (6.4)	46 (49.5)	30 (32.2)	9 (9.7)	2 (2.2)	2	4 (6.8)	33 (55.9)	16 (27.1)	3 (5.1)	3 (5.1)	4	10 (6.6)	79 (52.0)	46 (30.3)	12 (7.9)	5 (3.3)	6

Table A.13 (cont.)

Item[a]	Questionnaire Item Number	Cancer Sample (N=95)						MI Sample (N=63)						Total Sample (N=158)					
		1	2	3	4	5	Number Missing	1	2	3	4	5	Number Missing	1	2	3	4	5	Number Missing
16	VI.2D	2 (2.2)	9 (9.7)	27 (29.0)	37 (39.8)	18 (19.4)	2	3 (5.2)	3 (5.2)	14 (24.1)	15 (25.9)	23 (39.6)	5	5 (3.3)	12 (7.9)	41 (27.2)	52 (34.4)	41 (27.2)	7
17	VI.9F	0 (0.0)	2 (2.2)	13 (14.1)	18 (19.6)	59 (64.1)	3	1 (1.6)	2 (3.3)	3 (4.9)	6 (9.8)	49 (80.3)	2	1 (0.6)	4 (2.6)	16 (10.4)	24 (15.7)	108 (70.6)	5
18	VI.2M	1 (1.1)	14 (14.9)	25 (26.6)	38 (40.4)	16 (17.0)	1	2 (3.4)	5 (8.5)	19 (32.2)	9 (15.2)	24 (40.7)	4	3 (2.0)	19 (12.4)	44 (28.8)	47 (30.7)	40 (26.1)	5
19	VI.3C	2 (2.2)	7 (7.5)	20 (21.5)	31 (33.3)	33 (35.5)	2	1 (1.7)	4 (6.7)	8 (13.3)	12 (20.0)	35 (58.3)	3	3 (2.0)	11 (7.2)	28 (18.3)	43 (28.1)	68 (44.4)	5
20	VI.2B	0 (0.0)	11 (12.0)	52 (56.5)	20 (21.7)	9 (9.8)	3	5 (8.6)	9 (15.5)	11 (19.0)	18 (31.0)	15 (25.9)	5	5 (3.3)	20 (13.3)	63 (42.0)	38 (25.3)	24 (16.0)	8
21	VI.2I	0 (0.0)	14 (15.0)	39 (41.9)	28 (30.1)	12 (12.9)	2	6 (10.0)	13 (21.7)	14 (23.3)	16 (26.7)	11 (18.3)	3	6 (3.9)	27 (17.6)	53 (34.6)	44 (28.8)	23 (15.0)	5
22	VI.2E	1 (1.1)	11 (11.8)	39 (41.9)	34 (36.6)	8 (8.6)	2	3 (5.2)	3 (5.2)	25 (43.1)	14 (24.1)	13 (22.4)	5	4 (2.6)	14 (9.3)	64 (42.4)	48 (31.8)	21 (13.9)	7
23	VI.3B	1 (1.1)	6 (6.4)	25 (26.9)	28 (30.1)	33 (35.5)	2	2 (3.4)	5 (8.5)	6 (10.2)	15 (25.4)	31 (52.5)	4	3 (2.0)	11 (7.2)	31 (20.4)	43 (28.3)	64 (42.1)	6
24	VI.9E	2 (2.2)	6 (6.6)	18 (19.8)	20 (22.0)	45 (49.4)	4	0 (0.0)	8 (13.1)	4 (6.6)	5 (8.2)	44 (72.1)	2	2 (1.3)	14 (9.2)	22 (14.5)	25 (16.4)	89 (58.6)	6
25	II.24F	6 (6.4)	11 (11.7)	14 (14.9)	13 (13.8)	50 (53.2)	1	8 (13.3)	17 (28.3)	3 (5.0)	7 (11.7)	25 (41.7)	3	14 (9.1)	28 (18.2)	17 (11.0)	20 (13.0)	75 (48.7)	4
26	VI.3D	1 (1.1)	2 (2.2)	10 (10.8)	17 (18.3)	63 (67.7)	2	0 (0.0)	0 (0.0)	2 (3.3)	3 (5.0)	55 (91.7)	3	1 (0.6)	2 (1.3)	12 (7.8)	20 (13.1)	118 (77.1)	5
27	VI.2K	1 (1.1)	14 (14.9)	31 (33.0)	37 (39.4)	11 (11.7)	1	2 (3.3)	8 (13.3)	14 (23.3)	17 (28.3)	19 (31.7)	3	3 (1.9)	22 (14.3)	45 (29.2)	54 (35.1)	30 (19.5)	4
28	VI.2C	1 (1.1)	5 (5.4)	36 (38.7)	39 (41.9)	12 (12.9)	2	3 (5.2)	6 (10.3)	16 (27.6)	17 (29.3)	16 (27.6)	5	4 (2.6)	11 (7.3)	52 (34.4)	56 (37.1)	28 (18.5)	7
29	VI.2H	0 (0.0)	5 (5.3)	43 (45.7)	40 (42.6)	6 (6.4)	1	3 (5.0)	7 (11.7)	14 (23.3)	20 (33.3)	16 (26.7)	3	3 (1.9)	12 (7.8)	57 (37.0)	60 (39.0)	22 (14.3)	4
30	VI.2N	2 (2.1)	8 (8.5)	12 (12.8)	33 (35.1)	39 (41.5)	1	0 (0.0)	7 (11.7)	7 (11.7)	9 (15.0)	37 (61.7)	2	2 (1.3)	15 (9.7)	19 (12.3)	42 (27.3)	76 (49.4)	4
31	VI.3A	2 (2.2)	3 (3.2)	16 (17.2)	31 (33.3)	41 (44.1)	2	0 (0.0)	3 (4.9)	8 (13.1)	16 (26.2)	34 (55.7)	2	2 (1.3)	6 (3.9)	24 (15.6)	47 (30.5)	75 (48.7)	4

[a]Item number from Table 85.

[b]Number (percent in parentheses).

Table A.14

FUNCTIONAL STATUS ITEM FREQUENCY DISTRIBUTIONS

	Cancer Sample (N=95)				MI Sample (N=63)				Total Sample (N=158)			
Item[a]	1	2	3	Missing	1	2	3	Missing	1	2	3	Missing
1	76 (80.0)	19 (20.0)	-	0	56 (91.8)	5 (8.2)	-	2	132 (84.6)	24 (15.4)	-	2
2	46 (48.9)	48 (51.1)	-	1	40 (63.5)	23 (36.5)	-	0	86 (54.8)	71 (45.2)	-	1
3	74 (77.9)	18 (18.9)	3 (3.2)	0	53 (85.5)	4 (6.4)	5 (8.1)	1	127 (80.9)	22 (14.0)	8 (5.1)	1
4	54 (57.4)	15 (16.0)	25 (26.6)	1	21 (33.9)	9 (14.5)	32 (51.6)	1	75 (48.1)	24 (15.4)	57 (36.5)	2
5	60 (64.5)	28 (30.1)	5 (5.4)	2	36 (58.1)	16 (25.8)	10 (16.1)	1	96 (61.9)	44 (28.4)	15 (9.7)	3
6	71 (74.7)	23 (24.2)	1 (1.0)	0	48 (76.2)	9 (14.3)	6 (9.5)	0	119 (75.3)	32 (20.2)	7 (4.4)	0
7	85 (89.5)	10 (10.5)	0 (0.0)	0	59 (93.6)	2 (3.2)	2 (3.2)	0	144 (91.1)	12 (7.6)	2 (1.3)	0
8	90 (94.7)	5 (5.3)	0 (0.0)	0	62 (98.4)	1 (1.6)	0 (0.0)	0	152 (96.2)	6 (3.8)	0 (0.0)	0
9	92 (96.8)	3 (3.2)	0 (0.0)	0	60 (95.2)	2 (3.2)	1 (1.6)	0	152 (96.2)	5 (3.2)	1 (0.6)	0
10[b]	38 (40.4)	56 (59.6)	-	1	30 (49.2)	31 (50.8)	-	2	68 (43.9)	87 (56.1)	-	3
11[c]	52 (73.2)	19 (26.8)	-	24	41 (71.9)	16 (28.1)	-	6	93 (72.6)	35 (27.3)	-	30
12	58 (61.7)	36 (38.3)	-	1	45 (72.6)	17 (27.4)	-	1	103 (66.0)	53 (34.0)	-	2

[a] Item number from Table 91.

[b] People who reported working at a paid job were assigned a score of not limited (response of 2) on this item.

[c] This item was skipped by many respondents because of a faulty skip pattern.

APPENDIX B

PRODUCT-MOMENT CORRELATIONS AMONG ITEMS

Table B.1

PRODUCT-MOMENT CORRELATIONS[a] AMONG BELIEFS ABOUT RECOVERY ITEMS: CANCER SAMPLE

Item[b]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	1.00																			
2	.67	1.00																		
3	.76	.76	1.00																	
4	.47	.56	.60	1.00																
5	-.08	-.19	-.15	-.11	1.00															
6	-.40	-.39	-.44	-.34	.30	1.00														
7	.57	.71	.63	.49	-.15	-.30	1.00													
8	.55	.67	.61	.49	-.16	-.45	.71	1.00												
9	-.26	-.37	-.39	-.27	.24	.34	-.42	-.44	1.00											
10	.35	.34	.40	.28	-.30	-.23	.42	.58	-.24	1.00										
11	.64	.72	.66	.49	-.27	-.45	.58	.66	-.28	.47	1.00									
12	-.42	-.47	-.49	-.47	.08	.27	-.49	-.50	.22	-.25	-.39	1.00								
13	.27	.39	.31	.39	-.06	-.18	.35	.27	-.18	.09	.39	-.33	1.00							
14	-.31	-.46	-.37	-.16	.18	.24	-.39	-.44	.15	-.12	-.38	.43	-.39	1.00						
15	.18	.05	.15	.17	.32	.08	.19	.16	.09	.06	-.01	-.20	.09	.05	1.00					
16	-.06	.09	-.04	.04	-.08	.15	.07	.07	-.14	.10	.03	-.07	.04	.06	-.22	1.00				
17	.22	.11	.24	.29	.26	-.05	.29	.20	-.06	.10	.04	-.20	.09	.02	.70	-.08	1.00			
18	.28	.46	.33	.24	.02	-.32	.40	.39	-.16	.20	.34	-.15	.38	-.19	.02	.00	.11	1.00		
19	.41	.51	.42	.23	.00	-.28	.41	.40	-.06	.20	.36	-.14	.31	-.25	.07	-.05	.19	.83	1.00	
20	.25	.27	.19	.03	.23	-.16	.22	.22	-.01	.06	.12	.07	.08	.00	.04	.00	.25	.69	.70	1.00

[a]Correlations are based on pairwise deletion of missing data (N = 87 to 93).

[b]Item number from Table 5.

Table B.2

PRODUCT-MOMENT CORRELATIONS[a] AMONG BELIEFS ABOUT RECOVERY ITEMS: MI SAMPLE

Item[b]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	1.00																			
2	.36	1.00																		
3	.35	.64	1.00																	
4	.02	.29	.31	1.00	.															
5	-.15	-.09	-.05	-.05	1.00															
6	-.45	-.43	-.16	-.17	.12	1.00														
7	.27	.27	.08	.06	-.32	-.40	1.00													
8	-.03	.16	.07	-.03	.25	-.36	.22	1.00												
9	.11	-.20	-.02	-.12	.22	-.01	.02	.06	1.00											
10	.15	.10	.14	.09	.03	.13	-.28	-.15	-.06	1.00										
11	.27	.42	.33	.34	-.24	-.19	.24	.01	-.18	.15	1.00									
12	.06	-.26	-.27	-.26	-.01	.33	-.12	-.28	.34	.22	-.22	1.00								
13	.06	.02	.17	.23	-.14	-.04	.41	.08	.06	-.05	.28	-.04	1.00							
14	-.15	.04	.14	.03	-.13	.34	-.19	-.47	.22	.26	.18	.34	.01	1.00						
15	.18	.02	.15	.15	-.02	-.22	-.08	.13	.04	-.17	-.08	-.21	-.23	-.21	1.00					
16	-.15	.06	-.02	.04	-.05	.07	.19	-.02	.05	.20	.18	.01	.29	.09	-.44	1.00				
17	.06	.17	.32	.32	-.37	-.06	.04	.00	.00	-.11	.10	-.08	-.10	.03	.55	-.21	1.00			
18	.20	.37	.34	-.14	.00	-.33	.05	.14	-.05	.23	.14	-.03	.04	-.14	.00	.27	.08	1.00		
19	.39	.35	.34	-.06	.16	-.42	.11	.19	-.11	.17	.19	-.07	.06	-.26	.06	.14	-.06	.84	1.00	
20	.30	.31	.28	.00	.14	-.40	.05	.14	-.09	.06	.15	.00	.02	-.19	-.05	.05	-.03	.79	.92	1.00

[a]Correlations are based on pairwise deletion of missing data (N = 36 to 42).

[b]Item number from Table 5.

Table B.3

PRODUCT-MOMENT CORRELATIONS[a] AMONG 13 ATTITUDES ABOUT DEATH ITEMS: CANCER SAMPLE

Item[b]	1	2	3	4	5	6	7	8	9	10	11	12	13
1	1.00												
2	.32	1.00											
3	.41	.46	1.00										
4	-.26	-.54	-.42	1.00									
5	.20	.35	.42	-.40	1.00								
6	.34	.05	.21	-.17	-.04	1.00							
7	.30	.06	.09	-.01	-.15	.49	1.00						
8	-.22	-.04	.08	.01	.32	-.30	-.47	1.00					
9	.06	-.10	.00	.04	-.20	-.06	-.09	.06	1.00				
10	.04	-.02	-.04	-.03	-.14	-.12	-.10	.13	.77	1.00			
11	-.24	-.02	-.03	.04	.03	-.03	-.14	.19	-.35	-.32	1.00		
12	.06	.02	.06	-.03	.06	.07	.34	-.28	.09	.13	-.45	1.00	
13	.00	.20	.34	-.19	.22	-.07	-.14	.34	.26	.37	-.02	-.13	1.00

[a]Coefficients based on pairwise deletion of missing data (N = 87 to 92).

