DEVELOPMENT OF AN INSTRUMENT TO ASSESS DIAGNOSED CANCER PATIENTS' SELF-CONCEPT

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PREFACE

The defining characteristics of self-concept as they impact on the cancer patient's ability to function were identified, and an instrument was developed that measures those defining characteristics.

I wish to express my sincere gratitude to all the people who assisted me in this work. In particular, I wish to thank my major adviser Dr. Linda Vincent, for her guidance, concern, and endless help in keeping me on course.

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CHAPTER I

INTRODUCTION

Of all man's attributes, the self appears to be the most complex and intangible. Self-concept, as it is referred to in the professional literature, is a group of feelings and cognitive processes inferred from observed or manifest behavior (Labenne and Green, 1969).

As the second leading cause of death in the United States, cancer claims over 350,000 lives per year and brings disruption into the lifestyles of thousands more (American Cancer Society, 1980). The tremendous psychological, social, and economic impact brought about by this disease makes caring for people with cancer one of the largest and most significant tasks facing nursing today.

Cancer represents a form of chronic illness. Coping with the diagnosis of cancer is highly individualized and is directly affected by the person's self-concept. Despite whether the defining characteristics (feelings and behaviors) present after the diagnosis of cancer were a result of the diagnosis or were present beforehand, they affect the functioning ability of the person and ultimately require interventions.

Although research has been conducted in the area of psychological adaptation following the diagnosis of cancer, the emphasis has centered on the impact of the disease as it is compared to other diseases, as well as methods found useful in assisting the patient to adjust. An instrument to assess the cancer patients' defining characteristics

(feelings and behaviors) of self-concept was not available. Such an instrument is needed by the nursing community who must plan nursing care for patients being diagnosed with cancer.

Prior research in this area has been done by this investigator. The pertinent literature was first reviewed. Then a structured-interview format was devised for use in a pilot study investigating self-concept by the diagnosis of cancer (Morris, 1980). The interview format was used with 10 subjects who had been diagnosed as having cancer. Following completion of the study and analysis of data, the structured-interview format was further refined. Following a second review of the literature, a checklist of the behavioral and emotional components was compiled. The work of many theorists was used to compile the checklist. Since all of the behaviors and emotions extracted from the literature as the expected behaviors were negatives, 20 of the items were changed to positive items and became the unexpected behaviors and emotions.

Construct validity of the checklist was determined by a panel of experts in the field of oncology. Reliability of the checklist was determined by administering the checklist to a group of 30 subjects on a test-retest basis at a 48 hour interval. This checklist was then used with 30 recently diagnosed cancer patients (Morris, 1982). Many of the behaviors and emotions identified in the literature were not identified by the subjects studied. The results of this study were presented in 1984 at both the Midwest Nursing Research Society Conference and the North American Nursing Diagnosis Association Conference. From the critique and discussion following each presentation, this investigator was encouraged to continue research in this area. Other suggestions were made to convert the checklist into a semantic differential instrument

using the items and then test the instrument on the total population of one oncologist. It was felt that this would remove several variables that might have been partially responsible for the conflicting data obtained in the previous study.

Statement of the Problem

There was no instrument available to specifically assess the diagnosed cancer patient's defining characteristics (feelings and behaviors) for the nursing diagnosis "self-concept:altered". Altered means as it deviates from normal. Defining characteristics need to be identified so these alterations can be diagnosed and appropriate nursing interventions instituted.

Purpose of the Study

The purpose of this study was to identify the defining characteristics of self-concept as they impact on the cancer patient's ability to function, and to develop an instrument that measures those defining characteristics.

Research Objectives

This research had the following objectives:

1. To identify the defining characteristics of self-concept that are perceived to affect functioning for cancer patients.

2. To develop an instrument which assesses those defining characteristics of self-concept that are perceived to alter functioning for the cancer patient.

Significance and Need for the Study

In 1973, the First National Conference on the Classification of Nursing Diagnosis was held in St. Louis, Missouri. This conference was conceived as a starting point for a clear articulation of health problems into a taxonomic system (Gebbie, 1975). Participants thought that such a system could be of value in nursing education, nursing research, and health record keeping. This taxonomy would contain words for describing various mental and physical states of the patient. Definitions of nursing diagnoses and a classification system would lead to greater consistency between investigations. Through compilation, evaluation, and validation of nursing diagnoses, a compendium of diagnoses could be developed which would add to the unique body of nursing knowledge.

The goal of the National Group for the Classification of Nursing Diagnosis was to standardize diagnostic labels so patients' problems and needs could be clearly communicated from one nurse to another and from one shift to another. These labels would then be tested by research and eventually would lead to the establishment of specific outcome criteria and nursing interventions for each diagnosis. The participants requested that such work not be conducted in silence or in isolation, but that collaboration occur through conferences, publications, and correspondence (Dossey and Guzzetta, 1981).

According to Price (1980), a nursing diagnosis is described as an existing or potential health problem that nurses are qualified and licensed to treat. A nursing diagnosis is derived from objective and subjective data that demonstrates the presence of a pattern. Nursing diagnosis suggests an etiology requiring interventions within the realm

of nursing. Nursing interventions are centered around the patient and his family. Price (1980) reported that the Third National Conference on the Classification of Nursing Diagnosis accepted approximately 37 broad diagnostic category areas that nurses can use to state the patient's actual or potential health problem. "Self-concept:altered" is one of those 37.

Gatschet (1982) summarized nursing diagnosis by stating that it is an essential component within the nursing process. It is the concept on which the unique body of nursing knowledge is built. From the assessment, the nursing diagnosis is made. From this diagnosis flows the plan of interventions individually designed for each patient. Thus, there is a need to identify the defining characteristics for each nursing diagnosis.

Gordon (1976) concluded that psychosocial states cannot be defined solely by objective clinical signs and symptoms. Since human behavior is variable, there is a need for subjective validation by the patient. "Self-concept:altered" is one of these diagnostic categories which needs to be described by the client.

With the increasing incidence of cancer, the mere mention of the word continues to strike fear for those who hear it. With the ability to diagnose the disease earlier, it is important that the research be conducted to determine the impact the disease has on the self-concept. Only then can interventions be designed to assist the patient to meet his needs. The cancer patient in many ways is not unlike patients who are ill with other diseases or healthy persons. The cancer patient has the same basic needs. Udelman (1979) related that the diagnosis of cancer brings unique stresses which may alter the self-concept and the

patient's functioning ability. "Though the self-concept may be organized at a lesser level because of illness and/or treatment, it represents a 'healthy' accommodation to these stresses" (p. 687). It is apparent that new methods of treatment will both relieve and complicate emotional recovery. "The members of the helping profession must assess, intervene, and support the self-concept as well as the symptoms of the disease."

Scope and Limitations

The scope of this study was limited to the development of an instrument to assess the defining characteristics of self-concept that are perceived to alter the functioning ability of the cancer patient. The ability to generalize this instrument to populations outside the group is therefore somewhat limited.

This study was circumscribed by the following limitation: The data was collected through self-report and thus is only as valid as the amount of material the individual was willing to share.

Assumptions

The following assumptions were made in this study:

1. No two people have identical self-concepts.

2. Because self-concept is the frame of reference through which the person interacts with the world, it is a powerful influence on human behavior.

3. Some individuals will have these defining characteristics as a part of their self-concept prior to their diagnosis of cancer, while others will have them because of the diagnosis.

Definition of Terms

The following terms are defined for the purposes of this study:

Body-image--sum of the conscious and unconscious attitudes the individual has toward his body. It includes present and past perceptions, as well as feelings about size, function, appearance, and potential (Stuart and Sundeen, 1983).

Cancer--a collective term describing a large group of disease entities characterized by uncontrollable growth and spread of abnormal cells (Luckman and Sorensen, 1980).

Coping--an adaptive method or capacity developed by a person to manage or overcome a psychological or social problem (Wilson and Kneisl, 1983).

Defining Characteristics--the feelings and behaviors used to identify self-concept.

Nursing diagnosis--an existing or potential health problem that nurses are qualified and licensed to treat (Price, 1980).

Oncologist--one who specialized in the diagnosis and treatment of cancer patients.

Personal identity--organizing principle of the personality system that accounts for the unity, continuity, uniqueness, and consistency of the personality. It is the awareness of the process of "being oneself" that is derived from self-observation and judgment and is the synthesis of all self-representations into an organized whole (Stuart and Sundeen, 1983).

Role performance--set of socially expected behavior patterns associated with an individual's function in various social groups. Roles

provide a means for social participation and a way to test out identities for consensual validation by significant others (Stuart and Sundeen, 1983).

Self-concept--all of the notions, beliefs, and convictions that constitute an individual's knowledge of himself and influence his relationship with others. The self-concept is made up of personal identity, self-esteem, role performance, and body image (Stuart and Sundeen, 1979).

Self-concept:altered--any change in a person's perception of his personal identity, self-esteem, role performance, and body image as it influences his relationship with others.

CHAPTER II

REVIEW OF LITERATURE

This chapter contains a review of the literature and research applicable to the purpose of the study. This review was divided into two major categories concerning self-concept: the nature of the phenomenon, and alteration by the diagnosis of cancer as well as information concerning semantic differential instrumentation.

Self-Concept

The Nature of the Phenomenon

Of all man's attributes, the self appears to be the most complex and most intangible. Labenne and Greene (1969) in reviewing psychologists' feelings about self-concept, defined self-concept as a psychological construct. They described self-concept as an imaginary mechanism which helped the psychologist think about the phenomenon he was studying. They defined a construct as a concept of self inferred from behavior. They related, that according to Snygg and Combs, the self was presented as both object and process, and the individual was seen to behave according to how he perceived the situation and himself at the moment of his action. Self-concept, as it was referred to in the professional literature was a group of feelings and cognitive processes inferred from observed or manifest behavior (p. 10). By way of a formal

definition, they presented self-concept as the person's total appraisal of his appearance, background and origins, abilities and resources, attitudes and feelings which culminated as a directing force in behavior.

In further explaining the self-concept, Labenne and Greene (1969) believed that as the self-concept developed it brought with it a unique perspective of viewing one's relationship to one's world. What a person perceived and how he interpreted what he perceived was conditioned by his concept of self. They felt that a person who had a weak self-concept and who was unsure of himself was more likely to have a narrowed perceptual field. This shrinking effect limited the data required for intelligent decision and action. The threatened person's perceptions tended to be limited to the objects or events of the threat. This became the very antithesis of efficient behavior. Instead of broadening his fund of knowledge and skills, such a person was kept busy defending his already existing perceptual organizations. In contrast, the individual with a positive self-concept was free to devote his energies to the explorations and discoveries of the personal meanings of events for him in his world.

Labenne and Greene (1969) presented the following quote by Rogers:

> As experiences occur in the life of an individual, they are either symbolized, perceived and organized in some relationship to the self; ignored because there is no perceived relationship to the self-structure; denied symbolization or given a distorted symbolization because the experience is inconsistent with the structure of the self (p. 20).

They cited Shaffer and Shoben (1967) as supporting that by the proposition:

> Because the self-concept shaped new experiences to conform to its already established pattern, much behavior can be

> understood as a person's attempt to maintain the consistency of his self-concept, a kind of homeostasis at a higher psychological level (p. 19).