[b]Item number from Table 19.

Table B.4

PRODUCT-MOMENT CORRELATIONS[a] AMONG 13 ATTITUDES ABOUT DEATH ITEMS: MI SAMPLE

Item[b]	1	2	3	4	5	6	7	8	9	10	11	12	13
1	1.00												
2	.22	1.00											
3	.65	.40	1.00										
4	-.41	-.55	-.40	1.00									
5	.21	.61	.33	-.25	1.00								
6	.26	.12	.31	-.22	.03	1.00							
7	.48	.13	.28	-.28	-.02	.63	1.00						
8	-.09	.20	.00	.04	.22	-.21	-.21	1.00					
9	-.01	-.08	-.07	.19	-.12	.02	.07	-.03	1.00				
10	-.08	-.23	-.11	.38	-.11	-.03	.11	.03	.65	1.00			
11	-.13	-.04	-.09	.04	-.03	-.10	-.14	-.14	-.10	-.19	1.00		
12	.26	.22	.26	-.23	.04	.34	.42	-.13	.19	.21	-.19	1.00	
13	.25	.08	.33	-.04	.15	.11	.28	-.01	.10	.17	-.08	.29	1.00

[a]Coefficients based on pairwise deleting of missing data (N = 57 to 60).

[b]Item numbers from Table 19.

Table B.5

PRODUCT-MOMENT CORRELATIONS[a] AMONG 13 ATTITUDES ABOUT DEATH ITEMS: TOTAL SAMPLE

Item[b]	1	2	3	4	5	6	7	8	9	10	11	12	13
1	1.00												
2	.32	1.00											
3	.54	.50	1.00										
4	-.35	-.59	-.46	1.00									
5	.25	.51	.46	-.43	1.00								
6	.30	.08	.25	-.18	.00	1.00							
7	.35	.04	.13	-.07	-.14	.55	1.00						
8	-.07	.18	.18	-.11	.40	-.23	-.37	1.00					
9	.06	-.02	.02	.04	-.10	-.02	-.03	.09	1.00				
10	.00	-.07	-.04	.10	-.09	-.07	.00	.11	.72	1.00			
11	-.18	-.01	-.04	.03	.02	-.06	-.14	.07	-.23	-.26	1.00		
12	.14	.07	.14	-.09	.03	.20	.38	-.21	.13	.17	-.33	1.00	
13	.18	.27	.42	-.24	.31	.03	.00	.32	.23	.28	-.02	.04	1.00

[a]Coefficients based on pairwise deletion of missing data (N = 141 to 151).

[b]Item number from Table 19.

Table B.6

PRODUCT-MOMENT CORRELATIONS[a] AMONG SENSE OF CONTROL ITEMS: CANCER SAMPLE

Item[b]	1	2	3	4	5	6	7
1	1.00						
2	-.23	1.00					
3	.33	-.15	1.00				
4	-.27	.24	-.29	1.00			
5	.45	-.32	.47	-.34	1.00		
6	-.31	.25	-.20	.53	-.34	1.00	
7	-.06	-.04	-.08	-.07	.08	-.10	1.00

[a]Correlations based on pairwise deletion of missing data (N = 89 to 94)

[b]Item number from Table 29.

Table B.7

PRODUCT-MOMENT CORRELATIONS[a] AMONG SENSE OF CONTROL ITEMS: MI SAMPLE

Item[b]	1	2	3	4	5	6	7
1	1.00						
2	-.26	1.00					
3	.21	-.06	1.00				
4	-.54	.36	-.30	1.00			
5	.44	.14	.25	-.30	1.00		
6	-.47	.46	-.11	.41	-.27	1.00	
7	.09	.14	.49	-.16	.41	-.15	1.00

[a]Correlations based on pairwise deletion of missing data (N = 55 to 62).

[b]Item number from Table 29.

Table B.8

PRODUCT-MOMENT CORRELATIONS[a] AMONG SENSE OF CONTROL ITEMS: TOTAL SAMPLE

Item[b]	1	2	3	4	5	6	7
1	1.00						
2	-.23	1.00					
3	.27	-.04	1.00				
4	-.37	.33	-.25	1.00			
5	.44	-.16	.36	-.33	1.00		
6	-.36	.36	-.13	.50	-.33	1.00	
7	.00	.10	.22	-.06	.15	-.08	1.00

[a]Correlations based on pairwise deletion of missing data (N = 145 to 155)

[b]Item number from Table 29.

Table B.9

PRODUCT-MOMENT CORRELATIONS[a] AMONG SELF-ESTEEM/BODY IMAGE ITEMS: CANCER SAMPLE

	Self-Esteem						Body Image			Change in Body Image			
Item[b]	1	2	3	4	5	6	7	8	9	10	11	12	13
1	1.00												
2	.35	1.00											
3	-.28	-.12	1.00										
4	-.33	-.44	.46	1.00									
5	-.13	.03	.24	.29	1.00								
6	-.25	-.32	.36	.47	.40	1.00							
7	-.25	-.18	.29	.56	.13	.52	1.00						
8	-.20	-.23	.57	.62	.25	.41	.61	1.00					
9	.09	.22	.00	-.29	.05	-.12	-.49	-.33	1.00				
10	.20	.33	-.28	-.52	-.18	-.35	-.59	-.58	.51	1.00			
11	.18	.24	-.31	-.39	-.25	-.30	-.50	-.57	.33	.73	1.00		
12	.14	.25	-.34	-.48	-.24	-.34	-.45	-.51	.34	.51	.59	1.00	
13	-.18	-.33	.19	.33	.11	.28	.57	.47	-.40	-.65	-.64	-.48	1.00

[a]Coefficients are calculated based on pairwise deletion of missing data (N = 86 to 93)

[b]Item number from Table 35.

Table B.10

PRODUCT-MOMENT CORRELATIONS[a] AMONG SELF-ESTEEM ITEMS: MI SAMPLE

	Item					
Item[b]	1	2	3	4	5	6
1	1.00					
2	.38	1.00				
3	-.16	-.16	1.00			
4	-.38	-.47	.32	1.00		
5	-.06	-.06	.38	.13	1.00	
6	-.18	-.38	.26	.43	.23	1.00

[a]Coefficients are calculated based on pairwise deletion of missing data (N = 57 to 61).

[b]Item number from Table 35.

Table 6.12

PRODUCT-MOMENT CORRELATIONS[a] AMONG SOCIAL SUPPORT/EXPRESSIVENESS ITEMS: CANCER SAMPLE

Item[b]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
1	1.00																																			
2	-.17	1.00																																		
3	-.36	.15	1.00																																	
4	-.51	.13	.48	1.00																																
5	.35	-.21	-.42	-.36	1.00																															
6	.27	-.26	-.17	-.42	.13	1.00																														
7	.36	-.23	-.16	-.26	.11	.12	1.00																													
8	-.36	.30	.33	.46	-.36	-.24	-.13	1.00																												
9	.31	-.04	-.25	-.10	.28	.07	-.03	-.28	1.00																											
10	.18	-.28	-.20	-.20	.39	.23	.16	-.22	.16	1.00																										
11	-.23	-.14	.29	.35	-.20	-.06	.04	.08	-.09	.00	1.00																									
12	.15	.28	-.18	-.22	.12	-.04	-.11	.06	.02	.02	-.55	1.00																								
13	.38	-.01	-.36	-.24	.18	.22	-.08	-.22	.38	.07	-.27	.24	1.00																							
14	.32	.05	-.31	-.25	.25	.23	.07	-.25	.23	.24	-.26	.29	.43	1.00																						
15	.28	-.07	-.30	-.06	.26	.22	-.03	-.21	.11	.02	-.32	.22	.39	.35	1.00																					
16	.24	.06	-.39	-.15	.32	.19	-.17	-.04	.03	.09	-.41	.24	.37	.20	.18	1.00																				
17	.04	.23	-.14	-.03	-.07	-.10	-.27	.06	.26	-.11	-.21	.30	.38	.24	.07	.20	1.00																			
18	.10	.11	-.12	-.09	-.01	.09	-.28	.01	.08	-.13	-.37	.25	.38	.30	.23	.41	.56	1.00																		
19	.29	-.04	-.32	.29	.32	.29	.16	-.13	.16	.18	-.23	.30	.39	.36	.18	.61	.23	.21	1.00																	
20	-.31	.16	.32	.40	-.27	-.18	-.04	.43	-.28	-.09	.37	-.14	-.54	-.33	-.30	-.32	-.23	-.40	-.22	1.00																
21	-.10	.11	.32	.29	-.02	-.16	-.13	.20	-.05	-.04	-.09	.04	-.03	.09	.27	-.09	-.14	-.11	-.16	.06	1.00															
22	-.23	.05	.15	.23	-.25	-.18	.06	.33	-.21	-.05	-.07	.09	-.05	-.18	-.08	-.01	-.08	-.13	-.11	.30	.33	1.00														
23	-.31	.18	.36	.40	-.22	-.22	-.08	.42	-.36	-.20	.03	.12	-.16	-.19	-.03	-.20	-.05	-.06	-.14	.26	.26	.20	1.00													
24	-.22	.05	.25	.42	-.30	-.16	-.13	.34	-.17	-.09	.35	-.20	-.45	-.37	-.40	-.16	-.28	-.33	-.17	.69	-.30	.39	.13	1.00											
25	-.28	.23	.34	.43	-.26	-.35	-.02	.42	-.16	-.17	.23	-.13	-.41	-.30	-.18	-.29	-.06	-.12	-.28	.61	.08	.32	.30	.47	1.00										
26	-.46	.24	.64	.46	-.24	-.27	-.10	.36	-.15	-.14	.15	-.13	-.25	-.07	-.03	-.41	-.05	-.12	-.35	.45	.43	.22	.44	.20	.42	1.00									
27	.32	.01	-.24	-.30	.25	.04	.13	-.19	.22	.08	-.30	.28	.45	.31	.32	.17	.23	.24	.10	-.64	.06	-.03	-.07	-.66	-.34	-.24	1.00								
28	-.14	.22	.35	.40	-.11	-.06	.06	.38	-.20	-.13	.04	-.23	-.43	-.25	-.21	-.05	-.34	-.30	-.13	.59	.32	.12	.20	.55	.60	.68	-.54	1.00							
29	-.17	.30	.23	.30	-.21	-.23	.13	.26	-.15	-.08	.23	-.16	-.41	-.42	-.26	-.34	-.20	-.31	-.23	.65	.05	.21	.33	.32	.62	.32	-.42	.61	1.00						
30	-.13	.20	.29	.30	.05	-.33	.00	.16	-.08	-.18	.03	.06	-.24	.01	.00	-.14	-.06	-.10	-.10	.23	.28	.33	.31	.32	.32	.34	.03	.22	.23	1.00						
31	-.13	.08	.14	.37	-.09	-.31	-.08	.36	-.28	-.05	.04	-.12	-.23	-.10	-.07	-.14	-.12	-.10	-.19	.25	.36	.34	.40	.07	.26	.26	-.07	.32	.28	.38	1.00					
32	-.23	.03	.16	.32	-.18	-.15	-.09	.28	-.11	-.20	.10	-.36	-.24	-.18	-.15	-.11	-.26	-.27	-.17	.40	.38	.21	.24	.38	.39	.32	-.33	.62	.32	.14	.43	1.00				
33	-.22	.05	.17	.28	-.31	-.30	-.05	.15	.04	.13	.13	.08	-.06	.00	.16	-.17	-.01	-.16	-.16	.29	.35	.16	.09	.10	.15	.35	-.08	.07	.20	.12	.16	.32	1.00			
34	.07	-.11	-.02	.19	-.35	.00	-.05	.26	.00	.03	.38	-.22	-.06	-.12	-.03	-.06	-.17	-.24	-.30	.23	.15	.06	.13	.30	.06	-.06	-.07	.37	.15	.16	.33	.24	.08	1.00		
35	-.26	.12	.08	.28	-.14	-.15	-.07	.27	-.28	.01	.11	-.01	-.19	-.18	-.33	-.38	.06	-.08	-.11	.36	-.07	.16	.31	.35	.16	.20	-.25	.03	.30	.12	.17	.15	.04	.17	1.00	
36	-.06	-.27	.08	.09	-.07	.07	.08	.15	-.10	.06	.30	-.32	-.31	-.14	-.42	.00	-.01	-.10	.01	.27	-.10	.17	.04	.38	.24	.30	-.31	.13	.22	.23	.38	.11	-.04	.33	.16	1.00

[a] Correlations are based on pairwise deletion of missing data (N=52 to 94).

[b] Item number from Table 47.

Table B.12

PRODUCT-MOMENT CORRELATIONS[a] AMONG SOCIAL SUPPORT/EXPRESSIVENESS ITEMS: MI SAMPLE

Item[b]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
1	1.00																																			
2	.01	1.00																																		
3	-.48	.06	1.00																																	
4	-.21	.02	.40	1.00																																
5	.34	.38	-.34	-.34	1.00																															
6	.18	.34	-.07	-.27	.34	1.00																														
7	.07	-.01	.15	.01	.01	-.21	1.00																													
8	-.23	-.01	.39	.32	-.18	-.16	.13	1.00																												
9	.54	.23	-.33	-.21	.37	.20	.04	-.08	1.00																											
10	-.01	.21	.04	-.32	.26	.30	-.18	-.16	.01	1.00																										
11	-.15	-.15	.38	.33	-.24	-.14	.06	.00	-.19	.00	1.00																									
12	.00	.28	.05	.04	.34	.17	.10	.06	.02	.17	-.30	1.00																								
13	.45	.06	-.09	.05	.04	.22	-.08	-.14	.38	-.04	.09	.20	1.00																							
14	.43	.19	-.26	-.25	.24	.23	-.01	-.05	.32	-.06	-.14	.04	.41	1.00																						
15	.23	.14	-.07	-.15	.13	.22	-.19	.02	.10	.08	-.34	.31	.29	.09	1.00																					
16	.36	.44	-.07	.23	-.04	.05	-.15	.10	.42	-.18	-.02	.02	.39	.11	.10	1.00																				
17	.13	.13	.06	.05	.06	-.03	.15	.24	-.03	.00	.06	.13	-.04	.02	-.03	.11	1.00																			
18	.17	.01	-.10	.01	.16	.04	-.06	-.02	-.01	.01	-.11	.08	.24	.01	.16	.19	.26	1.00																		
19	.40	.09	-.25	-.17	.05	.03	-.01	-.06	.51	.00	-.15	-.06	.34	.34	.02	.39	-.12	.05	1.00																	
20	-.39	-.13	.36	.24	-.38	-.30	.03	.40	-.31	-.24	.33	-.32	+.37	-.23	-.25	-.33	.06	-.21	-.43	1.00															
21	.07	.13	.21	.13	.34	.05	.18	.15	.07	.22	.14	.07	.08	-.13	.13	-.19	.14	.38	-.22	.06	1.00														
22	.12	.15	.22	.27	.07	.02	.01	.24	.14	.11	.16	-.11	.30	.09	.02	.21	.25	.08	.12	.04	.25	1.00													
23	-.09	.07	.34	.30	.08	.06	.10	.16	-.06	.18	.09	.26	.00	.12	-.08	.16	-.02	-.08	-.06	-.06	.30	.32	1.00												
24	-.28	.01	.51	.23	-.17	.00	.02	.03	-.21	.06	.32	-.03	-.03	-.30	-.13	.07	.00	.09	-.06	.18	.35	.15	.20	1.00											
25	-.39	.03	.39	.39	-.19	-.32	.06	.18	-.05	-.12	.46	-.09	-.16	-.35	-.02	-.01	.12	.02	-.25	.44	.21	.18	.15	.38	1.00										
26	-.12	-.18	.32	.09	-.02	.08	.20	.07	.00	.03	.09	.17	.07	.10	.04	.09	.14	.03	-.01	.04	.00	.08	.04	.16	.23	1.00										
27	.41	.15	-.39	-.38	.33	-.03	.24	-.05	.26	.24	-.32	.26	.18	.43	.32	-.32	.15	-.05	.09	-.28	.08	.06	-.03	-.41	-.33	-.11	1.00								
28	-.30	-.03	.30	.16	.21	-.22	.02	.45	-.13	-.16	.05	-.01	-.19	+.21	.14	-.09	-.03	.00	-.30	.56	-.05	-.06	-.10	.00	.35	.20	-.07	1.00							
29	-.36	.00	.36	.08	-.14	-.18	+.04	.44	-.38	-.21	.29	-.15	+.35	-.05	-.16	-.09	.03	-.23	-.23	.70	-.08	.01	.04	.23	.60	.13	-.23	.69	1.00						
30	-.18	.14	.34	.41	-.25	-.23	.10	.25	.05	-.06	.24	-.08	.00	-.27	-.18	.26	.18	.18	.02	.26	.28	.38	.22	.30	.51	.30	-.30	.25	.23	1.00					
31	-.14	-.03	.31	.12	.11	-.12	.34	.16	.12	-.18	.35	-.04	.07	-.01	.12	.13	.17	.18	.00	.10	.33	.19	.14	.34	.48	.40	-.18	.13	.14	.35	1.00				
32	-.01	.01	-.02	.36	-.31	-.21	.35	.22	-.01	-.21	.08	.31	-.08	-.24	.02	-.08	.69	.06	-.15	.20	.19	.19	.05	.02	.43	.17	.03	.18	.11	.30	.34	1.00			
33	.04	.02	.21	.05	.08	-.14	.12	.22	-.16	.21	.20	-.39	-.22	+.34	-.06	-.11	.36	.15	-.06	.23	.18	.33	-.13	.03	.20	.12	-.04	.30	.00	.24	.25	.28	1.00		
34	-.26	.17	.33	.36	-.23	-.25	.07	.23	-.13	-.19	.41	-.19	.01	-.22	-.04	-.06	.19	.07	-.27	.58	.32	.09	.01	.24	.45	.08	-.19	.53	.35	.39	.29	.51	.38	1.00	
35	-.15	.02	.34	.42	-.28	-.24	-.19	.34	-.04	-.09	-.01	-.13	.02	-.06	-.21	.21	.00	-.04	-.08	.27	.02	.20	.18	.09	.11	.28	-.24	.43	.29	.52	-.01	-.04	.10	.21	1.00	
36	.08	.22	.00	.12	.24	-.02	.17	-.10	.24	.08	.10	.07	.00	-.10	.00	-.01	.10	.22	-.01	.04	.39	.06	-.32	.14	.22	.06	-.01	-.02	.05	.07	.18	.25	-.17	.26	-.16	1.00

[a]Correlations are based on pairwise deletion of missing data (N=60 to 61).

[b]Item number from Table 47.

Table 8.13

PRODUCT-MOMENT CORRELATIONS[a] AMONG SOCIAL SUPPORT/EXPRESSIVENESS ITEMS — TOTAL SAMPLE

Item[b]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
1	1.00																																			
2	-.08	1.00																																		
3	-.52	.30	1.00																																	
4	-.97	.01	.46	1.00																																
5	.37	.02	-.33	-.39	1.00																															
6	.25	-.03	-.16	-.41	.27	1.00																														
7	.22	-.14	-.01	-.09	.08	-.02	1.00																													
8	-.31	.14	.39	.44	-.31	-.26	.00	1.00																												
9	.43	.09	-.33	-.20	.32	.16	.00	- 16	1.00																											
10	.12	-.05	-.12	-.24	.16	.31	.00	-.24	.14	1.00																										
11	-.19	-.15	.33	.23	-.20	-.08	.01	.03	-.11	.01	1.00																									
12	.09	.27	-.07	-.10	.09	.07	-.07	.07	.02	.07	-.41	1.00																								
13	.42	.03	-.23	-.12	.15	.22	-.08	-.19	.38	.04	-.09	.22	1.00																							
14	.33	.12	-.25	-.30	.28	.28	.01	-.21	.30	.17	-.18	.18	.42	1.00																						
15	.25	-.01	-.13	-.06	.18	.38	-.08	-.09	.02	.02	-.33	.25	.34	.22	1.00																					
16	.30	.22	-.25	.00	.22	.18	-.12	-.01	.24	.01	-.21	.14	.38	.28	.12	1.00																				
17	.07	.16	-.02	.06	-.06	-.31	-.08	.17	.09	-.09	-.08	.22	.17	.12	.06	.12	1.00																			
18	.09	.03	-.08	.05	.00	-.01	-.16	.07	.01	-.14	-.26	.18	.28	.07	.29	.23	.45	1.00																		
19	.35	.03	-.30	-.26	.24	.21	.08	-.12	.33	.12	-.18	.14	.37	.37	.11	.61	.05	.10	1.00																	
20	-.35	.04	.34	.32	-.32	-.22	.00	.41	-.29	-.16	.16	-.21	-.46	-.39	-.26	-.27	-.10	-.32	-.32	1.00																
21	-.04	.08	.28	.27	.04	+.13	.07	.73	-.05	.00	.00	.05	.00	-.02	.23	-.16	.02	.07	-.20	.06	1.00															
22	-.08	.09	.18	.23	-.12	-.10	.01	.27	-.06	.01	.03	.01	.04	-.07	-.05	.08	.06	-.04	+.01	.08	.23	1.00														
23	-.23	.11	.37	.39	-.16	-.21	.02	.34	-.26	+.09	.05	.13	-.15	-.11	-.03	-.08	-.01	.00	-.12	.13	.30	.20	1.00													
24	-.26	.01	.40	.36	-.28	-.84	-.06	.23	-.21	-.07	.33	-.15	-.26	-.37	-.27	-.07	-.09	-.09	-.14	.48	.05	.37	.19	1.00												
25	-.25	.15	.37	.44	-.26	-.30	.02	.34	-.34	-.30	.26	-.11	-.31	-.35	-.09	-.20	.04	-.02	-.24	.53	.14	.34	.26	.44	1.00											
26	-.32	.04	.49	.36	-.20	-.19	.03	.37	-.12	-.13	.12	-.02	-.18	-.13	-.02	-.30	.06	.01	-.22	.28	.29	.16	.30	.25	.16	1.00										
27	.36	.08	-.32	-.33	.29	.02	.18	-.14	.24	.07	-.31	.27	.33	.35	.22	.04	.18	.10	.10	-.48	.09	.01	-.05	-.84	-.33	-.18	1.00								
28	-.23	.08	.33	.28	-.18	-.15	.08	.43	-.13	-.17	.04	-.14	-.28	-.24	-.02	-.09	-.18	-.21	-.18	.58	.27	.03	.07	.28	.49	.36	-.29	1.00							
29	-.26	.04	.31	.22	-.22	-.22	.05	.35	-.18	-.16	.25	-.14	-.36	-.28	-.18	-.16	-.08	-.25	-.23	.67	.02	.12	.11	.39	.62	.20	-.34	.65	1.00						
30	-.16	.16	.32	.36	-.09	-.30	.03	.28	-.04	-.14	.13	.00	-.14	-.02	-.06	.04	.06	.00	-.09	.25	.28	.35	.28	.21	.40	.33	-.15	.25	.24	1.00						
31	-.15	.02	.25	.31	-.10	-.30	.13	.33	-.12	-.18	.17	-.08	-.10	-.13	.03	-.08	.06	.30	-.13	.19	.39	.25	.33	.27	.39	.38	-.12	.27	.35	.37	1.00				
32	-.16	.00	.30	.37	-.24	-.21	.30	.29	-.11	-.26	.07	-.18	-.19	-.24	-.08	-.34	-.01	-.12	-.18	.32	.36	.19	.20	.23	.42	.29	-.17	.47	.45	.23	.42	1.00			
33	-.13	.00	.22	.23	-.21	-.12	.04	.23	-.08	.07	.14	-.03	-.14	-.17	.10	-.19	.16	.00	-.15	.27	.32	.17	.05	.11	.21	.30	-.04	.24	.35	.18	.25	.34	1.00		
34	+.02	.00	.12	.25	- 15	-.07	.00	.26	-.06	-.04	.40	-.20	-.02	-.24	-.04	-.04	-.83	+.17	-.16	.36	.20	.07	.07	.27	.20	.00	-.12	.32	.22	.26	.91	.28	.16	1.00	
35	-.22	.06	.24	.38	-.23	-.20	-.11	.31	-.18	-.07	.04	-.06	-.09	-.24	-.23	.00	.06	-.01	-.12	.32	.00	.18	.26	.23	.14	.28	-.25	.25	.56	.36	.10	.08	.08	.18	1.00	
36	.00	-.08	.03	.08	.08	.06	.10	.03	.04	.08	.24	-.19	-.19	-.11	-.30	.00	.06	.00	.00	.18	.06	.13	-.03	.28	.22	.06	-.39	.05	.14	.09	.15	.14	-.11	.24	.02	1.00

[a] Correlations are based on pairwise deletion of missing data (N = 90 to 156).

[b] Item number from Table 47.

Table B.14

PRODUCT-MOMENT CORRELATIONS[a] AMONG 13 WILL TO LIVE ITEMS: CANCER SAMPLE

Item[b]	1	2	3	4	5	6	7	8	9	10	11	12	13
1	1.00												
2	-.02	1.00											
3	.24	.20	1.00										
4	.56	.13	.41	1.00									
5	.09	-.26	.11	.00	1.00								
6	-.48	-.23	-.61	-.37	-.06	1.00							
7	.27	-.13	.16	.09	.11	-.17	1.00						
8	.18	-.05	.23	.17	.19	-.19	.41	1.00					
9	.38	-.03	.25	.21	.18	-.27	.49	.70	1.00				
10	.21	-.12	.08	.12	.36	-.14	.43	.71	.78	1.00			
11	-.29	-.11	-.44	-.20	-.10	.65	-.12	-.03	-.17	-.01	1.00		
12	.37	.19	.49	.28	.08	-.64	.15	.13	.28	.11	-.69	1.00	
13	.47	.07	.47	.28	.10	-.76	.16	.22	.38	.20	-.60	.62	1.00

[a]Coefficients based on pairwise deletion of missing data (N = 87 to 93).

[b]Item number from Table 54.

Table B.15

PRODUCT-MOMENT CORRELATIONS[a] AMONG 13 WILL TO LIVE ITEMS: MI SAMPLE

Item[b]	1	2	3	4	5	6	7	8	9	10	11	12	13
1	1.00												
2	.21	1.00											
3	.32	.18	1.00										
4	.34	-.06	.58	1.00									
5	.06	.17	-.03	-.04	1.00								
6	-.21	-.24	-.62	-.34	.04	1.00							
7	.20	-.08	.12	.25	.14	-.13	1.00						
8	.24	.01	.07	.18	.35	-.03	.28	1.00					
9	.46	.10	.26	.27	.38	-.19	.38	.54	1.00				
10	.41	.06	.16	.13	.50	-.18	.35	.60	.80	1.00			
11	-.06	-.04	-.18	-.11	-.17	.22	-.31	.03	-.23	-.12	1.00		
12	.29	.25	.34	.08	.17	-.34	.28	.28	.52	.48	-.31	1.00	
13	.45	.10	.37	.22	.11	-.28	.24	.29	.52	.50	-.16	.53	1.00

[a]Coefficients based on pairwise deletion of missing data (N = 58 to 61).