Biehler (1974) discussed the perceptual view as proposed by Combs and Snygg. It was proposed "that man was in part controlled by and in part controller of his destiny" (p. 76). This view provided an understanding of man deeply and intimately affected by his environment but capable also of molding and shaping his destiny in important ways. It viewed man as a growing, dynamic, creative being continuously in search of adequacy. Instead of an object at the mercy of his environment, he was himself a purposive agent engaged in the never ending business of becoming.

Maslow (1962) emphasized self-actualization and argued that an individual had within him a powerful desire to develop his potential to the fullest extent. Once the lower level needs on Maslow's heirachy are satisfied, the person might be motivated to express himself just for the sake of self-actualization. He cited Freud's greatest discovery as being "the great cause of much psychological illness is the fear of knowledge of oneself, of one's emotions, impulses, memories, capacities, potentialities, of one's destiny" (p. 60). That kind of fear was termed defensive, in the sense that it was a protection of one's self-esteem, of one's love and respect for himself. He found that man had a tendency to be afraid of any knowledge that could cause him to despise himself or make him feel inferior, weak, worthless, evil, or shameful. He would protect himself and his ideal image of himself by repression and similar defenses, which are essentially techniques by which he would avoid becoming conscious of unpleasant or dangerous truths.

Roy (1976) related that just as man adapted psychologically to his environment, he also adapted through self-concept. Therefore, she saw the nurse working with the whole person. That person would have a concept of himself which would be affected by and would also be used to cope with situations of health and illness.

Illness was defined by Menniger (1963) as being a certain state of existence which was uncomfortable to someone and for which medical science offered or was believed by the public to offer relief. The suffering might be in the afflicted person or in those around him or both, but a disturbance had occurred in the total makeup of the personality which must become the focus of clinical attention. He continued by explaining that the continuous internal and external conditions of an organism, which would carry the triumphs and scars and hidden weaknesses of many similar prior efforts and failures, had been jolted by something which might take advantage of the consequences of previous battles and their residual scars, and also pre-existent weaknesses. A shift in balance would occur with a lowering of the effective level of living. Shifts of some kind and degree would be going on constantly, and with them constant processes of restoration. But certain events or combinations of events or persistence of events upset the balance beyond righting. Then would come a crisis, a state of emergency, and special unusual restorative maneuvers would be automatically instituted. It would be the totality of these things, including the actual injury suffered and the reaction to that injury or stress, which would make up what he called the picture of illness. It would be an imbalance, an organismic disequilibration, and reequilibration at a lower level of effectiveness and well being. And if the imbalance was not corrected it

would tend to impair the comfort or even threaten the biological survival of the individual.

Alteration by Diagnosis of Cancer

A descriptive study was conducted in 1978 by Worden and Sobel in which they investigated a patient's ego strength at the time of an initial cancer diagnosis, and its relationship over time, to mood disturbance, vulnerability, self-reported physical symptom totals, current concerns, coping strategies, and effectiveness in the resolution of problems. The subjects were 163 newly diagnosed male and female cancer patients representing five primary tumor sites. All patients were seen for an initial evaluation, at which time they completed Barron's Es scale, the Profile of Mood States, the Inventory of Current Concerns, and a semi-structured interview. Ratings on patient vulnerability, coping strategies, and problem resolutions were made at each of the five follow ups. Results demonstrated that a positive psychological adaptation to cancer was related to a patient's ego strength as defined by the Minnesota Multiphasic Inventory.

The effect of a structured, interdisciplinary group counseling program was studied in 30 newly diagnosed adult patients with advanced cancer by Ferlic, Goldman, and Kennedy (1979), in an experimental study. The members of the study group were compared to 30 patients who did not undergo group counseling. The emphasis for the study group was on addressing the crisis status and vulnerability of newly diagnosed adult patients with advanced cancer with the assumption that the more patients knew about the varying aspects of their disease, the more they would be

able to handle their problems. The program was preceded by a three month pilot study involving 40 patients for the purpose of identifying needs, refining the goals and research instruments, validating the patient education model, and support group model combination. Three questionnaires were used. The Patient Perception and a self-concept questionnaire were administered before and after each of the six sessions. The Differential Personality Questionnaire was administered approximately one month after the pretests. There was no significant difference between the average pretest scores of the two groups on the Patient Perception. When tested two weeks later, the control patient group had a significant ($p < .05$) increase in every component scale. The difference between the two groups was highly significant ($p < .001$). On the self-concept test, the group tested patients had a significant increase in their responses after the group session ($p < .001$). On the Differential Personality Questionnaire, the scores of patients with cancer were not appreciably different from those of noncancer patients. Group counseling resulted in a significant improvement in patient perception and self-concept. This structured educational and psychological support program provided a mutual support experience for newly diagnosed patients with advanced cancer.

Gogan, Koocher, Fine, Foster, and O'Malley (1979) studied pediatric cancer survivors and the issues surrounding their marriage and the effect the diagnosis had on their adult adjustment. The study group consisted of 36 men and women, aged 21 or older who were treated for cancer as children. Of that group 20 had married. Survival rates for pediatric cancer patients are steadily improving. Many now reach adulthood essentially "cured". This study explored the survivor's married

lives and sought to illuminate some of the variables that might have discriminated between those who married and those who did not. Each person was subjected to a two hour interview which was taped and recorded verbatim. Each patient was assigned a rating by judges on three scales. The scales were the Physical Limitation Scale, Visible Impairment Scale, and the Combined Psychiatric Rating. Comparison of these ratings indicated significant differences at .05 level on the Physical Limitations and .0544 on the combined adjustment ratings, between patients who had married or became engaged and those who had not married. The Visual Impairment data were not significant. It was found that a life threatening illness had an impact on the patient and those around him even many years after treatment. Four spouses reported a variety of negative effects that they believed directly related to the patient's cancer experience. These ranged from serious psychological problems (two patients) to milder difficulties, including occasional tension, emotional withdrawal, short temper, decreased appetite, insomnia, and anxiety about recurrence. Two individuals reported a markedly negative impact on their marriage because the patient became periodically depressed and would withdraw from daily activities. Fewer than half of the spouses reported that the cancer experience had no effect on their marriage.

O'Malley, Koocher, Foster, and Slavin (1979) investigated 114 long term survivors at the Sidney Farber Cancer Institute in an attempt to measure the impact of the cancer experience on their adjustment in later life. Survivorship was defined as living 60 months past the age of initial diagnosis, being disease-free and off all treatment protocols for at least one year, and having been no older than 18 years of age at

the time of the diagnosis. Findings suggested that cancer survivors have a high rate of psychological adjustment problems. Adjusted ratings were assigned independently by experienced mental health professionals and showed a high degree of reliability. Fifty-nine percent of the sample of former patients were found to have at least mild psychiatric symptom formation, with 12 percent rated as markedly or severely impaired.

A descriptive study was designed by Johnson (1967) in which the role of communication before, during, and after cancer treatment was examined. It included communication between patient and spouse as well as between patient and health professionals. In studying the sexual concerns of the cancer patient and his or her spouse, she found that with the diagnosis of cancer, old values and concerns may disappear and new values and concerns may emerge. Individuals may feel differently and communicate differently. Eighteen persons were selected who either had been treated for cancer or were spouses of cancer patients. A questionnaire was developed for the interviews designed to elicit information about sexual concerns, body image, self-esteem, and marital and patient health professional communication. The data obtained suggested that persons with cancer who had positive self-images did talk to their spouses about the cancer, its implication for their relationship, and the alterations required in their marriage. They also conveyed mutual sharing of feelings of depression, fear, and anger in varying degrees. Sexual adjustments had been discussed and implemented. Persons with a comparatively low self-image and with much less self-esteem had been reluctant to talk about their illness with their spouse. They had not shared their depression or fears about the future or the implications of

the cancer for the marital relationship because they were concerned that the partner might become fearful and uncomfortable with them. Three persons indicated that they were having serious problems with the sexual aspects of their marital relationship, and they attributed those problems directly to the cancer. It was found that the information elicited was helpful in planning care for future clients to include more help in all areas, but especially in the area of sexual concerns.

An experimental study conducted by Grissom, Weiner, and Weiner (1975) attempted to determine whether the variables of recent life crisis and particular data of the self-concept were at least descriptive of the cancer patient and might serve to distinguish him from other groups. The experimental group consisted of 30 subjects under treatment for lung cancer. The control group consisted of 30 emphysema patients at the same hospital and 30 veterans (well controls). Subjects were given two questionnaires, the Recent Life Changes Questionnaire and the Clinical and Research Form of the Tennessee Self-Concept Scale. Four stepwise linear discriminant function analyses were computed to examine differences among the three groups of subjects and also between each possible pair of groups. Twenty subjects in each group were used in the establishment of the prediction systems, with the remaining 10 withheld for a cross-validation comparison. The most important variable for discriminating among all the groups was the Personal Integration Score from the Tennessee Self-Concept Scale, with the cancer group having the lowest mean and the well group having the highest. There was no significant difference among the mean life change unit totals. They found highly significant differences when the three groups of life change units were compared for scores above or below the mean level of person-

ality integration. Personality integration of the well control group who had not succumbed to illness, even though they had been subjected to considerable life stress, was found to be well above average. Each of the cancer subjects who showed a level of recent life stress below that considered necessary for the onset of illness also showed an extremely poor level of personality integration. It was concluded that there were definite indications of distinctive personality characteristics possessed by people who had cancer. It could not be determined if these may have been characteristic of those people before succumbing to the illness.

Udelman (1979) related that chronic illness has an evolutionary impact on all facets of a patient's life. Changes wrought by disease process include both physical and psychological. The self-concept involves how a patient views himself or herself as a total person. This may involve role, status, goals, and value systems. Body-image relates to observable physical and physiological modifications that are products of illness. If a modality of treatment destroys the child-bearing capacity and this role has been central in a woman's identity, the surgical procedure may present serious psychological effects. Men have been taught to be strong. They could not cry. Illness threatens this basic role of a male. Both self-esteem and body-image are involved, with reactions of men and women differing in some aspects. Because of illness, a patient may fear losses of personal identity.

Lewis, Gottesman, and Gutstein (1979), designed a study, built upon the assumption that specific psychological changes accompany the crisis state and that adaptation to a crisis occurs within six to eight weeks after onset. Psychological tests were administered to a group of sub-

jects in crisis. This was composed of 11 male and 24 female patients undergoing surgery for cancer. A comparison group composed of 19 male and 16 female patients undergoing surgery for less serious illnesses was also tested. Variables included measures of anxiety, self-esteem, depression, perceived locus of control, and a general measure of crisis. Tests were administered four times, first on the night before surgery and thereafter at three week intervals. Results indicated significant psychological changes only in the crisis group, in which feelings of helplessness preceded the appearance of depression and lowered self-esteem.

Bard and Sutherland (1977) reported that for some women, self-worth and acceptability as women have been predicated upon body attractiveness throughout their lives. Just the possibility of breast amputation could incite the feelings that life is no longer worth living. They found that women after mastectomy usually had painful fantasies of future consequences of relating to people without an intact and acceptable body. In some instances, the patient's fearful projections of future rejection by people, involved her most intimate relationships, such as those with her husband or children. The study group consisted of twenty white women between the ages 28 and 58.