[b]Item number from Table 54.

Table B.16

PRODUCT-MOMENT CORRELATIONS[a] AMONG 13 WILL TO LIVE ITEMS: TOTAL SAMPLE

Item[b]	1	2	3	4	5	6	7	8	9	10	11	12	13
1	1.00												
2	.03	1.00											
3	.32	.14	1.00										
4	.46	.01	.51	1.00									
5	.10	-.09	.04	.00	1.00								
6	-.33	-.23	-.60	-.36	-.01	1.00							
7	.30	-.15	.18	.21	.14	-.15	1.00						
8	.27	-.07	.17	.20	.28	-.12	.40	1.00					
9	.42	.01	.26	.25	.28	-.24	.44	.62	1.00				
10	.29	-.05	.11	.12	.42	-.16	.38	.65	.78	1.00			
11	-.18	-.06	-.30	-.16	-.14	.45	-.22	-.02	-.21	-.06	1.00		
12	.37	.16	.42	.21	.14	-.49	.28	.26	.40	.27	-.50	1.00	
13	.47	.06	.42	.26	.12	-.54	.23	.27	.45	.32	-.40	.59	1.00

[a]Coefficients based on pairwise deletion of missing data (N = 146 to 153).

[b]Item number from Table 54.

Table B.17

PRODUCT-MOMENT CORRELATIONS[a] AMONG ACTIVE COPING ITEMS: CANCER SAMPLE

Item[b]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1.00														
2	.32	1.00													
3	.67	.44	1.00												
4	-.28	-.09	-.22	1.00											
5	.22	.15	.14	-.13	1.00										
6	-.03	.01	.02	.22	-.29	1.00									
7	.23	.14	.13	-.18	.60	-.21	1.00								
8	.18	.03	.12	-.13	.39	-.11	.47	1.00							
9	.11	.19	.22	.08	.23	-.03	.13	.23	1.00						
10	.35	.05	.22	-.04	.36	.07	.20	.23	.18	1.00					
11	.20	-.03	.12	.10	.37	-.15	.41	.18	.06	.39	1.00				
12	.25	.15	.11	.01	-.03	.02	.19	.09	-.03	.16	-.04	1.00			
13	-.05	.01	.00	-.19	-.15	.02	.05	.01	-.08	-.15	.01	-.16	1.00		
14	-.16	.12	-.09	.12	-.12	.16	-.11	-.18	.00	-.17	-.18	-.52	.33	1.00	
15	.05	-.12	-.10	.14	-.13	-.02	-.12	-.07	-.10	.06	.14	.16	-.31	-.28	1.00

[a]Coefficients based on pairwise deletion of missing data (N = 88 to 95).

[b]Item number from Table 62.

Table B.18

PRODUCT-MOMENT CORRELATIONS[a] AMONG ACTIVE COPING ITEMS: MI SAMPLE

Item[b]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1.00														
2	.10	1.00													
3	.04	.30	1.00												
4	-.17	.24	-.16	1.00											
5	-.18	-.11	-.15	.04	1.00										
6	.16	.16	.16	.05	-.30	1.00									
7.	-.02	-.10	-.11	-.08	-.04	-.03	1.00								
8	.10	-.21	-.12	-.08	.07	.24	.33	1.00							
9	.00	.08	.35	-.10	.17	.07	-.10	-.08	1.00						
10	.27	.04	-.11	.13	.06	.11	-.13	.00	.08	1.00					
11	.19	-.03	-.13	.02	.33	-.06	-.13	.34	.03	.20	1.00				
12	.18	-.10	.08	-.12	.03	.18	.06	.22	.14	.15	.21	1.00			
13	-.11	.33	-.01	.13	-.27	.08	.01	-.09	-.17	-.15	-.20	-.12	1.00		
14	.06	.31	.12	.09	-.34	.05	.11	-.19	-.24	.00	-.26	-.18	.46	1.00	
15	-.06	.24	.05	.28	-.02	.27	-.22	-.18	.14	.23	-.05	-.04	-.05	-.06	1.00

[a]Coefficients based on pairwise deletion of missing data (N = 57 to 62).

[b]Item number from Table 62.

Table B.19

PRODUCT-MOMENT CORRELATIONS[a] AMONG ACTIVE COPING ITEMS: TOTAL SAMPLE

Item[b]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1.00														
2	.23	1.00													
3	.43	.37	1.00												
4	-.22	.06	-.19	1.00											
5	.10	.09	.03	-.08	1.00										
6	.03	.06	.07	.14	-.28	1.00									
7	.12	.04	.02	-.12	.36	-.13	1.00								
8	.14	-.06	.00	-.11	.30	.03	.40	1.00							
9	.04	.15	.22	-.01	.23	.01	.02	.12	1.00						
10	.29	.05	.07	.01	.32	.09	.08	.17	.19	1.00					
11	.18	-.02	.00	.06	.37	-.11	.20	.24	.09	.38	1.00				
12	.23	.02	.13	-.05	-.04	.08	.12	.12	-.03	-.05	.00	1.00			
13	-.09	.14	-.04	-.05	-.13	.05	.02	.00	-.03	-.06	.00	-.22	1.00		
14	-.08	.20	-.02	.10	-.14	.12	-.01	-.15	-.05	-.04	-.15	-.38	.42	1.00	
15	.04	.00	.01	.20	-.14	.07	-.14	-.14	-.08	.02	.01	.16	-.28	-.24	1.00

[a]Coefficients based on pairwise deletion of missing data (N = 147 to 157).

[b]Item number from Table 62.

Table B.20

PRODUCT-MOMENT CORRELATIONS[a] AMONG ACCEPTANCE/REJECTION ITEMS: CANCER SAMPLE

Item[b]	1	2	3	4	5	6	7
1	1.00						
2	-.24	1.00					
3	.12	.32	1.00				
4	.04	-.15	-.12	1.00			
5	-.14	.61	.47	-.23	1.00		
6	.05	-.26	-.23	.68	-.38	1.00	
7	.24	-.26	-.15	.36	-.31	.62	1.00

[a] Coefficients based on pairwise deletion of missing data (N = 88 to 94)

[b] Item number from Table 68.

Table B.21

PRODUCT-MOMENT CORRELATIONS[a] AMONG ACCEPTANCE/REJECTION ITEMS: MI SAMPLE

Item[b]	1	2	3	4	5	6	7
1	1.00						
2	-.31	1.00					
3	-.11	.30	1.00				
4	.19	-.16	-.11	1.00			
5	-.23	.48	.48	-.16	1.00		
6	.17	-.01	.00	.48	-.02	1.00	
7	.00	.04	.09	.35	.26	.31	1.00

[a]Coefficients based on pairwise deletion of missing data (N = 59 to 61).

[b]Item number from Table 68.

Table B.22

PRODUCT-MOMENT CORRELATIONS[a] AMONG ACCEPTANCE/REJECTION ITEMS: TOTAL SAMPLE

Item[b]	1	2	3	4	5	6	7
1	1.00						
2	-.26	1.00					
3	.03	.31	1.00				
4	.07	-.14	-.11	1.00			
5	-.18	.54	.48	-.18	1.00		
6	.08	-.14	-.14	.62	-.23	1.00	
7	.18	-.14	-.08	.35	-.13	.54	1.00

[a]Coefficients based on pairwise deletion of missing data (N = 148 to 156).

[b]Item number from Table 68.

Table B.23

PRODUCT-MOMENT CORRELATIONS AMONG DOCTOR-PATIENT RELATIONSHIP ITEMS: CANCER SAMPLE

Item[a]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
1	1.00																									
2	.46	1.00																								
3	.44	.24	1.00																							
4	.59	.32	.46	1.00																						
5	.36	.44	.31	.31	1.00																					
6	-.47	-.17	-.22	-.35	-.48	1.00																				
7	.27	.30	.12	.18	.72	-.53	1.00																			
8	-.64	-.40	-.31	-.57	-.48	.74	-.48	1.00																		
9	.52	.39	.32	.50	.55	-.70	.54	-.76	1.00																	
10	.46	.32	.28	.34	.45	-.67	.48	-.63	.75	1.00																
11	-.34	-.34	-.13	-.39	-.52	.40	-.45	.52	-.42	-.26	1.00															
12	.55	.44	.51	.57	.56	-.51	.46	-.70	.75	.65	-.45	1.00														
13	-.57	-.41	-.33	-.56	-.42	.59	-.43	.73	-.73	-.53	.53	-.70	1.00													
14	.62	.32	.17	.49	.35	-.58	.41	-.69	.64	.54	-.44	.52	-.65	1.00												
15	-.45	-.38	-.28	-.59	-.46	.52	-.39	.69	-.62	-.47	.68	-.70	.76	-.72	1.00											
16	.67	.44	.46	.46	.40	-.45	.31	-.57	.53	.52	-.34	.67	-.50	.46	-.48	1.00										
17	.16	.50	.24	.07	.35	-.24	.33	-.30	.41	.43	-.26	.43	-.36	.20	-.31	.34	1.00									
18	.29	.54	.36	.10	.40	-.32	.34	-.37	.43	.50	-.21	.48	-.26	.22	-.29	.42	.74	1.00								
19	.54	.45	.38	.42	.55	-.62	.48	-.65	.77	.67	-.37	.69	-.67	.55	-.61	.62	.36	.49	1.00							
20	-.36	-.40	-.16	-.34	-.24	.42	-.21	.39	-.32	-.32	.25	-.36	.46	-.28	.43	-.43	-.38	-.26	-.49	1.00						
21	-.27	-.34	-.02	-.16	-.38	.24	-.32	.25	-.26	-.16	.30	-.23	.25	-.31	.35	-.22	-.35	-.29	-.39	.42	1.00					
22	.27	.46	.20	.15	.35	-.23	.25	-.23	.42	.26	-.14	.30	-.37	.30	-.31	.20	.44	.42	.47	-.40	-.65	1.00				
23	-.51	-.24	-.15	-.40	-.39	.58	-.41	.48	-.56	-.45	.37	-.55	.53	-.51	.48	-.53	-.18	-.21	-.54	.32	.30	-.28	1.00			
24	.47	.41	.28	.22	.56	-.48	.46	-.39	.59	.52	-.36	.48	-.40	.34	-.41	.48	.42	.50	.66	-.34	-.43	.64	-.57	1.00		
25	.45	.32	.41	.32	.32	-.35	.19	-.53	.49	.58	-.28	.56	-.42	.47	-.50	.62	.31	.42	.48	-.19	-.12	.17	-.32	.40	1.00	
26	.48	.35	.31	.62	.58	-.55	.52	-.61	.71	.49	-.38	.65	-.68	.59	-.61	.48	.18	.17	.66	-.31	-.32	.32	-.58	.42	.32	1.00

[a]Item number from Table 73.

Note: Coefficients based on pairwise deletion of missing data (N = 89 to 94).

Table B.24

PRODUCT-MOMENT CORRELATIONS[a] AMONG PLEASURES/BENEFITS ITEMS: CANCER SAMPLE

Item[b]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1.00														
2	.15	1.00													
3	-.01	.00	1.00												
4	.42	.29	.03	1.00											
5	-.10	-.07	.09	-.03	1.00										
6	.05	.21	-.31	.26	-.10	1.00									
7	.09	.14	-.34	.10	-.33	.23	1.00								
8	.12	.26	.15	.10	-.06	.00	.00	1.00							
9	.21	.19	-.08	.12	-.10	.08	.21	.35	1.00						
10	.30	.25	.24	.18	-.26	-.13	.06	.12	.04	1.00					
11	-.17	-.08	-.16	.11	.21	.27	.12	-.14	-.03	-.50	1.00				
12	.18	-.07	-.02	.18	.34	-.07	-.14	-.26	-.16	-.18	.34	1.00			
13	.10	.32	.11	.18	-.12	.16	.16	.14	.10	.30	-.16	-.15	1.00		
14	.24	.39	-.19	.11	-.01	.29	.23	.09	.29	-.01	.06	-.01	.06	1.00	
15	.28	.00	.23	.09	-.20	-.07	.04	.14	-.01	.49	-.20	-.12	.09	-.01	1.00

[a]Coefficients based on pairwise deletion of missing data (N = 87 to 95).

[b]Item number from Table 79.

Table B.25

PRODUCT-MOMENT CORRELATIONS[a] AMONG PLEASURES/BENEFITS ITEMS: MI SAMPLE

Item[b]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1.00														
2	.03	1.00													
3	.10	.32	1.00												
4	.06	.24	.18	1.00											
5	-.10	-.01	-.03	-.13	1.00										
6	.07	.37	.20	.40	.04	1.00									
7	.28	.09	-.17	.33	-.25	.12	1.00								
8	.16	.06	.00	.08	-.18	.09	.21	1.00							
9	.00	.23	.19	.39	-.30	.32	.20	.33	1.00						
10	.27	.22	.08	.21	-.18	.09	.24	.13	.21	1.00					
11	-.09	.32	-.28	.34	.04	.28	.21	.15	.19	-.03	1.00				
12	.04	.03	-.29	.34	-.06	.30	.31	.24	.09	-.09	.60	1.00			
13	.06	.21	.08	.29	-.08	.24	.04	-.20	.24	.45	-.06	-.06	1.00		
14	-.03	.06	-.18	.11	.28	.17	.21	.22	.23	.10	.33	.27	.09	1.00	
15	.28	.14	.31	.18	-.05	.02	.26	.08	.00	.51	-.14	-.14	.19	-.05	1.00

[a]Coefficients based on pairwise deletion of missing data (N = 57 to 62).

[b]Item number from Table 79.

Table B.26

PRODUCT-MOMENT CORRELATIONS[a] AMONG PLEASURES/BENEFITS ITEMS: TOTAL SAMPLE

Item[b]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1.00														
2	.13	1.00													
3	.06	.17	1.00												
4	.29	.30	.13	.100											
5	-.11	-.06	.02	-.08	1.00										
6	.03	.24	-.11	.28	-.04	1.00									
7	.11	.07	-.30	.13	-.28	.22	1.00								
8	.11	.14	-.05	.05	-.09	.06	.10	1.00							
9	.12	.20	.03	.23	-.18	.19	.20	.34	1.00						
10	.30	.24	.18	.20	-.23	-.05	.10	.11	.10	1.00					
11	-.15	.07	-.23	.19	.14	.29	.16	.00	.07	-.31	1.00				
12	.12	-.04	-.14	.23	.18	.09	.02	-.04	-.06	-.15	.45	1.00			
13	.13	.32	.16	.28	-.12	.11	.02	-.08	.14	.35	-.14	-.12	1.00		
14	.14	.27	-.16	.13	.10	.22	.19	.13	.26	.04	.17	.10	.10	1.00	
15	.28	.07	.27	.14	-.15	-.04	.10	.10	-.01	.50	-.18	-.13	.14	-.02	1.00

[a]Coefficients based on pairwise deletion of missing data (N = 147 to 156).

[b]Item number from Table 79.

Table B.27

PRODUCT-MOMENT CORRELATIONS[a] AMONG POSITIVE AND NEGATIVE FEELINGS ITEMS: CANCER SAMPLE

Item[b]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	1.00																														
2	.47	1.00																													
3	-.40	-.29	1.00																												
4	-.49	-.29	.56	1.00																											
5	.54	.48	-.31	-.44	1.00																										
6	-.25	-.21	.29	.49	-.31	1.00																									
7	.19	.10	-.10	-.05	.29	.00	1.00																								
8	.35	.31	-.60	-.45	.36	-.22	.03	1.00																							
9	.26	.10	-.28	-.36	.14	-.38	-.09	.38	1.00																						
10	.27	.35	-.42	-.37	.40	-.24	.11	.69	.41	1.00																					
11	.32	.31	-.48	-.41	.24	-.30	.12	.61	.37	.59	1.00																				
12	.43	.23	-.70	-.48	.39	-.30	.15	.67	.42	.55	.58	1.00																			
13	.36	.34	-.57	-.42	.37	-.36	.02	.67	.35	.56	.48	.74	1.00																		
14	.43	.34	-.59	-.55	.42	-.38	.04	.69	.28	.53	.45	.59	.72	1.00																	
15	.47	.51	-.52	-.53	.53	-.37	.11	.67	.32	.59	.48	.66	.76	.80	1.00																
16	-.28	-.26	.51	.60	-.38	.53	-.03	-.59	-.36	-.46	-.33	-.48	-.49	-.66	-.61	1.00															
17	-.34	-.29	.69	.51	-.35	.25	-.01	-.58	-.28	-.31	-.38	-.59	-.56	-.59	-.58	.62	1.00														
18	-.37	-.23	.54	.60	-.39	.38	.01	-.69	-.27	-.53	-.46	-.53	-.52	-.69	-.66	.75	.69	1.00													
19	-.12	-.04	.63	.36	-.19	.26	-.04	-.55	-.30	-.44	-.39	-.47	-.40	-.68	-.43	.64	.62	.65	1.00												
20	-.14	-.21	.54	.48	-.22	.39	-.20	-.47	-.42	-.43	-.42	-.58	-.50	-.55	-.52	.58	.47	.53	.43	1.00											
21	-.25	-.13	.32	.39	-.26	.34	.04	-.49	-.36	-.46	-.27	-.41	-.41	-.53	-.50	.59	.41	.62	.42	.54	1.00										
22	-.20	-.20	.40	.42	-.25	.35	-.04	-.51	-.38	-.42	-.26	-.47	-.40	-.67	-.49	.72	.48	.61	.46	.71	.74	1.00									
23	-.14	-.10	.54	.27	-.12	.22	.01	-.50	-.28	-.38	-.34	-.43	-.37	-.43	-.40	.53	.50	.54	.74	.40	.64	.55	1.00								
24	-.14	-.06	.33	.29	-.11	.39	-.05	-.25	-.22	-.26	-.40	-.32	-.21	-.27	-.18	.23	.25	.18	.19	.30	.24	.16	.12	1.00							
25	-.12	-.05	.16	.32	-.20	.30	.14	-.22	-.40	-.24	-.16	-.07	-.19	-.29	-.21	.32	.18	.35	.28	.20	.27	.12	.21	.23	1.00						
26	-.06	-.07	.54	.40	-.16	.38	-.09	-.41	-.15	-.32	-.34	-.40	-.32	-.47	-.40	.52	.51	.50	.61	.52	.37	.50	.53	.31	.34	1.00					
27	-.17	-.05	.32	.38	-.15	.46	-.02	-.48	-.34	-.38	-.36	-.41	-.42	-.45	-.40	.58	.41	.55	.42	.54	.61	.54	.49	.32	.32	.32	1.00				
28	-.03	-.03	.40	.19	-.04	.24	.01	-.48	-.20	-.42	-.28	-.34	-.31	-.37	-.30	.44	.30	.43	.43	.56	.49	.51	.45	.29	.26	.51	.58	1.00			
29	.00	-.01	.38	.32	-.14	.19	.13	-.49	-.29	-.39	-.20	-.36	-.40	-.43	-.44	.47	.45	.56	.56	.47	.64	.52	.56	.18	.31	.45	.56	.56	1.00		
30	-.28	-.11	.51	.31	-.20	.28	-.07	-.54	-.27	-.47	-.36	-.44	-.42	-.51	-.42	.44	.47	.62	.55	.50	.51	.49	.51	.26	.45	.62	.44	.60	.48	1.00	
31	-.08	-.05	.57	.25	-.09	.20	.04	-.56	-.29	-.43	-.38	-.50	-.49	-.50	-.41	.51	.57	.48	.72	.44	.51	.49	.75	.23	.29	.64	.55	.58	.55	.63	1.00

[a] Coefficients based on pairwise deletion of missing data (N = 80 to 94).

[b] Item number from Table B5.

Table B.28

PRODUCT-MOMENT CORRELATIONS[a] AMONG POSITIVE AND NEGATIVE FEELINGS ITEMS: MI SAMPLE

Item[b]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	1.00																														
2	.42	1.00																													
3	-.24	-.01	1.00																												
4	-.24	-.19	.53	1.00																											
5	.33	.14	-.17	-.13	1.00																										
6	-.03	.04	.21	.43	-.21	1.00																									
7	.09	.11	-.10	-.04	.24	.04	1.00																								
8	.40	.13	-.55	-.44	.08	-.24	-.13	1.00																							
9	-.01	.08	-.22	-.42	.07	-.27	.01	.16	1.00																						
10	.16	.23	-.53	-.31	.23	-.27	.02	.52	.22	1.00																					
11	.33	.09	-.50	-.36	.16	-.31	-.16	.56	.17	.52	1.00																				
12	.19	.25	-.48	-.33	.21	-.22	.02	.44	.15	.46	.55	1.00																			
13	.07	.19	-.28	-.29	.13	-.35	.01	.38	-.07	.29	.39	.54	1.00																		
14	.06	.13	-.39	-.20	.22	-.28	.27	.37	.01	.24	.21	.45	.47	1.00																	
15	.04	.07	-.27	-.23	.01	-.31	.18	.34	.13	.28	.31	.55	.38	.67	1.00																
16	-.07	-.10	.42	.41	-.12	.46	-.11	-.48	-.02	-.29	-.40	-.47	-.58	-.44	-.39	1.00															
17	.01	.09	.34	.19	-.18	.33	-.10	-.46	.04	-.48	-.23	-.38	-.37	-.41	-.26	.50	1.00														
18	-.05	-.07	.42	.37	-.18	.36	-.29	-.41	-.04	-.27	-.28	-.60	-.55	-.62	-.60	.74	.54	1.00													
19	-.10	-.04	.37	.28	-.14	.34	-.18	-.32	-.02	-.26	-.37	-.44	-.58	-.44	-.41	.76	.43	.62	1.00												
20	-.14	-.25	.03	.21	-.15	.43	.00	-.17	-.06	-.14	-.16	-.32	-.41	-.24	-.13	.53	.28	.41	.42	1.00											
21	.16	.06	.20	.20	.07	.27	.02	-.28	-.28	-.07	-.30	-.33	-.35	-.28	-.35	.54	.29	.48	.44	.28	1.00										
22	.05	.20	.21	.13	-.14	.42	-.15	-.33	.02	-.24	-.28	-.22	-.38	-.48	-.41	.63	.42	.56	.61	.19	.45	1.00									
23	.02	.07	.21	.30	-.05	.15	-.21	-.26	-.14	-.18	-.36	-.31	-.34	-.18	-.29	.64	.24	.48	.69	.34	.64	.55	1.00								
24	.13	.17	.16	.15	.01	.52	.18	-.13	.08	-.16	-.23	-.19	-.32	-.23	-.25	.23	.35	.35	.22	.13	.20	.26	.09	1.00							
25	-.04	.20	.10	.06	.06	.06	-.02	-.12	.09	-.20	-.04	.09	.02	.07	.01	-.13	-.08	-.04	.00	-.19	-.07	.13	-.01	-.02	1.00						
26	-.06	-.13	.06	.20	.09	.24	.12	-.15	-.05	-.03	-.04	.03	-.13	-.10	-.13	.23	.07	.13	.27	.11	-.01	.15	.04	.07	.22	1.00					
27	-.02	.03	.16	.19	-.14	.35	-.01	-.39	-.03	-.10	-.39	-.24	-.49	-.39	-.31	.64	.34	.53	.57	.49	.47	.51	.52	.27	-.08	.14	1.00				
28	.11	.02	.08	.18	.07	.29	.00	-.15	.05	-.07	-.21	-.12	-.48	-.28	-.30	.61	.16	.45	.53	.34	.50	.48	.45	.20	-.06	-.02	.58	1.00			
29	.02	.14	.13	.27	.05	.43	.12	-.42	.11	-.10	-.33	-.09	-.28	-.28	-.21	.55	.33	.35	.41	.46	.46	.43	.45	.42	-.08	.06	.71	.50	1.00		
30	-.06	-.03	.28	.37	-.01	.45	-.09	-.30	.01	-.25	-.26	-.16	-.50	-.29	-.30	.63	.24	.50	.57	.45	.23	.53	.52	.27	.07	.15	.62	.67	.59	1.00	
31	.12	.12	.25	.28	-.14	.30	-.05	-.15	-.05	-.19	-.38	-.19	-.46	-.25	-.17	.50	.27	.34	.67	.21	.43	.53	.52	.16	.00	-.02	.54	.69	.44	.61	1.00

[a] Coefficients based on pairwise deletion of missing data (N = 45 to 61).

[b] Item number from Table B5.

Table B.29

PRODUCT-MOMENT CORRELATIONS[a] AMONG POSITIVE AND NEGATIVE FEELINGS ITEMS: TOTAL SAMPLE

Item[b]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	1.00																														
2	.41	1.00																													
3	-.37	-.19	1.00																												
4	-.38	-.24	.53	1.00																											
5	.46	.36	-.26	-.31	1.00																										
6	-.15	-.10	.25	.46	-.26	1.00																									
7	.16	.10	-.08	-.06	.28	.01	1.00																								
8	.38	.23	-.56	-.45	.24	-.23	-.03	1.00																							
9	.15	.07	-.22	-.41	.10	-.32	-.02	.30	1.00																						
10	.23	.29	-.44	-.35	.33	-.31	.09	.62	.34	1.00																					
11	.33	.22	-.47	-.39	.21	-.30	.02	.59	.30	.56	1.00																				
12	.32	.23	-.39	-.40	.31	-.26	.10	.56	.29	.50	.56	1.00																			
13	.22	.29	-.47	-.34	.28	-.33	-.01	.52	.12	.40	.42	.63	1.00																		
14	.26	.26	-.51	-.37	.33	-.32	.13	.51	.12	.37	.33	.51	.62	1.00																	
15	.28	.35	-.43	-.39	.33	-.34	.14	.50	.21	.43	.40	.61	.61	.74	1.00																
16	-.18	-.20	.48	.49	-.27	.49	-.06	-.52	-.17	-.36	-.35	-.46	-.54	-.56	-.51	1.00															
17	-.18	-.15	.63	.35	-.28	.28	-.03	-.51	-.10	-.36	-.30	-.48	-.48	-.52	-.45	.57	1.00														
18	-.23	-.17	.49	.47	-.31	.37	-.11	-.54	-.12	-.38	-.36	-.56	-.54	-.66	-.63	.75	.62	1.00													
19	-.09	-.04	.56	.30	-.18	.28	-.07	-.42	-.14	-.32	-.36	-.44	-.49	-.48	-.42	.70	.55	.62	1.00												
20	-.18	-.22	.28	.32	-.18	.40	-.09	-.28	-.19	-.25	-.27	-.42	-.46	-.39	-.38	.55	.37	.47	.43	1.00											
21	-.05	-.05	.24	.29	-.11	.30	.02	-.39	-.34	-.25	-.29	-.37	-.35	-.39	-.42	.55	.33	.53	.40	.38	1.00										
22	-.08	-.05	.32	.27	-.20	.18	-.07	-.41	-.16	-.32	-.26	-.34	-.39	-.47	-.45	.68	.46	.59	.53	.42	.58	1.00									
23	-.06	-.04	.41	.27	-.09	.18	-.06	-.37	-.18	-.26	-.34	-.37	-.37	-.33	-.36	.58	.39	.52	.72	.36	.62	.55	1.00								
24	-.02	.01	.27	.21	-.06	.44	.06	-.17	-.05	-.19	-.31	-.23	-.27	-.21	-.20	.24	.30	.26	.22	.22	.20	.22	.12	1.00							
25	-.09	.05	.11	.20	-.10	.18	.04	-.19	-.21	-.24	-.12	.00	-.06	-.21	-.10	.09	.04	.15	.13	-.03	.12	.14	.09	.09	1.00						
26	-.04	-.08	.43	.29	-.09	.29	.00	-.27	-.05	-.17	-.21	-.24	-.30	-.37	-.31	.42	.39	.38	.52	.35	.20	.37	.39	.27	.22	1.00					
27	-.09	-.03	.26	.27	-.14	.40	-.01	-.42	-.13	-.22	-.35	-.32	-.46	-.43	-.36	.62	.38	.55	.50	.51	.52	.53	.51	.31	.10	.27	1.00				
28	.04	-.01	.24	.18	.01	.27	.01	-.30	-.07	-.23	-.24	-.22	-.38	-.32	-.30	.52	.23	.44	.47	.43	.49	.49	.45	.24	.09	.30	.58	1.00			
29	.02	.05	.25	.28	-.04	.32	.13	-.43	-.05	-.21	-.26	-.20	-.34	-.35	-.31	.51	.38	.44	.47	.46	.52	.49	.50	.30	.08	.28	.64	.52	1.00		
30	-.18	-.08	.42	.33	-.13	.35	-.03	-.41	-.31	-.11	-.35	-.31	-.46	-.42	-.37	.52	.38	.58	.56	.47	.36	.51	.52	.27	.26	.49	.53	.63	.52	1.00	
31	.00	.00	.46	.25	-.10	.23	.02	-.36	-.36	-.16	-.30	-.36	-.49	-.43	-.32	.51	.46	.42	.70	.32	.45	.51	.66	.21	.15	.49	.54	.62	.48	.63	1.00

[a] Coefficients based on pairwise deletion of missing data (N = 126 to 154).