In discussing the psychological response to cancer, Phipps, Long, and Woods (1979), related that once the diagnosis of cancer has been made, the patient and his family might be overwhelmed and immobilized. She cited one patient as saying "I cried all day Saturday, Sunday and Monday. My daughter and my husband wanted to help, but didn't know how. I know my daughter was scared that she would get cancer too." Not all patients can openly express their feelings. Consequently, the nurse may

have difficulty gathering data in order to assess and plan interventions. Some individuals are stoical, feeling it is a sign of weakness to display their psychological devastation in public. The nurse must be alert to the subtle cues that may indicate that intervention is needed. It was further related that the general psychologic responses to a diagnosis of cancer are those accompanying the grieving process. The patient and his family may go through a period of denial during which there may be a delay in beginning therapy. Anxiety, depression, regressive behavior, and anger might be manifested.

Guilt was also cited by Phipps, Long, and Woods (1979) as a frequent psychologic response to the diagnosis of cancer. The cancer patient might feel that his disease was punishment for past actions of his life. He might also feel guilty if he had delayed seeking treatment. One of the most prevalent reactions described was a sense of isolation, of being cut off from those persons and things that were important to them. Perhaps the most profound isolation described was psychologic isolation, an inability to relate to and derive comfort from others, like the feeling of being alone in a crowd. They cautioned nurses to be comfortable with their own sexuality and sensitive to the patient's responses which might indicate that the patient was having some sexual disequilibrium. They reported that some patients were overwhelmed with fantasies of death and dying. Most patients were more concerned with the process of dying, fearing pain, mutilation, and deterioration in both their physiologic and psychologic status, than with death itself.

Burkhalter and Donley (1978) included a section by Ehlke on Psychological Aspects of Cancer. They reported that the patient with cancer

experienced a wide gamut of feelings from the very negative to the very positive. Probably the most frequent feeling was fear. They found fear of death to be very real in Western society because of the "life" orientation. The second fear that they found to be commonly experienced by oncology patients was fear of the unknown. Fear of altered body-image was also expressed along with fear of pain. They suggested that in planning care for the patient who was depressed as a result of a loss, it was important that the nurse keep in mind that the person would probably display grieving behavior. They cited the following ten stages of the grief process as discussed by Westburg: state of shock; expression of emotions; depression and loneliness; physical symptoms of distress; panic; sense of guilt; hostility and resentment; inability to return to usual activities; hope; and affirmation of reality. They also listed loneliness, dependency and rapid loss of identity as the other common occurrences. Along with these feelings, were changes in responsibility or roles that were present prior to the diagnosis. Women in general were reported to have more difficulty with fear or threat of a changed body-image than did men.

In 1980, Dulcey reported research findings that breast cancer causes the alteration of a woman's sexual image both directly and indirectly. Indirectly, the sexual image was reported to be affected by the diagnosis of cancer itself. Such a diagnosis was found to provoke much anxiety and depression. It was feared that these feelings could undermine the woman's sense of worth and alter her body image, then spread to affect her sexual image. No longer does her body appear as it did prior to surgery. This change also was found to serve as a constant

reminder of her bout with cancer and as such, could shake her sense of self-worth.

A study conducted by Levine and Zigler (1975) had as its major purpose to determine whether stroke, cancer, and heart disease patients differed in the degree to which they employed the defense of denial. The sample included 60 patients, 20 in each category. They reported that contrary to the conclusions of Hackett and Weisman, it would seem equally reasonable to argue that the use of denial was related to the impact of the disability or illness. The greater the threat to self, the more likely the individual was to avoid coming to terms with the consequences of his illness. The stroke patients appeared to employ denial more successfully than did the other two patient groups. It was also concluded that lung cancer patients employed greater denial than did the heart disease patients.

In the 1976 Roche Laboratories Series on Coping with Cancer, Hamburg emphasized that in all stressful situations, people must cope with the urgent problem of containing distress within tolerable limits, and with maintaining self-esteem and interpersonal relationships. Hope for cancer patients was reported to stem from a good self-image, healthy self-esteem, and the confidence that they can still exert a degree of influence on the world around them.

In exploring the problems encountered when caring for the young adult with cancer, Valentine (1978) found that those included were alteration in self-esteem, alterations in body image, disruption of interpersonal relationships, and the uncertainty of the future. These young adults were found to experience loss in relation to the changes in daily activities, independence, and self-worth as a result of their disease,

its treatments and toxicities. A specified patient population was described.

Marten (1978) provided a description of the integration of concepts from other disciplines into Orem's model of the patient as a self-care, goal-oriented, decision-making agent and applied them to the care of a woman recovering from a radical vulvectomy. For Jane, the vulvectomy patient, the surgery meant many things. It meant pain, anger, uncertainty about the future, greater need for acceptance by a significant other, and changes in body image associated with her sexuality. Her feelings of adequacy were threatened, and her self-esteem had been dealt a blow.

Stuart and Sundeen (1979), in discussing behaviors associated with altered self-concept, listed low self-esteem as a major problem of many people. They suggested the existence of a close relationship between feelings of low self-esteem and role conflict. Low self-esteem was felt to be a major dynamic element occurring with problems of disturbed body image. From Erikson, they listed the third alteration as identity confusion. Identity confusion could lead to resolution by the adoption of a deviant or negative identity. Another group of behaviors were found to arise when the individual experienced panic levels of anxiety. The panic state produced a blocking off of awareness, a collapse in reality testing, and feelings of depersonalization. Depersonalization was described as a feeling of unreality and alienation from oneself. The individual had great difficulty distinguishing self from others, and one's body had an unreal or strange quality about it. Since it was described as the subjective experience of the partial or total disruption of one's ego and the disintegration and disorganization of one's self-

concept, it was considered to be the most frightening of human experiences.

The concepts of the psychological construct, self-concept, as altered by the diagnosis of cancer identified in this concept analysis from the review of the literature were self-esteem, body image, role performance, and personal identity, each as altered by the diagnosis of cancer.

Semantic Differential Instrumentation

Edwards (1957) suggested that there has been a major area of interest in attitudes concerning the methods by which attitudes might be measured. Attitude scales, used in the measurement of attitudes, have proven to be useful in a variety of research problems. When a research worker is interested in measuring the attitudes of a large number of individuals, he may find that there is no available scale suitable for his purpose. Edwards (1957, p. 2) feels "it thus becomes necessary for him to construct his own scale".

Edwards (1957) cited the definition of an attitude as presented by Thurston (1946) as being the degree of positive or negative affect associated with some psychological object (p. 2). He further related:

> In the literature of psychology, the terms affect and feelings are used interchangeably. An individual who has associated positive affect or feeling with some psychological object is said to like that object or to have a favorable attitude toward the object. An individual who has associated negative affect with the same psychological object would be said to dislike that object or to have an unfavorable attitude toward the object (p. 2).

Ebel (1979, p. 366) defined the concept of an attitude as the "sum total of a man's inclinations and feelings, prejudice or bias, precon-

ceived notions, ideas, fears, threats, and convictions about any specific topic". He suggested that "some attitudes involve mainly feelings" and "that self-concepts are attitudes of a person toward him or herself". He believed that it was "an easier and generally better way to ask subjects directly what they believe or what they like to do" rather than having measurement based on direct observation. He favored the measurement of attitudes as being based on subjects' self-reports.

Selltiz, Wrightsman, and Cook (1976), in discussing research methods, related that unlike other attitude scales, structured scales like the semantic differential produce data which is almost totally uncontaminated by the investigator's views. They cited Osgood and his colleagues as suggesting "that the semantic differential makes possible the measurement and comparison of various objects by diverse subjects, and implying that the measuring instrument is not grossly affected by the nature of the object being measured or by the type of person using the scale" (p. 429-30). They therefore interjected the probability that if this is true, the semantic differential would be a solution to many of the problems of attitude measurement.

The semantic differential was presented as a general procedure for assessing affective responses by Summers (1970). He cited three features of the semantic differential that distinguish it as an instrument for social psychological research. Factors given were: (1) the structure has an unprecented amount of cross-cultural validation that yields a wealth of information about affective responses to a stimulus; (2) it is easy to set up, administer, and code, and is cost effective; and (3) since the form of a semantic differential is basically the same whatever the stimulus, research using this methodology can cumulate. He related

that perhaps the most important general contribution of the semantic differential "is the provision of a single attitude space for all stimuli"(p. 250). This he feels "permits analyses, comparisons, and insights that were virtually impossible with traditional instruments".

It was further related by Summers (1970, p. 250) that "subjects find it easier to use scales which relate meaningfully to the concepts being judged and make distinctions that are familiar". Three possible ways of graphically setting up semantic differential scales and the concepts to be rated were presented. (1) Concepts can be presented one at a time, with each concept followed by all of the scales on which it is to be rated. (2) A concept and one of the scales on which it is to be rated can be presented as a single item with the various concept scale combinations arrayed randomly one after another. (3) A single scale can be presented along with all of the concepts which are to be rated on it.

The validity of the semantic differential in attitude research was discussed by Summers (1970). The general validity of the scale was supported by the fact that it yields predicted results when it is used for the purpose of measuring attitudes. This statement Summers felt, was supported by studies which have compared the semantic differential measurement with attitude measurement and traditional scales. He also presented the test-retest reliability data obtained by Tannenbaum in 1953 concerning the semantic differential. Each of six concepts were judged against six evaluative scales by 135 subjects on two occasions separated by five weeks. The test-retest coefficients ranged from .87 to .93 with a mean r (computed by z-transformation) of .91.

The semantic differential is described by Osgood, Suci, and Tannenbaum (1957, p. 76) as being "a very general way of getting at a certain type of information, a highly generalizable technique of measurement which must be adapted to the requirements of each research problem to which it is applied". There are no standard concepts and no standard scales; rather the concepts and scales used in a particular study depend upon the purposes of the research. They use the term "concept" in a very general sense to refer to the "stimulus" to which the subject's checking operation is a terminal "response". It was suggested that since time and subject limitations do not permit complete coverage of all the relevant concepts in a given area, the investigator must sample. "Only those objects of judgment that are both relevant to and representative of the area of research interest should be included". The amount of material that could be covered in a semantic differential scale was discussed by Osgood, Suci, and Tannenbaum (1957). In sharing their experiences over the past several years, it was presented that even the slowest college student could be expected to make judgments at the rate of at least 10 items per minute, and that most come closer to 20 items per minute once they got underway. They recommended that one should allow about 10 to 15 minutes for a 100 item test.

In constructing the semantic differential scale, Osgood, Suci, and Tannenbaum (1957) suggested three areas that need to be included in the instructions for the subject: (1) orientation to the general nature of the task; (2) the significance of the scale positions and how to mark them; and (3) the attitude to be taken toward the task (speed, first impression, but true impression).

The semantic differential was developed by Osgood, Suci, and Tannenbaum (1957). They described it as a technique for measuring the psychological meaning of concepts or objects to an individual.

Polit and Hungler (1983) described the semantic differential as being structurally very similar to a set of graphic rating scales. The scale is highly flexible and easy to construct. The concept being rated can be anything from a person, place, situation, abstract idea to a controversial issue.

It was explained by Polit and Hungler (1983), that the respondent is asked to rate a given concept on a series of seven point bipolar rating scales. The scales consist of bipolar adjectives such as good-bad, important-unimportant, strong-weak, and beautiful-ugly. Usually several concepts are included in the same instrument so that comparisons can be made (if the same bipolar scales are used) across concepts.

Polit and Hungler (1983) cautioned that even though the researcher has considerable freedom in constructing bipolar scales, two considerations must guide the selection of the adjective: (1) the adjectives should be appropriate for the concepts being used and the information being sought; and (2) the extent to which the adjectives are measuring the same dimension or aspect of the concept.

According to Polit and Hungler (1983), the scoring procedure for semantic differential responses is essentially the same as for Likert Scales. Scores from one to seven are assigned to each bipolar scale response. Usually the positively-worded adjective is associated with higher scores. It was suggested that the direction of the adjective pairs be randomly reversed to prevent response biases. After proceeding in this fashion, scale responses associated with the same dimension can

be summed up and yield a total score. It was felt that clear instructions are essential and that an explicit example may be required.

CHAPTER III

METHODOLOGY

Introduction

The purpose of this study was to identify the defining characteristics of self-concept as they impact on the cancer patient's ability to function, and to develop an instrument that measures those defining characteristics. The purpose of this chapter is to describe how the researcher developed the Morris Scale to Assess Diagnosed Cancer Patients' Self-Concept. The parts of this chapter are instrument, subjects and setting, data collection, data analysis, and ethical considerations.

Instrument

A semantic differential instrument was utilized in this study. Much effort was involved in the design of this instrument. First, the investigator reviewed the pertinent literature. Then a structured-interview format was devised for use in a pilot study investigating self-concept as altered by the diagnosis of cancer (Morris, 1980). The interview format was used with 10 subjects who had been diagnosed as having cancer. Following completion of the study and analysis of the data, the structured-interview format was further refined. Following a

second review of the literature, a checklist of the behavioral and emotional components was compiled. The work of the many theorists, from the review of the literature, was used to compile the checklist. Since all of the behaviors and emotions extracted from the literature as the expected behaviors were negatives, 20 of the items were changed to positive items and became the unexpected behaviors and emotions.

Construct validity of the checklist was determined by a panel of experts in the field of oncology. Reliability of the checklist determined by administering the checklist to a group of 30 subjects on a test-retest basis at a 48 hour interval. This checklist was then used with 30 recently diagnosed cancer patients (Morris, 1982). It was felt after this study that the checklist would be a much stronger instrument if it could be developed into a semantic differential instrument. The development of the checklist into the semantic differential instrument is explained under data collection.

Subjects and Setting

This study was conducted in a three state region in the Midwest. The target population for this study included the entire population of cancer patients who were scheduled for office visits with one oncologist during a three week period. The instrument was given to each person as they signed in at the oncologist's office. They were asked by the receptionist to fill out the instrument. This was done prior to their seeing the doctor.

Data Collection

The 60 items from the checklist were developed into a semantic differential format by listing the opposite of each item. A panel of three nurse experts in oncology nursing were selected to validate the opposites of each feeling or behavior, as well as rate each pair of opposites by indicating on a scale of one to four how opposite they thought the word or phrase was. They were asked to use the scale of four being the most opposite and one being the least opposite.

The panel of experts was then asked to use the scale of one to four to indicate how relevant they felt the word or phrase was to the feelings and/or behaviors that the cancer patient has, with four being the most relevant and one being the least relevant. The third area the panel of experts was asked to consider was to identify which part of the self-concept was presented by the word or phrase. The four parts they were asked to identify were self-esteem (S), body image (B), personal identity (P), and role performance (R). This process was repeated until there was agreement among the panel of experts. Those items that were agreed upon as being the defining characteristics of the "self-concept: altered" in the cancer patient were then included in the semantic differential instrument. Each word or phrase and its opposite were placed on a seven point bipolar scale. Even numbered items were placed for a rating scale of seven, six, five, four, three, two, and one. Odd numbered items were placed for a rating scale of one, two, three, four, five, six, seven.

A second panel of twelve college instructors, who are colleagues of the investigator, were then asked to edit the instrument for clarity of

directions, readability, and appropriateness of those items. Their consensus, comments, and suggestions were incorporated into the instrument. This was then given consideration for decisions by the first panel of experts.

The instrument was then mailed to 30 cancer patients known to the investigator. They were asked to complete the instrument and return it in the stamped addressed envelope. Two weeks later, they were mailed a second identical instrument and asked to complete it and return it in the stamped addressed envelope. Each time they were asked to mark their birth month, day, and year at the top of the instrument. Test-retest reliability was obtained by this method.

Data Analysis

Validity of the instrument was obtained by the panel of experts. Reliability data for the semantic differential instrument was obtained by analyzing the data from the test-retest instruments by means of the Pearson Product Moment Correlation Coefficient calculated between the total scores of test one and test two.

The Chi-Square Goodness of Fit Test was used to compare each item by category to the overall responses for all items. By this method, the items which had a correlation coefficient which was significant at the 0.05 level or less and which were on the high side of the scale could be identified. The scale was broken down into three categories of one through three, four, and five through seven.

Analysis of Variance was used to compare for a significant difference at the 0.05 level or less among the four parts of self-concept being self-esteem, body image, personal identity, and role performance.

Ethical Consideration

Ethical and legal considerations of the subjects and the researcher were of foremost importance in the conduction of the study. Consent was implied by the subjects completing the instrument. All of the participants were given instructions in writing prior to their filling out the instrument. The risks to the participants were minimal.

The information obtained throughout the study was used only for the purpose of the study, and all information was considered confidential. The compiled data was made available to the panel of experts and the oncologist upon request.

CHAPTER IV

PRESENTATION OF THE FINDINGS

Introduction

The purpose of this study was to identify the defining characteristics of self-concept as they impact on the cancer patient's ability to function, and to develop an instrument that measures those defining characteristics. An instrument to be used for this study was developed by the investigator based on the defining characteristics of the patient diagnosed as having cancer that were identified in the review of the literature. Assessment of clarity of the instrument items, time to complete the instrument, reliability to assign scores consistently, and validity of the items to adequately represent the defining characteristics of the cancer patient was sought. Data were collected and analyzed on the testing of the research instrument.

Phase Two of the study utilized the developed research instrument to survey the defining characteristics identified by a population of cancer patients who visited the office of one oncologist during a three week period. Data were collected and analyzed from the responses made on the instrument by the cancer patients surveyed.

This chapter presents the methodology and data analysis of Phase One and Phase Two of the study. Description of Phase One presents the design of the instrument, testing done on the instrument, and analysis

of the test results. Phase Two describes the design of the survey, the setting of the survey, ethical considerations, and subjects used in the survey. Analysis and discussion of the statistical tests performed on the data obtained from the survey are presented.

Phase One: The Instrument

The first research objective of this study was to identify the defining characteristics of self-concept that are perceived to affect functioning in cancer patients. A self-administered instrument developed by the investigator using the review of literature as a basis of instrument items was constructed for the purpose of assisting cancer patients to convey their defining characteristics of self-concept and to collect demographic data. The instrument, constructed by the investigator, contained defining characteristics drawn from the literature; these items were coupled with a summated rating scale for each of the items and their opposite.

Design of the Instrument

The self-administered instrument was designed with the review of the literature serving as the information base for the development of the instrument. The defining characteristics of the self-concept of cancer patients identified in the literature were listed. Each item was assigned an opposite. A seven point bipolar rating scale accompanied each item. The rating scale allowed for varying degrees of the defining characteristic in relation to each item. In this way the respondent could make known his/her perception of the defining characteristics of self-concept in the cancer patient.

Creation of the Items

The items for this instrument were creating using the following steps:

1. An extensive review of the literature was performed to identify the defining characteristics of the self-concept of cancer patients as reported by researchers.

2. A list was drawn of all defining characteristics of the self-concept of cancer patients identified in the literature.

3. Duplicated items were withdrawn from the list. Fifty-six items remained listed.

4. Related items were grouped together.

5. The parts of self-concept were identified. Those parts identified were self-esteem, body image, role performance, and personal identity.

6. The opposites for each of the items were identified.

7. The 56 items were randomized for use on the instrument (Appendix B).

Example item--Distracted with opposite Focused.

Scaling of the Instrument

A seven point bipolar rating scale utilizing the Semantic Differential Instrument format was attached to each item and its opposite. There were five points on the scale which were not labeled. Odd numbered items were designated with a rating of one, two, three, four, five, six, seven. Even numbered items were designated with a rating of

seven, six, five, four, three, two, one. The scale was intended as a means for the respondent to indicate the degree of the item or the opposite they felt in response to reading the item and the opposite.

No indication of numerical value was given on the rating scale of the instrument presented to subjects, however, numerical values were assigned by the investigator and used to perform data analysis. An example follows:

Sample odd item FOCUSED____:____:____:____:____:____:____ DISTRACTED

Sample even item GUILTY ____:____:____:____:____:____:____ INNOCENT

Demographic Data

Demographic data collected from the sample population described characteristics of the sample including: (1) sex, (2) age, (3) site of cancer, (4) when diagnosed, and (5) an indication of the treatment or treatments received. A form for this data collection was placed on the last page of the instrument.

Instruction for Administration

The instrument was intended to be used as a survey instrument administered to patients who had been diagnosed as having cancer. Instructions were printed in the introductory section of the instrument (Appendix B). The instructions defined the purpose of the instrument, provided an explanation of what the items were, and explained how to read and interpret the examples. These instructions were followed by a sample item and a sample of a marked rating scale provided to assist respondents to understand what was expected of them in responding to the items in the instrument.

Testing of the Instrument

The instrument developed for this study was subjected to testing for:

1. Clarity
2. Time
3. Reliability
4. Validity

Results of the instrument testing procedures were analyzed to judge the adequacy of the instrument to gather data concerning the defining characteristics of self-concept in the cancer patient.

Clarity

A pilot test for clarity of items was performed by twelve of the investigator's peers. That group responding to the instrument was composed of all female, college instructors. The instrument was administered to those persons individually. Each instructor answered the instrument and wrote comments and suggestions to improve the clarity of the items and their opposites of the instrument. The comments and suggestions were then used to revise the instrument with the expectation that the investigator's intent and the respondent's understanding would more closely match.

Clarity was again tested for as a part of the validity testing done by the panel of three experts. Recommendations for change of the wording was sought from this panel as they performed the test for validity. These changes were made before the instrument was used in the survey.

Time

The pilot test for clarity also provided information on the time necessary for answering the instrument. At the time of pilot testing the instrument contained 56 items. The 12 instructor participants used an average length of time of 15 minutes to complete the instrument. Based on the average time established in the pilot testing, it was estimated that the instrument would require 15-20 minutes for the cancer population.

An additional observation of time required by the respondents to complete the instrument was made during the survey. The first ten persons of the survey population were observed by the receptionist in the oncology clinic for length of time required to complete the instrument. The shortest amount of time taken was 12 minutes and the longest amount of time taken was 18 minutes. Most respondents (4) took 16 minutes. The average length of time to complete the instrument was 15 minutes.

Reliability

Reliability of this instrument to allow scores to be consistently assigned over time to a group of subjects was tested for by using a two-week, test-retest correlation. Each item of the instrument was matched with itself for scores made on the item by the same individual at two separate testings occurring at a two-week interval. Thus, the reliability testing obtained correlation data for all 56 items of the instrument.

Method. The test-retest was conducted in the following steps:

1. An instrument was mailed to thirty subjects known to the investigator as having been diagnosed as having cancer.

2. The written instructions were found at the beginning of the instrument.

3. Each subject was instructed to mark the front sheet of the instrument with their birth month, date, and year as a coding mark.