[b] Item number from Table B5.

APPENDIX C

COPING WITH ILLNESS QUESTIONNAIRE

SDP# [ ][ ][ ][ ][ ][ ] 1-6/

CARD 01 7-8/

VERSION# [ ][ ] 9-10/

Survey Number [ ][ ] - [ ][ ][ ] 11-15/

COPING WITH ILLNESS QUESTIONNAIRE

People who are being treated for various medical conditions are filling out this questionnaire. Its purpose is to understand how people feel about their experience with illness. This information will assist in the development of programs to help people like you cope most effectively with illness.

People with many different kinds of medical conditions will answer these questions, so some of the questions will apply to you more than others. Please try to answer each one as honestly as you can. There are no right or wrong answers. We are interested in your feelings and opinions.

You should know that your name will not be connected with the questionnaire and all results will be presented in summary form. All information that would permit your identification will be regarded as strictly confidential, will be used only for the purposes of the survey, and will not be disclosed or released for any other purposes without prior consent, except as required by law.

The questionnaire will take about an hour to fill out. Try to do it in a quiet place so you can think about each question. The questionnaire is quite long and you may become tired before you finish. If you do, put it aside for a short time and finish it later. It is important to begin our research with many questions, but we plan to reduce the length of the questionnaire after analyzing the answers from the first group of people.

We are also asking your permission to contact your doctor because we are interested in knowing details about your diagnosis and treatment. We will not release any information from this questionnaire to your doctor.

Thank you for your help. We hope you find the questions interesting. When you've filled out all the questions, return it in the envelope we've attached. Feel free to talk with Anita Stewart about any reactions you have to the questionnaire (393-0411, extension 673).

Some aspects of people's backgrounds are important in understanding the kind of help they need when faced with illness.

1. What is your sex?
(Circle the number next to the correct or most accurate response.)

MALE.....	1	*16/*
FEMALE.....	2	

2. How old were you on your last birthday?
(Write your age on the line.)

_____ YEARS *17-18/*

3. At this time are you:

married?	1	*19/*
separated?.....	2	
divorced?.....	3	
widowed?.....	4	
never married?.....	5	

4. Do you have any children?

YES.....	1		*20/*
NO.....	2	(Skip to Q.5)	

4A. How many children do you have <u>living at home</u>?

_____ CHILDREN *21-22/*

(OR)

NONE AT HOME.... 00 (Skip to Q.5)

4B. Living at home, do you have:

	YES	NO	
pre-school children (1-5)?	1	2	*23/*
school age children (6-12)?	1	2	*24/*
teenagers (13-19)?	1	2	*25/*
older children (20 and over)?	1	2	*26/*

CARD 01

5. Not counting children do you:

live alone? ..... 1 (Skip to Q.6) *27/*

have others living in your household?...2

5A. Does your household include:

	YES	NO	
your spouse or other mate?	1	2	*28/*
relatives?	1	2	*29/*
friends?	1	2	*30/*

5B. How many people, counting children and any others who usually live with you, are in your household? (Count yourself!)

_____ PEOPLE *31-33/*

6. Are you currently working at a paid job?

YES ---> 6A. How many hours per week do you work? _____ AVERAGE HOURS PER WEEK (Skip to Q.7) *34-35/*

NO ---> 6B. Are you: (Pick the best one)

Unemployed?..... 1 *36/*

Retired?..... 2

Disabled?..... 3

In school?..... 4

Keeping house?..... 5

6C. Does your illness keep you from working at a job or going to school?

YES..... 1 *37/*

NO..... 2 (Skip to Q.8)

7. Does your illness limit the kinds or amounts of work or schoolwork that you usually do?

YES..... 1 *38/*

NO..... 2

8. How many years of regular school (including college) did you finish and get credit for?

_____ YEARS OF SCHOOL *39-40/*

9. What is the highest degree or diploma you have?

No degree or diploma 1 *41/*

High school diploma..... 2

Associate (A.A.)..... 3

Bachelors (B.A. or B.S.)..... 4

Master's (M.A., M.S., MBA, etc.).... 5

Professional (MD, Ph.D., Law Degree, etc.)..... 6

Other..... 7

10. Counting all income from all sources, what was your total family income (before taxes) in 1979?
INCLUDE WAGES, TIPS OR COMMISSIONS, SOCIAL SECURITY, DIVIDENDS, PENSIONS, ALIMONY, WELFARE, ETC.

IF YOU'RE NOT SURE, USE YOUR BEST ESTIMATE.

Less than $10,000..... 1 *42/*

$10,000 to $19,999 2

$20,000 to $29,999..... 3

$30,000 to $39,999..... 4

$40,000 or more..... 5

11. Including yourself, how many people were dependent on that income in 1979?

_____ PEOPLE *43-45/*

CARD.01

12. What would you say is your own main racial or ethnic group?

AMERICAN INDIAN OR ALASKAN NATIVE.... 1 *46/*

ASIAN OR PACIFIC ISLANDER..... 2

BLACK (NOT OF HISPANIC ORIGIN)..... 3

HISPANIC..... 4

WHITE (NOT OF HISPANIC ORIGIN)..... 5

OTHER _____ 6

13. How important are religious or spiritual beliefs in helping you deal with everyday problems in life? Would you say:

very important?..... 1 *47/*

somewhat important?..... 2

not very important?..... 3

not at all important?..... 4

PART TWO - DESCRIBING YOUR ILLNESS

The first few questions are very important and can have long answers. For this questionnaire, try to answer them fairly briefly.

1. How would you describe your health problem?

_____

_____

_____ ☐☐☐ / ☐☐☐ 48-53/

2. Why do you think you have it?

_____

_____

_____ ☐☐☐ 54-56/

3. What do you think will happen to you as a result of your medical condition?

_____

_____

_____ ☐☐☐ / ☐☐☐ 57-62/

4. Why do you think this will happen? (Is it from something you read or heard, something you feel, or what? If someone told you, who told you?)

_____

_____

_____ ☐☐☐ / ☐☐☐ 63-68/

5. At this time are you receiving any treatments or taking any medicines for you illness? What kinds? CARD 02 7-8/

(1)_____ ☐☐ (5)_____ ☐☐ 9-12/

(2)_____ ☐☐ (6)_____ ☐☐ 13-16/

(3)_____ ☐☐ (7)_____ ☐☐ 17-20/

(4)_____ ☐☐ (8)_____ ☐☐ 21-24/

CARD 01/02

6. Compared with one month ago, would you say your health in general is:

better,..... 1 *25/*

about the same,..... 2

or worse?..... 3

7. In general, would you say your health right now is:

excellent,..... 1 *26/*

good,..... 2

fair,..... 3

or poor?..... 4

8. How long has it been since you last saw a medical doctor for this health problem?

_____ WEEKS AGO *27-28/*

(and/or) _____ MONTHS AGO *29-30/*

(and/or) _____ YEARS AGO *31-32/*

9. How long has it been since you first contacted a medical doctor about the main health problem that is currently bothering you?

_____ WEEKS AGO *33-34/*

(and/or) _____ MONTHS AGO *35-36/*

(and/or) _____ YEARS AGO *37-38/*

10. Does your illness limit you in any way in doing the things you like to do in your free time?

YES..... 1 *39/*

NO..... 2

11. Does your health limit the kinds or amounts of vigorous activities you can do such as running, lifting heavy objects, or participating in active sports?

YES..... 1 *40/*

NO..... 2

12. Does your health limit the kinds or amounts of moderate activities you can do such as moving a table, carrying groceries, or bowling?

YES..... 1 *41/*

NO..... 2

CARD 02

	YES	YES, BUT ONLY SLOWLY	NO, I CAN'T DO THIS	
13. If you had to, could you do light work around the house like dusting or washing dishes?.....	1	2	3	42/
14. If you had to, could you run a a short distance?.....	1	2	3	43/
15. Can you walk uphill or upstairs?.....	1	2	3	44/
16. Can you walk a block or more?.....	1	2	3	45/
17. Can you walk around inside the house?	1	2	3	46/
18. Can you dress yourself?.....	1	2	3	47/
19. Can you bathe without help?.....	1	2	3	48/

20. During the past month, how much pain have you had?

A GREAT DEAL OF PAIN..... 1 49/

SOME PAIN..... 2

A LITTLE PAIN..... 3

NO PAIN AT ALL 4

21. During the past 30 days, did you have:	YES	NO	
A. A cough, without fever, which lasted at least 3 weeks?.....	1	2	50/
B. A sore throat or cold, with fever, lasting more than 3 days?.....	1	2	51/
C. A weight loss of more than 10 pounds (unless you were dieting)?.....	1	2	52/
D. An upset stomach, for less than 24 hours?.....	1	2	53/
E. Stiffness, pain or swelling of joints, lasting more than 2 weeks?.....	1	2	54/
F. Backaches or sciatica?.....	1	2	55/
G. Trouble falling asleep at night?.....	1	2	56/

CARD 02

	YES	NO	
H. Getting up exhausted in the mornings, even with the usual amount of sleep?	1	2	57/
I. A skin rash, or breaking out on any part of the body?	1	2	58/
J. Shortness of breath with light exercise or light work?	1	2	59/
K. Chest pain when exercising?	1	2	60/
L. Your nose stopped up, or sneezing or allergies for 2 weeks or more?	1	2	61/
M. Swollen ankles when you wake up?	1	2	62/
N. Headaches almost every day?	1	2	63/
O. A cough without fever, which lasted for less than a week?	1	2	64/
P. Loss of consciousness, fainting, or passing out?	1	2	65/
Q. Acid indigestion or heartburn after many meals?	1	2	66/
R. A sprained ankle, but you could still walk?	1	2	67/
S. A toothache?	1	2	68/
T. Stomach "flu" or virus (gastroenteritis) with vomiting or diarrhea?	1	2	69/
U. Bleeding (other than nose bleed or periods) not caused by accident or injury?	1	2	70/
V. An eye infection?	1	2	71/
W. Men Only: Difficulty passing urine, or prostate trouble?	1	2	72/
X. Women Only: Irregular periods, or bleeding between periods?	1	2	73/

22. How much of the time do you think about your illness?

ALL OF THE TIME	1	*74/*
MOST OF THE TIME	2	
SOME OF THE TIME	3	
A LITTLE OF THE TIME	4	
NONE OF THE TIME	5	

23. How much does it bother you to think about your illness?

A LOT	1	*75/*
SOME	2	
A LITTLE	3	
NOT AT ALL	4	

24. How true or false would you say these statements are about you and your illness?

CARD 03 *7-8/*

	DEFINITELY TRUE	MOSTLY TRUE	DON'T KNOW	MOSTLY FALSE	DEFINITELY FALSE	
A. Most of the time I try to forget that I am ill	1	2	3	4	5	*9/*
B. I often get upset when my illness interferes with what I want to do	1	2	3	4	5	*10/*
C. Even though I am ill, I try to just keep going as usual	1	2	3	4	5	*11/*
D. Most of the time, I accept the the fact that I am ill and live as fully as possible	1	2	3	4	5	*12/*
E. I try to avoid letting my illness interfere with my life.	1	2	3	4	5	*13/*
F. I blame myself for my illness	1	2	3	4	5	*14/*

PART THREE - TAKING CARE OF YOUR HEALTH

1. Are the following statements about what you know about your illness true or false?

	DEFINITELY TRUE	MOSTLY TRUE	DON'T KNOW	MOSTLY FALSE	DEFINITELY FALSE	
A. Information about my illness has helped me plan my health program.....	1	2	3	4	5	15/
B. I don't actively seek information about my illness.....	1	2	3	4	5	16/
C. I often turn to my friends and family for information and advice about my illness.....	1	2	3	4	5	17/
D. Having information about my illness will not help me deal with it.....	1	2	3	4	5	18/
E. I've tried to get information from anyone who might know anything about my illness.....	1	2	3	4	5	19/