4. Each subject was instructed to return the completed instrument in the enclosed envelope.

5. Two weeks later, twenty-five of the original thirty repeated steps 1-4.

Test-Retest Population

The sample population for the reliability testing of the instrument was composed of thirty subjects known by the investigator as having been diagnosed as having cancer. The instrument was mailed to the subjects with the instructions printed to complete the instrument. They were further instructed to place at the top of the first page of the instrument their birth month, date, and year. They were instructed to return the instrument in the stamped addressed envelope included with the instrument. Two weeks later, they were mailed a second identical instrument and asked to complete it and return it in the enclosed addressed envelope. They were again asked to place at the top of the first page of the instrument their birth month, date, and year. Twenty-five subjects returned the second instrument that was mailed. Data of this population appear in Table I.

TABLE I

SEX, AGE, RANGE, SITE OF CANCER, TIME SINCE DIAGNOSIS, TREATMENT RECEIVED OF THE RELIABILITY TESTING POPULATION

Total Population Surveyed	Number	Percent of Total
	25	100%
Sex:		
Male	11	44
Female	14	56
Age Range:		
20-29 years	1	4
30-39 years	4	16
40-49 years	5	20
50-59 years	4	16
60-69 years	6	24
70-79 years	5	20
Site of Cancer:		
Hodgkins	2	8
Melanoma	2	8
Myeloma	1	4
Thyroid	1	4
Lung	4	16
Breast	3	12
Prostate	2	8
Neck	1	4
Ovary	1	4

TABLE I (CONTINUED)

Colon	2	8
Spine	1	4
Kidney	1	4
Uterus	2	8
Intestine	1	4
Leukemia	1	4
Time Since Diagnosis:		
1-2 months	11	44
3-4 months	11	44
5-6 months	3	12
Treatment Received:		
Surgery only	8	32
Radiation only	2	8
Chemotherapy only	2	8
Surgery and Chemotherapy	7	28
Radiation and Chemotherapy	1	4
Surgery and Radiation	4	16
Surgery, Radiation, and Chemotherapy	1	4

The sample population was composed of 11 males and 14 females. The age ranges of the sample were one (20-29 years of age), four (30-39 years of age), five (40-49 years of age), four (50-59 years of age), six (60-69 years of age), and five (70-79 years of age).

The sample population reported 15 different locations as the site of their cancer. Table I lists those sites. In identifying the types of treatment received seven different treatments or combined methods of treatment were identified. These are listed in Table I.

The survey sample population was compared to the reliability testing population. There was a larger percent of females in both the survey and the reliability population (68.63 percent survey; 56 percent reliability). There was a larger percent of males in the reliability population (44) than the survey (31.37). The age range containing the greatest percentage of persons was the 60-69 year old (23.5 survey; and 24 reliability). The age range for the survey group was 18-90 years, while the age range for the reliability group was 20-79 years. Both the survey group and the reliability group listed 15 different sites of cancer. Each group identified seven different treatments or combined methods of treatment that they had received. The greatest difference between the survey group and the reliability group was in the length of time since their diagnosis. The survey group had been diagnosed from one month to 20 years, while the reliability group had been diagnosed from one to six months.

The survey population and the reliability testing population were very similar in the demographic areas of sex, age range, location of their cancer, and types of treatment or treatments received. The two populations were vastly different in the length of time since their

diagnosis. Thus the sample population which took the test-retest for reliability was representative of the survey population in sex, age range, location of their cancer, and types of treatment or treatments received, but vastly different in the area of length of time since their diagnosis.

Presentation and Analysis of the Test-Retest Reliability Testing

Establishing reliability of the instrument developed for this study so that scores could be assigned consistently was necessary to assess its usefulness in assisting cancer patients to identify their defining characteristics of self-concept. The test for estimating reliability of the items of the instrument was a test-retest to measure the consistency of performance the instrument elicited from one sample population on two separate occasions. The instrument was administered to the sample population under standardized conditions (same setting) at a two week interval. Item responses from the two instruments became a set of scores for each subject. Determination of the correlation of the sets of scores was sought to determine the reliability of the instrument to measure consistency over time. A Pearson Product Moment Correlation was calculated for each of the twenty five sets of paired scores from the 56 items of the instrument. The correlation coefficient (r) was taken as the estimate of reliability for the items on the instrument. The results of the Pearson Product Moment Correlation are displayed in Table II.

The closer the correlation was to 1.00 the more stable the item was presumed to be. The coefficient reflected the extent to which the item rank ordered the performance of the reliability testing subjects on two

TABLE II

RESULTS OF TEST-RETEST CORRELATION FOR
56 INSTRUMENT ITEM SCORES

Item Number	Correlation Coefficient	Item Number	Correlation Coefficient
1	0.9892	29	0.9532
2	0.8214	30	0.9751
3	0.9609	31	0.9875
4	0.9734	32	0.8885
5	0.9850	33	0.9214
6	0.9578	34	0.8370
7	0.8734	35	0.9975
8	0.9836	36	0.9620
9	0.9723	37	0.9110
10	0.9871	38	0.9556
11	0.9501	39	0.8845
12	0.9260	40	0.9860
13	0.9466	41	0.9632
14	0.8337	42	0.8790
15	0.9887	43	0.9202
16	0.9903	44	0.9841
17	0.8925	45	0.9849
18	0.8443	46	0.8884
19	0.9967	47	0.9949
20	0.9495	48	0.9908
21	0.9722	49	0.9843
22	0.9920	50	0.8802
23	0.9541	51	0.9654
24	0.9726	52	0.9847
25	0.9806	53	0.9663
26	0.9924	54	0.9975
27	0.9641	55	0.8770
28	0.9632	56	0.9912

separate testing occasions. All 56 items tested reliable (r=0.7 or greater). Twelve of the items tested greater than r=0.8, but less than r=0.9. The additional 44 items tested greater than r=0.9. The instrument was considered highly reliable containing all 56 reliable items.

Validity

Validity, which "is often defined as the extent to which an instrument is measuring what it is intending to measure," (Holsti, 1968) was tested for by using a panel of three experts to perform face and content validity procedures to judge the adequacy of the instrument to measure the content of the defining characteristics of self-concept in the cancer patient. They were also asked to judge if the opposites for each item were a true opposite. Their third assignment was to match each item and its opposite with the part of self-concept they felt it measured.

The Panel of Experts. The three judges chosen for the panel of experts were all female Registered Nurses. An inspection of the professional background and areas of expertise of the three judges chosen for this panel revealed that they were persons who, through acquired knowledge, research, work experience, and stated interest have expertise in the area of oncology nursing.

Procedure and Analysis of Data. Using a method described by Hambleton and co-workers (1975) cited in Waltz and Bausell (1981, p. 71), each expert judge was asked to perform content and face validity tests on the instrument developed for this study.

Face Validity. The panel of experts was asked to judge the face validity of the instrument on the basis the appearance the instrument would have to a layman. This was done by performing a cursory inspection of the instrument (Appendix A) to determine if the instrument would cause the reader to feel that it was measuring the defining characteristics of self-concept in the cancer patient. All three judges received a copy of the items and their opposites for inclusion into the instrument. Their determination was that reading the items and their opposites would cause the reader to feel that those items were measuring the defining characteristics of self-concept in the cancer patient.

Content validity. All three members of the panel of experts received and returned the form (Appendix A) to the investigator. This form contained: (1) a list of the items and their opposites, (2) Part I and a list of the items and their opposites for them to identify how opposite they felt the word or phrase was on a scale of 1-4 with 1 being the least opposite and 4 being the most opposite, (3) Part II and a list of the items and their opposites for them to indicate how relevant they felt the word or phrase was to the feelings and/or behaviors that the cancer patient has with 4 being the most relevant and 1 being the least relevant, and (4) Part III and a list of the items and their opposites for them to indicate which part of the self-concept was represented by each item. The scale for this was self-esteem (S), body image (B), role performance (R), and personal identity (P). Table III displays the judges' rating of Part I and Table IV displays the judges' rating of Part II. Their rating of Part III is listed in Table V.

TABLE III

CONTENT VALIDITY TESTING: JUDGMENT OF OPPOSITES OF INSTRUMENT ITEMS BY RATING PERFORMED BY PANEL OF THREE EXPERTS

Item	Opposite	Rating			
		1	2	3	4
DISTRACTED	PURPOSEFUL	X			
POWERLESS	POWERFUL				X
UNCLEAN	CLEAN				X
NERVOUS	CALM				X
OUT OF CONTROL	IN CONTROL				X
FRUSTRATED	ADJUSTED				X
HOPELESS	OPTIMISTIC				X
GUILTY	INNOCENT				X
WITHDRAWN	SOCIABLE				X
DEPENDENT	INDEPENDENT				X
HELPLESS	HELPFUL				X
REJECTED	ACCEPTED				X
RECALLING PAST UNPLEASANT ACTIVITIES	RECALLING PAST PLEASANT ACTIVITIES				X
FATIGUED	ENERGETIC				X
LIMITED FUNCTION	UNLIMITED FUNCTION				X
LOSS OF INTEREST IN OTHERS	INTACT INTEREST IN OTHERS				X
PREOCCUPATION WITH THOUGHTS ABOUT THE CANCER	NO THOUGHT ABOUT THE CANCER				X
WORTHLESS	WORTHWHILE				X
CHANGE IN DUTIES AS WIFE OR HUSBAND	NO CHANGE IN DUTIES AS WIFE OR HUSBAND				X
DIFFICULTY IN SLEEPING	NO DIFFICULTY SLEEPING				X
TEARFUL	EASILY AMUSED	X			
CHANGE IN DUTIES AS PRODUCTIVE WORKER	NO CHANGE IN DUTIES AS PRODUCTIVE WORKER				X
INTROVERTED	EXTROVERTED				X
DECREASED APPETITE	USUAL APPETITE				X
ANGRY	ACCEPTING				X

TABLE III (Continued)

FEELING DIFFERENT ABOUT MY BODY	UNCHANGED FEELINGS ABOUT MY BODY			X
ISOLATED	ACCOMPANIED		X	
LIFE THREATENED	NO THREAT TO LIFE			X
SAD	GLAD			X
HOSTILE	UNCHANGED EMOTIONS	X		
CHANGED BODY IMAGE	INTACT BODY IMAGE		X	
UNLOVED	LOVED			X
RESENTMENT	ACCEPTANCE		X	
DISMAL	CHEERFUL		X	
CHANGE IN DUTIES AS FAMILY PROVIDER	NO CHANGE IN DUTIES AS FAMILY PROVIDER			X
CONFUSED	CLEAR UNDERSTANDING			X
ABANDONED	SECURE		X	
DISFIGURED	WHOLE			X
UNCERTAIN	CERTAIN			X
FEAR OF DEATH	NO FEAR OF DEATH			X
FEAR OF UNKNOWN	NO FEAR OF UNKNOWN			X
RESTLESS	QUIET		X	
THREATENED ROLE PERFORMANCE	INTACT ROLE PERFORMANCE			X
PUNISHED	REWARDED			X
SHOCKED	NOT SURPRISED		X	
USELESS	USEFUL			X
CHANGE IN DUTIES AS MOTHER OR FATHER	NO CHANGE IN DUTIES AS MOTHER OR FATHER			X
GRIEF STRICKEN	NO FEELING OF GRIEF			X
TERRORIZED	UNAFRAID			X
UNHAPPY	HAPPY			X
IN STATE OF TURMOIL	TRANQUIL		X	
NUMB	SURE OF FEELINGS			X
PANICKY	BRAVE	X		
LOSS OF SEXUAL IDENTITY	INTACT SEXUAL IDENTITY			X
DEPRESSED	ELATED			X
DISBELIEF IN WHAT IS HAPPENING	ACCEPTANCE IN WHAT IS HAPPENING		X	

Index of Content Validity, 56 Items x 3 Judges=168 Items, 3 and 4 Ratings=156 Items, 156:168=0.9285 Index of Content Validity.

TABLE IV

CONTENT VALIDITY TESTING: JUDGMENT OF RELEVANCE OF INSTRUMENT ITEMS BY RATING PERFORMED BY PANEL OF THREE EXPERTS

Item	Opposite	Rating			
		1	2	3	4
DISTRACTED	PURPOSEFUL				X
POWERLESS	POWERFUL				X
UNCLEAN	CLEAN			X	
NERVOUS	CALM				X
OUT OF CONTROL	IN CONTROL			X	
FRUSTRATED	ADJUSTED				X
HOPELESS	OPTIMISTIC			X	
GUILTY	INNOCENT			X	
WITHDRAWN	SOCIABLE				X
DEPENDENT	INDEPENDENT				X
HELPLESS	HELPFUL			X	
REJECTED	ACCEPTED			X	
RECALLING PAST UNPLEASANT ACTIVITIES	RECALLING PAST PLEASANT ACTIVITIES			X	
FATIGUED	ENERGETIC			X	
LIMITED FUNCTION	UNLIMITED FUNCTION			X	
LOSS OF INTEREST IN OTHERS	INTACT INTEREST IN OTHERS			X	
PREOCCUPATION WITH THOUGHTS ABOUT THE CANCER	NO THOUGHT ABOUT THE CANCER			X	
WORTHLESS	WORTHWHILE			X	
CHANGE IN DUTIES AS WIFE OR HUSBAND	NO CHANGE IN DUTIES AS WIFE OR HUSBAND			X	
DIFFICULTY IN SLEEPING	NO DIFFICULTY SLEEPING			X	
TEARFUL	EASILY AMUSED				X
CHANGE IN DUTIES AS PRODUCTIVE WORKER	NO CHANGE IN DUTIES AS PRODUCTIVE WORKER			X	
INTROVERTED	EXTROVERTED				X
DECREASED APPETITE	USUAL APPETITE			X	
ANGRY	ACCEPTING				X

TABLE IV (Continued)

FEELING DIFFERENT ABOUT MY BODY	UNCHANGED FEELINGS ABOUT MY BODY		X
ISOLATED	ACCOMPANIED	X	
LIFE THREATENED	NO THREAT TO LIFE		X
SAD	GLAD	X	
HOSTILE	UNCHANGED EMOTIONS		X
CHANGED BODY IMAGE	INTACT BODY IMAGE		X
UNLOVED	LOVED	X	
RESENTMENT	ACCEPTANCE		X
DISMAL	CHEERFUL	X	
CHANGE IN DUTIES AS FAMILY PROVIDER	NO CHANGE IN DUTIES AS FAMILY PROVIDER		X
CONFUSED	CLEAR UNDERSTANDING		X
ABANDONED	SECURE	X	
DISFIGURED	WHOLE	X	
UNCERTAIN	CERTAIN		X
FEAR OF DEATH	NO FEAR OF DEATH		X
FEAR OF UNKNOWN	NO FEAR OF UNKNOWN		X
RESTLESS	QUIET	X	
THREATENED ROLE PERFORMANCE	INTACT ROLE PERFORMANCE	X	
PUNISHED	REWARDED		X
SHOCKED	NOT SURPRISED		X
USELESS	USEFUL	X	
CHANGE IN DUTIES AS MOTHER OR FATHER	NO CHANGE IN DUTIES AS MOTHER OR FATHER	X	
GRIEF STRICKEN	NO FEELING OF GRIEF	X	
TERRORIZED	UNAFRAID	X	
UNHAPPY	HAPPY	X	
IN STATE OF TURMOIL	TRANQUIL	X	
NUMB	SURE OF FEELINGS		X
PANICKY	BRAVE		X
LOSS OF SEXUAL IDENTITY	INTACT SEXUAL IDENTITY	X	
DEPRESSED	ELATED		X
DISBELIEF IN WHAT IS HAPPENING	ACCEPTANCE IN WHAT IS HAPPENING	X	

Index of Content Validity, 56 Items x 3 Judges=168 Items, 3 and 4 Ratings=168 Items, 168:168= 1.0 Index of Content Validity.

TABLE V

CATEGORIZATION OF CONTENT: JUDGMENT OF PARTS OF SELF-CONCEPT OF INSTRUMENT ITEMS BY RATING PERFORMED BY PANEL OF THREE EXPERTS

Item	Opposite	Categorization			
		S	B	R	P
DISTRACTED	PURPOSEFUL				X
POWERLESS	POWERFUL	X			
UNCLEAN	CLEAN				X
NERVOUS	CALM				X
OUT OF CONTROL	IN CONTROL		X		
FRUSTRATED	ADJUSTED			X	
HOPELESS	OPTIMISTIC	X			
GUILTY	INNOCENT				X
WITHDRAWN	SOCIABLE				X
DEPENDENT	INDEPENDENT			X	
HELPLESS	HELPFUL	X			
REJECTED	ACCEPTED				X
RECALLING PAST UNPLEASANT ACTIVITIES	RECALLING PAST PLEASANT ACTIVITIES				X
FATIGUED	ENERGETIC	X			
LIMITED FUNCTION	UNLIMITED FUNCTION			X	
LOSS OF INTEREST IN OTHERS	INTACT INTEREST IN OTHERS				X
PREOCCUPATION WITH THOUGHTS ABOUT THE CANCER	NO THOUGHT ABOUT THE CANCER				X
WORTHLESS	WORTHWHILE	X			
CHANGE IN DUTIES AS WIFE OR HUSBAND	NO CHANGE IN DUTIES AS WIFE OR HUSBAND			X	
DIFFICULTY IN SLEEPING	NO DIFFICULTY SLEEPING				X
TEARFUL	EASILY AMUSED				X
CHANGE IN DUTIES AS PRODUCTIVE WORKER	NO CHANGE IN DUTIES AS PRODUCTIVE WORKER			X	
INTROVERTED	EXTROVERTED	X			
DECREASED APPETITE	USUAL APPETITE				X
ANGRY	ACCEPTING				X

TABLE V (Continued)

FEELING DIFFERENT ABOUT MY BODY	UNCHANGED FEELINGS ABOUT MY BODY		X		
ISOLATED	ACCOMPANIED	X			
LIFE THREATENED	NO THREAT TO LIFE				X
SAD	GLAD				X
HOSTILE	UNCHANGED EMOTIONS	X			
CHANGED BODY IMAGE	INTACT BODY IMAGE		X		
UNLOVED	LOVED				X
RESENTMENT	ACCEPTANCE				X
DISMAL	CHEERFUL	X			
CHANGE IN DUTIES AS FAMILY PROVIDER	NO CHANGE IN DUTIES AS FAMILY PROVIDER			X	
CONFUSED	CLEAR UNDERSTANDING				X
ABANDONED	SECURE				X
DISFIGURED	WHOLE		X		
UNCERTAIN	CERTAIN	X			
FEAR OF DEATH	NO FEAR OF DEATH				X
FEAR OF UNKNOWN	NO FEAR OF UNKNOWN				X
RESTLESS	QUIET	X			
THREATENED ROLE PERFORMANCE	INTACT ROLE PERFORMANCE			X	
PUNISHED	REWARDED				X
SHOCKED	NOT SURPRISED				X
USELESS	USEFUL	X			
CHANGE IN DUTIES AS MOTHER OR FATHER	NO CHANGE IN DUTIES AS MOTHER OR FATHER			X	
GRIEF STRICKEN	NO FEELING OF GRIEF				X
TERRORIZED	UNAFRAID				X
UNHAPPY	HAPPY	X			
IN STATE OF TURMOIL	TRANQUIL			X	
NUMB	SURE OF FEELINGS				X
PANICKY	BRAVE				X
LOSS OF SEXUAL IDENTITY	INTACT SEXUAL IDENTITY			X	
DEPRESSED	ELATED	X			
DISBELIEF IN WHAT IS HAPPENING	ACCEPTANCE IN WHAT IS HAPPENING				X
Total 56		14	5	9	28

S=Self-esteem, B=Body image, R=Role performance, P=Personal identity

The index of content validity (CVI) was calculated as the proportion of 3 and 4 rated items to the total possible items. In Part I, 156 of the 168 items received a 3 or 4 rating. The CVI for Part I was calculated as .9285. For Part II, all 168 of the 168 items received a 3 or 4 rating accounting for a CVI of 1.0.

The calculated content validity index was high for both Part I and Part II meaning that the items of the instrument could be considered to be measuring the defining characteristics of self-concept of the cancer patient.

In Part III of the process, the panel of experts identified items representative of self-esteem to be items 2, 7, 11, 14, 18, 23, 27, 30, 34, 39, 42, 46, 50, and 55. They identified items 3, 26, 31, 38, and 54 as being representative of body image. Items 6, 10, 15, 19, 22, 35, 43, 47, and 51 were identified as being representative of role performance. Those listed as representative of personal identity were items 1, 4, 5, 8, 9, 12, 13, 16, 17, 20, 21, 24, 25, 28, 29, 32, 33, 36, 37, 40, 41, 44, 45, 48, 49, 52, 53, and 56. These are included in Table V. A listing of those items is found in Appendix A.

The instrument, developed by the investigator utilizing the defining characteristics of self-concept of the cancer patient identified in the literature, was tested for clarity and changed when indicated. Testing for reliability found the instrument to have a correlation coefficient of r=0.9313. Face and content validity were tested. The index of content validity for Part I was .9283, and for Part II was 1.0. Part III divided the items that were representative of the parts of the self-concept. The developed instrument was used as the survey tool in a survey of cancer patients visiting one oncologist's office during a

three week period to identify their defining characteristics of self-concept in the cancer patient.

Phase Two: The Survey

The second research objective of this study was to develop an instrument which assesses those defining characteristics of self-concept that are perceived to alter functioning for the cancer patient. To identify those defining characteristics of self-concept the cancer patients would select, a survey was conducted using the instrument developed for this study.

Phase Two of this research study was a descriptive survey conducted at one oncology clinic in a moderate sized midwestern city using the self-administered instrument developed by the investigator as the survey tool. Subjects were 51 non-institutionalized cancer patients who completed the instrument when they came to the oncology clinic for a scheduled visit. Survey participants indicated on the instrument how they were feeling now about each item on the instrument.

The content collected on the 56 item instrument was analyzed for frequency of choosing the degree of the item or its opposite. The number of choices were tested for significance by the use of Chi-Square. The means of the choices on each of the four parts of self-concept were tested by using Analysis of Variance.

Design

The design of this phase of the study was a non-experimental, descriptive survey. The purpose of the survey was to identify the

defining characteristics of self-concept in the cancer patient that the sample population identified.

Setting

The setting for the survey included on oncology clinic in a moderate sized midwestern city. The patients were given the instrument when they checked in with the receptionist. The instrument was completed in the waiting room before they visited the doctor.

Ethical Considerations

The oncologist at the oncology clinic selected as the site for the survey of this study was contacted to obtain permission to use the clinic as the research site, and for access to the individuals who are scheduled for visits at the clinic. The purpose of the study including both the instrument development and testing, as well as the purpose of the survey was explained. Permission was obtained from the oncologist.

No risk was anticipated to occur to the subjects as a result of participating in this study. Agreement or refusal to participate in the study in no way affected the subjects' being seen in the clinic or their treatment in any way. Subjects who refused to participate or those who began filling out the instrument and decided not to finish were not included in the study. Anonymity of participants was assured; this anonymity was protected by reporting only group data and by not identifying by name either individuals or the clinic when reporting this study.