2. How often do you do the following things?

A. Take time to relax yourself.

EVERY DAY..... 1 — 20/

3 OR 4 TIMES A WEEK..... 2

1 OR 2 TIMES A WEEK..... 3

2 OR 3 TIMES A MONTH..... 4

NEVER..... 5

B. Do something that is physically active such as walk, run, bike, or swim.

EVERY DAY..... 1 — 21/

3 OR 4 TIMES A WEEK..... 2

1 OR 2 TIMES A WEEK..... 3

2 OR 3 TIMES A MONTH..... 4

NEVER..... 5

CARD 03

C. Eat well-balanced meals.

EVERY DAY..... 1 *22/*

3 OR 4 TIMES A WEEK..... 2

1 OR 2 TIMES A WEEK..... 3

2 OR 3 TIMES A MONTH..... 4

NEVER..... 5

D. Get a good night's sleep.

EVERY DAY..... 1 *23/*

3 OR 4 TIMES A WEEK..... 2

1 OR 2 TIMES A WEEK..... 3

2 OR 3 TIMES A MONTH..... 4

NEVER..... 5

3. Do you think these statements about the things you've done during the <u>past month</u> are true or false?

	DEFINITELY TRUE	MOSTLY TRUE	DON'T KNOW	MOSTLY FALSE	DEFINITELY FALSE	
A. I did things I always wanted to do, but had never gotten around to.....	1	2	3	4	5	*24/*
B. I was usually too busy to take time just for fun.....	1	2	3	4	5	*25/*
C. I relied on work or other activities to take my mind off things.....	1	2	3	4	5	*26/*
D. I have been taking things a little easier.....	1	2	3	4	5	*27/*
E. I could have done a lot more to improve my health and well-being.....	1	2	3	4	5	*28/*
F. I often took time to do things I enjoy.....	1	2	3	4	5	*29/*
G. I usually found it easy to fill my free time.....	1	2	3	4	5	*30/*
H. I tended to seek the company and support of other people...	1	2	3	4	5	*31/*

CARD 03

4. How much of the time were these statements about your outlook on your illness true for you during the past month?

	ALL OF THE TIME	MOST OF THE TIME	SOME OF THE TIME	A LITTLE OF THE TIME	NONE OF THE TIME	
A. I told myself that things could be a lot worse.....	1	2	3	4	5	32/
B. Thinking positive thoughts helped me deal with my illness.....	1	2	3	4	5	33/
C. I felt weighed down by my illness.....	1	2	3	4	5	34/
D. I looked on the bright side of things.....	1	2	3	4	5	35/
E. I daydreamed and imagined things that made me feel better.....	1	2	3	4	5	36/
F. Everything looked very discouraging.....	1	2	3	4	5	37/
G. I told myself things to help make me feel better.....	1	2	3	4	5	38/
H. I found myself thinking negative thoughts.....	1	2	3	4	5	39/
I. Keeping a hopeful outlook helped me deal with my illness.....	1	2	3	4	5	40/

5. Here are some statements about how your life has been since your illness began. To what extent are they true for you?

	DEFINITELY TRUE	MOSTLY TRUE	DON'T KNOW	MOSTLY FALSE	DEFINITELY FALSE	
A. I enjoy being taken care of when I am ill.....	1	2	3	4	5	41/
B. I live more for today.....	1	2	3	4	5	42/
C. I usually do pretty much what I used to do.....	1	2	3	4	5	43/
D. I have taken a vacation or gotten away from things for awhile.....	1	2	3	4	5	44/

CARD 03

	DEFINITELY TRUE	MOSTLY TRUE	DON'T KNOW	MOSTLY FALSE	DEFINITELY FALSE	
E. I have become more religious or spiritual.....	1	2	3	4	5	45/
F. I like helping other people who are ill.....	1	2	3	4	5	46/
G. I have been able to take care of my own problems without friends or family getting involved.....	1	2	3	4	5	47/
H. I avoid stressful situations as much as I can.....	1	2	3	4	5	48/
I. People around me seem to pay more attention to me.....	1	2	3	4	5	49/
J. I enjoy everyday experiences more than I did before I was ill.....	1	2	3	4	5	50/
K. My illness has given me a chance to get away from a bad situation.	1	2	3	4	5	51/
L. I have not been able to reduce the pressures in my life.....	1	2	3	4	5	52/
M. I am more aware of what is important and meaningful in my life.....	1	2	3	4	5	53/
N. My illness has given me a chance to rest or to have a break from my busy life.....	1	2	3	4	5	54/

6. What have you learned about having an illness such as yours that has been most useful to you?

_____

_____

_____

_____

|_|_|_|,|_|_|_| 55-60/

CARD 03

PART FOUR - THE PEOPLE AROUND YOU

1. How helpful or unhelpful have each of the following people been since you've been coping with the stresses of your illness? If you've had contact with several people in one category (for example, several doctors) try to give us your overall impression.

	EXTREMELY HELPFUL	VERY HELPFUL	MODERATELY HELPFUL	NOT VERY HELPFUL	EXTREMELY UNHELPFUL	DOES NOT APPLY	
A. My spouse or mate.....	1	2	3	4	5	6	61/
B. My doctors.....	1	2	3	4	5	6	62/
C. My nurses.....	1	2	3	4	5	6	63/
D. My neighbors.....	1	2	3	4	5	6	64/
E. My coworkers.....	1	2	3	4	5	6	65/
F. My friends.....	1	2	3	4	5	6	66/
G. My counselor, social worker,or other professional.....	1	2	3	4	5	6	67/
H. My children.....	1	2	3	4	5	6	68/
I. Other people with a similar illness.....	1	2	3	4	5	6	69/
J. My mother.....	1	2	3	4	5	6	70/
K. My father.....	1	2	3	4	5	6	71/
L. My brother(s) or sister(s).....	1	2	3	4	5	6	72/
M. My minister, priest, or other religious leader.....	1	2	3	4	5	6	73/

2. Of those people just mentioned, who is the one person you feel closest to?

(RELATIONSHIP TO YOU)_____

__ __ 74-75/

CARD 03

3. Think about the one person you feel closest to.

3A. In the past month, when you talked with this person about how you felt, how much of the time did he or she seem to understand your feelings?

ALL OF THE TIME..... 1 *76/*

MOST OF THE TIME..... 2

SOME OF THE TIME..... 3

A LITTLE OF THE TIME..... 4

NONE OF THE TIME..... 5

3B. In the past month, how much of the time did this person seem not to accept your feelings?

ALL OF THE TIME..... 1 *77/*

MOST OF THE TIME..... 2

SOME OF THE TIME..... 3

A LITTLE OF THE TIME..... 4

NONE OF THE TIME..... 5

3C. In the past month, how much of the time did this person encourage you to cope better?

ALL OF THE TIME..... 1 *78/*

MOST OF THE TIME..... 2

SOME OF THE TIME..... 3

A LITTLE OF THE TIME..... 4

NONE OF THE TIME..... 5

4. How much advice do you get from friends and family about what to do for your illness?

A LOT..... 1 *79/*

SOME..... 2

A LITTLE..... 3

NONE..... 4

CARD 03

5. During the past month, about how often did you get together with friends or relatives, like going out together or visiting in each other's homes? CARD 04 7-8/

EVERY DAY..... 1 9/

SEVERAL DAYS A WEEK..... 2

ABOUT ONCE A WEEK..... 3

2 OR 3 TIMES IN A MONTH..... 4

ABOUT ONCE..... 5

6. During the past month, how much did you talk to someone about how you were feeling?

MANY TIMES..... 1 10/

A FEW TIMES..... 2

ONCE OR TWICE..... 3

NEVER..... 4

7. These are statements about relationships with family and friends. How true is each statement for you? (By family, we mean whomever you consider to be your family.)

	DEFINITELY TRUE	MOSTLY TRUE	DON'T KNOW	MOSTLY FALSE	DEFINITELY FALSE	DOES NOT APPLY	
A. During the past month, I usually didn't bother my family with my problems.....	1	2	3	4	5	6	*11/*
B. My friends and family keep me informed about the latest medical treatments for my illness.....	1	2	3	4	5	6	*12/*
C. In the past month, I usually felt close to my family.....	1	2	3	4	5	6	*13/*
D. Where I live, it's hard to "blow off steam" without upsetting somebody.....	1	2	3	4	5	6	*14/*
E. I give as much support to the people around me as I receive....	1	2	3	4	5	6	*15/*
F. I am hesitant to tell friends the real nature of my illness.....	1	2	3	4	5	6	*16/*
G. I felt close to at least one friend during the past month.....	1	2	3	4	5	6	*17/*
H. In my family, we often keep our feelings to ourselves.....	1	2	3	4	5	6	*18/*
I. People often tell me they think I can lick this disease.....	1	2	3	4	5	6	*19/*
J. It is helpful to talk with other people who have an illness like mine.....	1	2	3	4	5	6	*20/*
K. I am usually able to give what I like to the people closest to me.	1	2	3	4	5	6	*21/*
L. The people I'm close to encourage me to be hopeful.....	1	2	3	4	5	6	*22/*

CARD 04

8. How true or false are these statements about you?

A. I sometimes withdraw from people because they don't understand my problems.

DEFINITELY TRUE..... 1 *23/*
MOSTLY TRUE..... 2
DON'T KNOW..... 3
MOSTLY FALSE..... 4
DEFINITELY FALSE..... 5

B. During the past month, when I haven't felt well, what I wanted most was to be left alone.

DEFINITELY TRUE..... 1 *24/*
MOSTLY TRUE..... 2
DON'T KNOW..... 3
MOSTLY FALSE..... 4
DEFINITELY FALSE..... 5

C. I tend to hide my illness from others.

DEFINITELY TRUE..... 1 *25/*
MOSTLY TRUE..... 2
DON'T KNOW..... 3
MOSTLY FALSE..... 4
DEFINITELY FALSE..... 5

D. When I felt like crying during the past month, it was hard to cry in front of people close to me.

DEFINITELY TRUE..... 1 *26/*
MOSTLY TRUE..... 2
DON'T KNOW..... 3
MOSTLY FALSE..... 4
DEFINITELY FALSE..... 5
DOES NOT APPLY..... 6

CARD 04

9. How much of the time during the past month were these statements true for you?

	ALL OF THE TIME	MOST OF THE TIME	SOME OF THE TIME	A LITTLE OF THE TIME	NONE OF THE TIME	DOES NOT APPLY	
A. I let the people around me know what I was feeling.....	1	2	3	4	5	6	27/
B. I placed the needs of other people above my own.....	1	2	3	4	5	6	28/
C. I showed my anger.....	1	2	3	4	5	6	29/
D. When I was unable to get to the doctor on my own, there was someone to help me.....	1	2	3	4	5	6	30/
E. I kept my feelings to myself..	1	2	3	4	5	6	31/
F. When I didn't feel well, I could count on my family or friends to do the things I usually did.....	1	2	3	4	5	6	32/
G. There has been someone available when I wanted to talk.....	1	2	3	4	5	6	33/
H. I asked people around me for help.....	1	2	3	4	5	6	34/

CARD 04

10. How much of the time would you say these statements about how others treat you are accurate?

A. When people find out about my illness, some of them tend to avoid me.

ALWAYS..... 1 *35/*

VERY OFTEN..... 2

SOMETIMES..... 3

ALMOST NEVER..... 4

NEVER..... 5

B. People treat me differently when they find out about my illness.

ALWAYS..... 1 *36/*

VERY OFTEN..... 2

SOMETIMES..... 3

ALMOST NEVER..... 4

NEVER..... 5

11. If someone you were close to had a serious illness, what kind of support would you offer them? What do you think would be the most helpful thing you could do?

_____

_____

_____

_____

___ / ___ *37-42/*

CARD 04

PART FIVE - ILLNESS, DEATH, AND RECOVERY

Please circle the number that shows how strongly you agree or disagree with each statement. Some of the statements will sound alike, but no two are the same.