Willingness to participate in this study was considered to exist when the individual completed the instrument. Consent to participate

was considered to be expressed by the individual through accepting and responding to the instrument.

Instrumentation

A self-administered instrument developed by the investigator to identify the defining characteristics of self-concept of the cancer patient was the instrument used for this survey. The 56 item instrument was composed of items and their opposites identified in the literature as being the defining characteristics of self-concept of the cancer patient. The instrument had previously been subjected to testing for clarity, time, reliability, and validity.

Subjects

The sample for the survey was composed of all of the cancer patients who visited one oncology clinic during a three week period. The sample population contained 51 cancer patients who visited the clinic. The criteria for selection of the subjects for the study were that these individuals were:

1. Age of 18 or over
2. Able to read, understand, and write English
3. Willing to receive and complete the instrument

Data gathered from the 51 survey subjects included: sex, age, site of cancer, time since diagnosis, and treatment or treatments received. The receptionist in the clinic checked when the instrument was returned to be sure this information was filled out. She also checked to be sure each item was answered on the instrument. If either needed to be com-

pleted, she asked the subject to do so. All 51 instruments were complete. Table VI contains demographic data for this group.

The sample population of this survey was found to contain 16 males (31.37 percent) and 35 females (68.63 percent). Two persons refused to accept the instrument. One subject started to complete the instrument and then told the receptionist she did not want to finish. These three subjects were not included in the 51 subjects who completed the instrument.

The age ranges of the survey sample population were one (18-19 years of age), three (20-29 years of age), five (30-39 years of age), six (40-49 years of age), eleven (50-59 years of age), twelve (60-69 years of age), eleven (70-79 years of age), one (80-89 years of age), and one (90-90+ years of age).

The survey population identified 15 different sites of cancer. The largest percentage cited was breast with 27.45 percent. The next most indicated site of cancer was leukemia with 13.72 percent.

In responding to the area of time since diagnosis of cancer, the survey population ranged from one month to 20 years since their diagnosis. Nine indicated less than six months. Six had been diagnosed six to twelve months. In the one to two year category were 15, with 14 in the three to four year category. Five persons had been diagnosed five to ten years with one person being diagnosed in each of the 10-15 year and 15-20 year categories.

Seven different treatments or combinations of treatments were identified by the survey sample population as being the treatment or treatments they had received since their diagnosis of cancer. The largest number had received chemotherapy alone (18). Two indicated that they

TABLE VI

SEX, AGE, RANGE, SITE OF CANCER, TIME SINCE DIAGNOSIS, TREATMENT RECEIVED OF THE SURVEY TESTING POPULATION

Total Population Surveyed	Number	Percent of Total
	51	100%
Sex:		
Male	16	31.37
Female	35	68.63
Age Range:		
18-19 years	1	1.96
20-29 years	3	5.88
30-39 years	5	9.803
40-49 years	6	11.76
50-59 years	11	21.568
60-69 years	12	23.529
70-79 years	11	21.568
80-89 years	1	1.96
90-90+ years	1	1.96
Site of Cancer:		
Lung	3	5.88
Breast	14	27.45
Cervix	2	3.92
Prostate	2	3.92
Testicular	1	1.96
Colon	4	7.843

TABLE VI (Continued)

Leukemia	7	13.725
Lymph Glands	5	9.803
Pelvic Area	1	1.96
Bone	4	7.843
Lymphoma	2	3.92
Melanoma	2	3.92
Head and Neck	2	3.92
Brain	1	1.96
Hodgkins	1	1.96
Time Since Diagnosis:		
Less than 6 months	9	17.64
6-12 months	6	11.76
1-2 years	15	29.41
3-4 years	14	27.45
5-10 years	5	9.803
10-15 years	1	1.96
15-20 years	1	1.96
Treatment Received:		
Surgery only	5	9.803
Radiation only	2	3.92
Chemotherapy only	18	35.294
Surgery and Chemotherapy	11	21.568
Surgery and Radiation	3	5.88
Radiation and Chemotherapy	4	7.843
Surgery, Radiation, and Chemotherapy	8	15.686

had received radiation alone while five indicated they had received surgery alone. Surgery and chemotherapy was indicated by 11; surgery and radiation by three; radiation and chemotherapy by four; and surgery, radiation, and chemotherapy by eight.

Phase Two: Data Collection

Data collection was carried out each day during a three week period at the oncology clinic. The procedure was the same for each day. The steps of the procedure for conducting the survey were:

1. As patients signed in at the oncology clinic for their scheduled visit, they were told that patients in the clinic were being asked to participate in a study.

2. Each of the patients were given an instrument and told that instructions for completion of the instrument were found on the first page of the instrument.

3. Each patient was requested to complete and return the instrument to the receptionist.

4. To prevent investigator bias that might occur, the patients were never seen by the investigator.

Data Analysis

Responses made to the survey by non-institutionalized cancer patients completing the developed instrument were analyzed. The Chi-Square Goodness of Fit Test was used to compare each item by category to the overall responses for all the items. By this method, the items which had a correlation coefficient which was significant at the 0.05 level or less and which were on either the high side or the low side of

the scale could be identified. The scale was broken down into three categories of one through three, four, and five through seven. Analysis of Variance was used to compare the means of items representative of the four parts of self-concept for a significant difference at the 0.05 level or less. The four parts of self-concept were self-esteem, body image, personal identity, and role performance.

Item Scaling

The unit of analysis for this study was the item and its opposite in which the subjects scaled in terms of the degree their feelings were at the time they completed the instrument. The assigned values ranged from 1 for the opposite of the item to 7 for the item.

The number of responses to each item was the same for each of the 56 items. The N (number of responses) is displayed in Appendix C.

Analysis of Data for Frequency of Choice

Respondents to the survey instrument were able to indicate how they were feeling about each item using a scale of 7 possible responses. Scale choices 1, 2 and 3 indicated a feeling in the opposite of the item. Scale choice 4 was a neutral feeling of neither the item or its opposite. Scale choice 5, 6 and 7 indicated a feeling of the item. For the purpose of the Chi-Square Goodness of Fit Test, the responses for each item were calculated using three categories. They were responses with 5, 6, or 7 in Category 1; responses with 4 in Category 2; and responses with 3, 2, or 1 in Category 3. From the Chi-Square Goodness of Fit Test, 27 items were found to be significant at the 0.05 level or less. Sixteen of the 27 items were significant in the direction of the

item, indicating that they were significant in the direction of the defining characteristic the literature said that cancer patients had. These items are listed in Table VII. Ten of the 27 significant items were significant in the opposite direction to what the literature had said the defining characteristics would be for the cancer patient. Those items are found in Table VIII. One item was significant at the four point on the scale. The patients felt neither punished nor rewarded, so they answered significantly in the center category or category two. Table IX contains those scores. One interesting thing was noted on the expected values figured for the Chi-Square Goodness of Fit. Sixteen additional items had responses above the expected value of 28.9 in Category 1. Ten additional items had responses above the expected value of 20.4 in Category 3. Even though these items were not significant at the 0.05 level or less, the number of responses were above the expected value level.

An Analysis of Variance Test was computed on the means of the responses of items in the four parts of self-concept. The four parts of self-concept identified were self-esteem, body image, role performance and personal identity. There was no significant difference among the means of the four groups at the 0.05 significance level. Table X contains the Analysis of Variance Summary table.

TABLE VII

SIGNIFICANT INSTRUMENT ITEMS
AND RESPONSES CATEGORY 1

NERVOUS	10 : 4 : 18 : 0 : 6 : 4 : 9	CALM
FRUSTRATED	16 : 9 : 11 : 0 : 2 : 5 : 8	ADJUSTED
SOCIABLE	11 : 2 : 5 : 0 : 14 : 9 : 10	WITHDRAWN
UNLIMITED FUNCTION	7 : 2 : 0 : 0 : 8 : 11 : 23	LIMITED FUNCTION
NO THOUGHT ABOUT THE CANCER	2 : 2 : 5 : 0 : 20 : 9 : 13	PREOCCUPATION WITH THOUGHTS ABOUT THE CANCER
NO CHANGE IN DUTIES AS WIFE OR HUSBAND	9 : 4 : 3 : 10 : 6 : 4 : 15	CHANGE IN DUTIES AS WIFE OR HUSBAND
DIFFICULTY SLEEPING	18 : 3 : 11 : 0 : 3 : 9 : 7	NO DIFFICULTY SLEEPING
FEELING DIFFERENT ABOUT MY BODY	12 : 15 : 12 : 0 : 0 : 1 : 11	UNCHANGED FEELINGS ABOUT MY BODY
LIFE THREATENED	19 : 10 : 12 : 0 : 1 : 0 : 9	NO THREAT TO LIFE
NO CHANGE IN DUTIES AS FAMILY PROVIDER	3 : 2 : 1 : 18 : 4 : 3 : 20	CHANGE IN DUTIES AS FAMILY PROVIDER
CERTAIN	5 : 2 : 1 : 0 : 17 : 8 : 18	UNCERTAIN
NO FEAR OF UNKNOWN	10 : 0 : 1 : 0 : 13 : 10 : 17	FEAR OF UNKNOWN
INTACT ROLE PERFORMANCE	9 : 3 : 0 : 0 : 13 : 10 : 16	THREATENED ROLE PERFORMANCE
RESTLESS	16 : 10 : 13 : 0 : 3 : 1 : 8	QUIET
NO CHANGE IN DUTIES AS MOTHER OR FATHER	11 : 4 : 2 : 11 : 2 : 4 : 17	CHANGE IN DUTIES AS MOTHER OR FATHER
ELATED	3 : 1 : 0 : 0 : 12 : 9 : 26	DEPRESSED

TABLE VIII

SIGNIFICANT INSTRUMENT ITEMS
AND RESPONSES CATEGORY 3

GUILTY	6 : 4 : 6 : 0 : 6 : 2 : 27	INNOCENT
RECALLING PAST PLEASANT ACTIVITIES	11 : 7 : 8 : 2 : 16 : 2 : 5	RECALLING PAST UNPLEASANT ACTIVITIES
LOSS OF INTEREST IN OTHERS	5 : 2 : 14 : 0 : 1 : 4 : 25	INTACT INTEREST IN OTHERS
WORTHLESS	3 : 5 : 12 : 1 : 12 : 7 : 11	WORTHWHILE
EXTROVERTED	13 : 3 : 13 : 0 : 16 : 2 : 4	INTROVERTED
ACCOMPANIED	22 : 3 : 6 : 0 : 6 : 6 : 8	ISOLATED
GLAD	11 : 13 : 14 : 0 : 6 : 2 : 5	SAD
HOSTILE	5 : 2 : 7 : 0 : 7 : 7 : 23	FRIENDLY
UNLOVED	5 : 4 : 3 : 0 : 8 : 3 : 28	LOVED
SECURE	31 : 7 : 7 : 0 : 5 : 1 : 0	ABANDONED

TABLE IX

SIGNIFICANT INSTRUMENT ITEMS
AND RESPONSES CATEGORY 2

PUNISHED	4 : 7 : 7 : 23 : 3 : 4 : 3	REWARDED

TABLE X

ANALYSIS OF VARIANCE TABLE - SELF CONCEPT
FOUR GROUPS

Source of Variance	SS	df	MS	F
Between groups	198.25	3	66.08	4.31
Within groups	14819.75	52	284.99	
Total	15018.			