	STRONGLY AGREE	AGREE	NOT SURE	DISAGREE	STRONGLY DISAGREE	
1. I find it hard to believe that my feelings have any effect on my illness.....	1	2	3	4	5	*43/*
2. Taking good care of myself is important in getting well.....	1	2	3	4	5	*44/*
3. For diseases like mine, medical treatments can sometimes do as much harm as good.....	1	2	3	4	5	*45/*
4. It is difficult for me to accept the fact that I may die from my illness.	1	2	3	4	5	*46/*
5. Prayer and religious faith can help me get better.....	1	2	3	4	5	*47/*
6. Getting this illness was due to bad luck.....	1	2	3	4	5	*48/*
7. I find it best not to think too much about dying.....	1	2	3	4	5	*49/*
8. The more I tell myself that I'm going to be well, the more likely my body will heal.....	1	2	3	4	5	*50/*
9. In some form I believe that there is life after death.....	1	2	3	4	5	*51/*
10. More than anything else, my recovery requires good medical care.....	1	2	3	4	5	*52/*
11. I may have brought this illness on myself.....	1	2	3	4	5	*53/*
12. Regular exercise (like walking and bicycling) is not very important in helping me recover from my illness.....	1	2	3	4	5	*54/*

CARD 04

		STRONGLY AGREE	AGREE	NOT SURE	DISAGREE	STRONGLY DISAGREE	
13.	I have a religious or spiritual perspective on death.....	1	2	3	4	5	55/
14.	Feeling happy will help my body heal.....	1	2	3	4	5	56/
15.	Whether I recover is pretty much up to chance.....	1	2	3	4	5	57/
16.	A person should have the right to decide to die.....	1	2	3	4	5	58/
17.	Some pollutant such as smog, chemicals, or food additives contributed to my illness.....	1	2	3	4	5	59/
18.	When I feel good about myself, I'm more likely to get better.....	1	2	3	4	5	60/
19.	When I think about my own death I get very angry.....	1	2	3	4	5	61/
20.	Whether I get well depends on the help of doctors and medicines.....	1	2	3	4	5	62/
21.	My illness was brought on by the stresses in my life.....	1	2	3	4	5	63/
22.	Thinking a lot about how sick I am will slow my recovery.....	1	2	3	4	5	64/
23.	Thinking more about dying has changed my views about how I live...	1	2	3	4	5	65/
24.	My illness is mostly hereditary (inherited).....	1	2	3	4	5	66/
25.	My getting well has little or nothing to do with chance.....	1	2	3	4	5	67/
26.	My faith in God will help me recover.....	1	2	3	4	5	68/
27.	I avoid thinking about my own death.	1	2	3	4	5	69/
28.	Not getting enough sleep makes it harder for me to get better.....	1	2	3	4	5	70/
29.	My illness may be a punishment for something I've done.....	1	2	3	4	5	71/
30.	We should prolong life at any cost..	1	2	3	4	5	72/

CARD 04

CARD 05 7-8/

		STRONGLY AGREE	AGREE	NOT SURE	DISAGREE	STRONGLY DISAGREE	
31.	Well balanced meals will help me get better	1	2	3	4	5	9/
32.	There is not much I can do to help myself get well	1	2	3	4	5	10/
33.	I caught my illness from someone else	1	2	3	4	5	11/
34.	Thinking about dying makes me depressed	1	2	3	4	5	12/
35.	It is up to God whether I get well	1	2	3	4	5	13/
36.	Relaxation techniques will help me get well	1	2	3	4	5	14/
37.	I have thought a lot about my own death	1	2	3	4	5	15/
38.	Telling myself I'm going to get better has nothing to do with whether I do	1	2	3	4	5	16/
39.	I have a calm and accepting attitude toward my own death	1	2	3	4	5	17/
40.	My illness is God's will	1	2	3	4	5	18/
41.	My illness may have been caused by something I ate	1	2	3	4	5	19/
42.	I don't really know why I got this illness	1	2	3	4	5	20/
43.	The fear of dying is very much with me	1	2	3	4	5	21/
44.	My illness may have been caused by drugs or medications	1	2	3	4	5	22/

PART SIX - HOW YOU'RE FEELING

1. Would you say you agree or disagree with each of these statements about how you are feeling these days?

	STRONGLY AGREE	AGREE	NOT SURE	DISAGREE	STRONGLY DISAGREE	
A. There are a lot of things I like about myself.....	1	2	3	4	5	23/
B. I feel good about my body.....	1	2	3	4	5	24/
C. I have a strong will to live....	1	2	3	4	5	25/
D. My religious or personal spiritual beliefs give meaning to my life.....	1	2	3	4	5	26/
E. I feel less physically attractive because of my illness.....	1	2	3	4	5	27/
F. If I work at it, I can usually get what I want.....	1	2	3	4	5	28/
G. I am optimistic that my life will work out well.....	1	2	3	4	5	29/
H. I would like to change some parts of my body.....	1	2	3	4	5	30/
I. I am determined to do everything possible to improve or recover..	1	2	3	4	5	31/
J. My life is empty and has no meaning.....	1	2	3	4	5	32/
K. I am important to someone.....	1	2	3	4	5	33/
L. I have done most of the things I wanted to in my life.....	1	2	3	4	5	34/
M. I feel less sexually desirable now than before my illness.....	1	2	3	4	5	35/
N. No matter how serious my illness is, there is always hope of getting better.....	1	2	3	4	5	36/
O. My illness has made me feel ashamed of my body.....	1	2	3	4	5	37/

CARD 05

	STRONGLY AGREE	AGREE	NOT SURE	DISAGREE	STRONGLY DISAGREE	
P. I feel that I usually succeed in solving my problems.....	1	2	3	4	5	*38/*
Q. I like my looks just the way they are.....	1	2	3	4	5	*39/*
R. There are people who depend on me.....	1	2	3	4	5	*40/*
S. My body looks as good as it did before my illness.....	1	2	3	4	5	*41/*
T. I feel like giving in to my illness.....	1	2	3	4	5	*42/*
U. I feel that I am an attractive person.....	1	2	3	4	5	*43/*
V. I am usually satisfied with the way I am.....	1	2	3	4	5	*44/*
W. I am usually able to influence others.....	1	2	3	4	5	*45/*
X. I have some tasks to accomplish in my life that are important to me.....	1	2	3	4	5	*46/*

2. During the past month, <u>how often</u> have you felt:

	ALL OF THE TIME	MOST OF THE TIME	SOME OF THE TIME	A LITTLE OF THE TIME	NONE OF THE TIME	
A. Good about yourself?.....	1	2	3	4	5	*47/*
B. Nervous?.....	1	2	3	4	5	*48/*
C. Angry?.....	1	2	3	4	5	*49/*
D. Depressed?.....	1	2	3	4	5	*50/*
E. Tense?.....	1	2	3	4	5	*51/*
F. Loved?.....	1	2	3	4	5	*52/*

CARD 05

2. (con't) During the past month, how often have you felt:

	ALL OF THE TIME	MOST OF THE TIME	SOME OF THE TIME	A LITTLE OF THE TIME	NONE OF THE TIME	
G. Cheerful?	1	2	3	4	5	*53/*
H. Irritated?	1	2	3	4	5	*54/*
I. Anxious?	1	2	3	4	5	*55/*
J. Happy?	1	2	3	4	5	*56/*
K. Easily annoyed?	1	2	3	4	5	*57/*
L. Lonely?	1	2	3	4	5	*58/*
M. In low spirits?	1	2	3	4	5	*59/*
N. Resentful?	1	2	3	4	5	*60/*

CARD 05

3. In the past month, how much have each of these feelings interfered with what you usually do?

	ALL OF THE TIME	MOST OF THE TIME	SOME OF THE TIME	A LITTLE OF THE TIME	NONE OF THE TIME	
A. Feeling angry?.....	1	2	3	4	5	*61/*
B. Feeling anxious?.....	1	2	3	4	5	*62/*
C. Feeling depressed?.....	1	2	3	4	5	*63/*
D. Feeling guilty?.....	1	2	3	4	5	*64/*

4. How often do you run into problems that you can't solve?

VERY OFTEN.....	1	*65/*
OFTEN.....	2	
SOMETIMES.....	3	
OCCASIONALLY.....	4	
ALMOST NEVER.....	5	

5. How much of what you do is determined by what other people want you to do?

ALMOST EVERYTHING.....	1	*66/*
MOST THINGS.....	2	
SOME THINGS.....	3	
A FEW THINGS.....	4	
ALMOST NOTHING.....	5	

CARD 05

6. During the past month, how much of the time have you <u>been satisfied</u> with each of these aspects of your life?

	ALL OF THE TIME	MOST OF THE TIME	SOME OF THE TIME	A LITTLE OF THE TIME	NONE OF THE TIME	
A. Your work?	1	2	3	4	5	67/
B. Your personal life?	1	2	3	4	5	68/
C. Your friendships?	1	2	3	4	5	69/
D. Your leisure activities?	1	2	3	4	5	70/

7. During the past month, how often have you been in unpleasant situations that you felt helpless to do anything about?

VERY OFTEN..... 1 71/

OFTEN..... 2

SOMETIMES..... 3

OCCASIONALLY..... 4

ALMOST NEVER..... 5

8. During the past month, how much of the time did you enjoy the things you did?

VERY OFTEN..... 1 72/

OFTEN..... 2

SOMETIMES..... 3

OCCASIONALLY..... 4

ALMOST NEVER..... 5

9. During the past month, how often have you felt:

	ALL OF THE TIME	MOST OF THE TIME	SOME OF THE TIME	A LITTLE OF THE TIME	NONE OF THE TIME	
A. down on yourself?.....	1	2	3	4	5	73/
B. that you had nothing to look forward to?.....	1	2	3	4	5	74/
C. that you deserved very little from other people?.....	1	2	3	4	5	75/
D. that you were in a good mood?...	1	2	3	4	5	76/
E. guilty that your illness brought on problems for your family and friends?.....	1	2	3	4	5	77/
F. so down in the dumps that nothing could cheer you up?.....	1	2	3	4	5	78/

PART SEVEN - FEELINGS ABOUT YOUR DOCTORS

Try to answer these questions about the doctors who usually treat you for your illness.

CARD 06 7-8/

1. Overall, how satisfied are you with your doctors' care?

VERY SATISFIED	1	9/
SOMEWHAT SATISFIED	2	
NEITHER SATISFIED NOR DISSATISFIED	3	
SOMEWHAT DISSATISFIED	4	
VERY DISSATISFIED	5	

2. What is the one thing about your doctors that you like most?

_____ ___ 10-12/

3. What is the one thing that you like least?

_____ ___ 13-15/

4. Would you say these statements are true or false?

A. When my doctors come into the room, it makes me feel better.

DEFINITELY TRUE	1	16/
MOSTLY TRUE	2	
DON'T KNOW	3	
MOSTLY FALSE	4	
DEFINITELY FALSE	5	

B. My doctors seem very well-trained.

DEFINITELY TRUE	1	17/
MOSTLY TRUE	2	
DON'T KNOW	3	
MOSTLY FALSE	4	
DEFINITELY FALSE	5	

5. Would you say you agree or disagree with each of these statements about your doctors and how they treat you and your illness?

	STRONGLY AGREE	AGREE	NOT SURE	DISAGREE	STRONGLY DISAGREE	
A. If anything can be done for my illness, my doctors will know it.....	1	2	3	4	5	18/
B. My doctors encourage me to do things I like to help the healing process.....	1	2	3	4	5	19/
C. When my doctor explained my diagnosis, he/she seemed cold and distant.....	1	2	3	4	5	20/
D. My doctors always respect my feelings.....	1	2	3	4	5	21/
E. The caring of my doctors has helped me during this illness...	1	2	3	4	5	22/
F. My doctors never discuss decisions about my treatment with me.....	1	2	3	4	5	23/
G. When my doctor told me what I had, I got the feeling that I had some chance for recovery....	1	2	3	4	5	24/
H. Following my doctors' orders will help me get well.....	1	2	3	4	5	25/
I. My doctors often act more impersonal than is necessary....	1	2	3	4	5	26/
J. My doctors always explain things about my disease, the suggested treatments, and their effects....	1	2	3	4	5	27/
K. My doctors usually inspire hope and optimism.....	1	2	3	4	5	28/
L. My doctors hardly ever explain my medical problems to me.....	1	2	3	4	5	29/
M. My doctors usually make it easy for me to tell them my concerns..	1	2	3	4	5	30/

CARD 06

	STRONGLY AGREE	AGREE	NOT SURE	DISAGREE	STRONGLY DISAGREE	
N. When my doctor explained my diagnosis, he/she encouraged me to overcome my illness.....	1	2	3	4	5	31/
O. My doctors often encourage me to tell them how I feel.....	1	2	3	4	5	32/
P. My doctors encourage me to improve my health habits.....	1	2	3	4	5	33/
Q. When I ask questions about my illness and treatment, my doctors always put me off.....	1	2	3	4	5	34/
R. My doctors and I work together to treat my illness.....	1	2	3	4	5	35/
S. My doctors believe that keeping a hopeful outlook will help me get better.....	1	2	3	4	5	36/
T. When my doctor told me what I had, I got the feeling there wasn't much that could be done...	1	2	3	4	5	37/
U. I usually feel that my doctors don't really listen to me.....	1	2	3	4	5	38/
V. My doctors do not seem hopeful about my chances for recovery....	1	2	3	4	5	39/
W. My doctors believe that a fighting spirit will help me recover.....	1	2	3	4	5	40/

PART EIGHT - THE 'LIVE TODAY' PROGRAM

1. How did you first learn of our Live Today program? Was your source of information: (CIRCLE ALL THAT APPLY)

A. Physician	1	41/
B. Other health professional	2	42/
C. Friend in program	3	43/
D. Family member	4	44/
E. Friend (not in program)	5	45/
F. TV or radio	6	46/
G. Newspaper or magazine	7	47/
H. Mailing or brochure about program	8	48/
I. Other - how? _____	9	49/

2. Is anyone participating in this program along with you?

YES	1	50/
NO (Skip to Q 3)	2	

2a. Who?

SPOUSE OR MATE	1	51/
OTHER FAMILY MEMBER	2	
CLOSE FRIEND	3	

3. What do you hope to get from participating in this program?

_____

_____

_____

_____

_____

|_|_|_| / |_|_|_| / |_|_|_| 52-60/

CARD 06

4. Which of the following treatments have you used to help you deal with current or past illnesses?
(CIRCLE ALL THAT APPLY) CARD 07 7-8/

A. Hypnotherapy..... 1 9-10/

B. Biofeedback..... 2 11-12/

C. Muscle relaxation..... 3 13-14/

D. Meditation..... 4 15-16/

E. Acupressure..... 5 17-18/

F. Chiropractic..... 6 19-20/

G. Nutritional treatment..... 7 21-22/

H. Visualization or guided imagery 8 23-24/

I. Psychotherapy..... 9 25-26/

J. Growth experiences..... 10 27-28/

K. Laetrile..... 11 29-30/

L. Other (What?)

_____ 12 31-32/

5. Were you able to express what you think is most important about your illness experiences in this questionnaire?

YES..... 1 33/

NO..... 2

If not, what was left out?

_____

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☐☐☐ / ☐☐☐ 34-39/

This is the end of the questionnaire. Thank you very much for your help. Before you send it back, check quickly to be sure you've filled out all the questions.

Then, please sign the "Consent to Contact Physician" form and keep the second copy for yourself. Slip the first (signed) copy inside the questionnaire.

Return the questionnaire in the envelope. If you return it in another envelope, please send it to:

Live Today!
1314 Westwood Blvd., Suite 107
Los Angeles, CA 90024

Again, thank you.

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