$F \leq 8.58$ at .05 No Significance noted

Summary of the Data Analysis

The population of the survey group was made up of the entire population of patients who entered one oncologist's office during a three week period. The findings of this study represented their selection of the defining characteristics of self-concept on the instrument developed for use in this study. The instrument used was considered valid for content by three experts. Reliability of the instrument was tested and found to be highly reliable.

Analysis of the data identified those items most frequently chosen and those items and their opposites which were significant at the 0.05 level or less. These analyses have been displayed and discussed. The items that were found to be significant were items 4, 6, 9, 15, 17, 19, 20, 26, 28, 35, 39, 41, 42, 43, 47, and 55. These were items that were reflected in the literature as being defining characteristics of the

self-concept of cancer patients. The opposites were found to be significant for items 8, 13, 16, 18, 23, 27, 29, 30, 32, and 37. This was not what was expected. These were significant in the opposite direction of what the literature reflected the defining characteristics of self-concept in the cancer patient would be.

Sixteen additional items came out with a higher than expected number of responses. Even though this was not at the significant level, it is in agreement with the literature reviewed. There were also 10 items in which the opposite received higher than the expected number of responses, but not at the significant level. This is also contrary to what is presented in the literature as the defining characteristics of self-concept in the cancer patient. The findings in this study did not support the items identified in the review of the literature as being the defining characteristics of self-concept in the cancer patient. Only ten of the 56 items were found to be significant at the 0.05 level or less. Based on the data collected, one must question the validity of the literature reviewed. Is there a discrepancy between the defining characteristics of the self-concept in the cancer patient reported by the authors in the literature reviewed and the true defining characteristics of the self-concept in the cancer patient?

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

"Self-concept:altered", has been identified by the Third National Conference on the Classification of Nursing Diagnosis as one of 37 broad diagnostic category areas that nurses can use to state the patient's actual or potential health problem (Price, 1980). It was the belief of this investigator and supported by the literature reviewed that the self-concept is altered in the patient diagnosed as having cancer. Identification of the defining characteristics of self-concept as perceived by cancer patients was needed to assist nurses and other health workers to know how to meet the needs of their cancer patients. As the second leading cause of death in the United States, cancer alone claims over 350,000 lives per year and brings disruption into the lifestyles of thousands more (American Cancer Society, 1980). The tremendous psychological, social, and economic impact brought about by this disease makes caring for people with cancer one of the largest and most significant tasks facing nursing today. A standardized instrument to measure the defining characteristics of self-concept of the cancer patient could not be found in the literature.

Summary

The purpose of this study was to identify the defining characteristics of self-concept as they impact on the cancer patient's ability to function, and to develop an instrument that measures those defining characteristics. Information obtained from this study was intended to lay the groundwork for further refinement of an instrument to measure the defining characteristics of the self-concept of the cancer patient.

This research study was performed in two phases: Phase One, the development and testing of the instrument and Phase Two the survey of a population of cancer patients utilizing the instrument developed for this study.

A 56 item, self-administered instrument was developed and tested by the investigator to be used for this study (Phase One). A panel of three experts performed face and content validity procedures to judge the adequacy of the instrument to measure the content of the defining characteristics of self-concept in the cancer patient. They were also asked to judge if the opposites chosen for each item were a true opposite. Their third assignment was to match each item and its opposite with the part of self-concept they thought it measured. A seven point bipolar rating scale utilizing the Semantic Differential Instrument format was attached to each item and its opposite. The instrument also collected data from the sample population on sex, age, site of cancer, when diagnosed, and the treatment or treatments received. A pilot test for clarity of items was performed by twelve of the investigators peers. Clarity was again tested for as a part of the validity testing done by the panel of three experts. The pilot test for

clarity also provided information on the time necessary for answering the instrument. Reliability of this instrument to allow scores to be consistently assigned over time to a group of subjects was tested for by using a two-week, test-retest correlation. The sample population for the reliability testing of the instrument was composed of twenty-five subjects known by the investigator as having been diagnosed as having cancer. The correlation coefficient for the instrument (all items combined) was r=0.9313. All 56 items on the instrument had correlation coefficients of r=0.7 or higher. Validity of the instrument with respect to measurement of defining characteristics of self-concept in the cancer patient was rated by a panel of three experts to be 1.0 index of content validity and 0.9285 on rating of opposites. The panel of experts also categorized the items on the instrument into the four parts of the self-concept.

Phase Two of this research study was a descriptive survey conducted at one oncology clinic in a moderate sized midwestern city using the self-administered instrument developed by the investigator as the survey tool. Subjects were 51 non-institutionalized cancer patients who completed the instrument when they came to the oncology clinic for a scheduled visit. The survey sample compared closely to the reliability sample in sex, age, site of cancer, and treatment or treatments received. In the area of time since diagnosis, there was a vast difference with all of the reliability group being diagnosed within the past six months. The survey group had been diagnosed from one month to 20 years.

The content collected on the 56 item instrument was analyzed for frequency of choosing the degree of the item or its opposite. The

number of choices were tested for significance by the use of the Chi-Square Goodness of Fit Test. From this test, 16 items were found to be significant in the direction of the item, indicating that they were significant in the direction of the defining characteristic the literature said that cancer patients had. Ten of the 27 significant items were significant in the opposite direction to what the literature had said the defining characteristics would be for the cancer patient. One item found patients feeling neither punished or rewarded, therefore, category two. Sixteen additional items had responses above the expected value of 28.9 in Category 1. Ten additional items had responses above the expected value of 20.4 in Category 3. Even though these items were not significant at the 0.05 level or less, the number of responses were above the expected value level.

An Analysis of Variance Test was computed on the means of the responses to items in the four parts of self-concept. The four parts of self-concept identified were self-esteem, body image, role performance, and personal identity. There was no significant difference among the means of the four groups at the 0.05 significance level. Therefore, one part of the self-concept was not altered significantly more than the other three parts.

Conclusions

A 56 item instrument was developed to provide a method for the cancer patient to identify their defining characteristics. This instrument was given extensive testing. Validity of the instrument with respect to measurement of the defining characteristics of self-concept in the cancer patient was rated by a panel of three experts to a 1.0

index of content validity. This was a perfect score. The index of content validity on the rating of opposites was 0.9285. This was also a very high score. Twenty-five subjects completed the instrument on a two-week test-retest basis. The scores from the first test and the scores from the second test were tested by the Pearson Product Moment Correlation Coefficient. The correlation coefficient for the instrument (all items combined) was r=0.9313. All 56 items on the instrument had correlation coefficients of r=0.7 or higher.

Phase Two of this study was a survey of 51 non-institutionalized cancer patients who completed the instrument. The results of the data collected were analyzed for frequency of choosing the degree of the item or its opposite. Only 16 items were found to be significant on the Chi-Square Goodness of Fit Test in the direction the literature said cancer patients defining characteristics of self-concept were. An additional 10 items were significant but in the opposite direction to what was reflected in the literature. Twenty six additional items had responses above the expected value, but not at the significant level. Sixteen of those items were in the direction as reflected in the literature, but 10 of those items were in the opposite direction of what is presented in the literature as the defining characteristics of self-concept in the cancer patient. Based on the data collected, one must question the validity of the literature reviewed. Are the defining characteristics of the self-concept in the cancer patients reported by the authors in the literature reviewed the true defining characteristics of the self-concept in the cancer patient?

The reliability sample and the survey sample compared closely in sex, age, site of cancer, and treatment or treatments received. How-

ever, there was a vast difference between the two groups in time since diagnosis with the reliability sample having been diagnosed from one to six months, while the survey sample had been diagnosed from one month to 20 years. One has to question if this may not have affected the responses on the instrument by the survey group. It would appear that the longer a cancer patient lives since diagnosis, the less alteration they would have in their self-concept. This would change most probably if they had a recurrence.

Since 42 of the 51 patients in the survey group had been diagnosed longer than the six months that the reliability group had been diagnosed, this investigator must make the conclusion that the instrument is worthy of keeping and that none of the instrument items be discarded until further testing has been done.

Recommendations

Based on the findings of this study, the investigator has made the following recommendations for further refinement of an instrument to measure the defining characteristics of self-concept of the cancer patient:

1. That additional research be carried out utilizing the data obtained in this study.

2. Replication of this study, on a population of cancer patients who have been diagnosed two to four weeks prior to the study, utilizing items already developed which have tested reliable at the r=0.7 or greater level.

3. Conduct a study using a different instrument, for example using defining characteristics to choose from or open-ended statements, to identify the defining characteristics.

4. Replicate the study longitudinally from one day after diagnosis and weekly for three months to see if there is a change.

5. Conduct a longitudinal study on a population of patients who have a high risk for development of cancer to establish a baseline self-concept, then if diagnosed with cancer, how this changes.

6. Conduct a study to determine what effect the type of treatment and length of therapy has on the self-concept.

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APPENDIX A

ITEM SELECTION BY PANEL OF EXPERTS

It is the attempt of this research study to develop a Semantic Differential Instrument that can be used to assess the self-concept of the cancer patient. The pertinent literature has been reviewed and 56 feelings and/or behaviors have been listed that are identified in the literature as being feelings cancer patients have, or ways cancer patients behave.

Thank you so much for consenting to be one of a Panel of Experts to assist in the development of this instrument. This phase of the development will be carried out in three parts.

PART I

The items taken from the literature are listed on the following pages with an opposite of that item. On the left side of the page, please indicate how opposite you think the word of phrase is of the item on a scale of 1-4 with 4 being the most opposite, and 1 being the least opposite. If you assign a 1 or 2 rating to the opposite of any item, you will need to suggest what you believe to be an opposite word or phrase to replace the one I have given.

PART II

In the spaces to the right of the item, please indicate how relevant you feel the word or phrase is to the feelings and/or behaviors that the cancer patient has with 4 being the most relevant and 1 being the least relevant.

PART III

Self-concept as defined by some authors is made up of four parts. They are self-esteem, body image, personal identity, and role performance. In the space to the extreme right of each item, please indicate which of these four parts you believe includes the item using the following code:

S-self-esteem

B-body image

P-personal identity

R-role performance

This process will need to be repeated until there is agreement among the Panel of Experts. Those items agreed upon as being the feelings and/or behaviors of the cancer patient and their opposites will then be included in a Semantic Differential Instrument for measuring Self-Concept of the Cancer Patient. A specified patient population will then be tested using the instrument.

I sincerely appreciate your time and effort on behalf of the development of this instrument. Please feel free to contact me if you have any questions.

PART I	OPPOSITE	ITEM	PART II	PART III
4 3 2 1	LOVED	UNLOVED	1 2 3 4	
4 3 2 1	WHOLE	DISFIGURED	1 2 3 4	
4 3 2 1	ACCEPTANCE	RESENTMENT	1 2 3 4	
4 3 2 1	TRANQUIL	IN STATE OF TURMOIL	1 2 3 4	
4 3 2 1	CLEAR UNDERSTANDING	CONFUSED	1 2 3 4	
4 3 2 1	SECURE	ABANDONED	1 2 3 4	
4 3 2 1	NO FEAR OF DEATH	FEAR OF DEATH	1 2 3 4	
4 3 2 1	NO FEAR OF UNKNOWN	FEAR OF UNKNOWN	1 2 3 4	
4 3 2 1	REWARDED	PUNISHED	1 2 3 4	
4 3 2 1	NOT SURPRISED	SHOCKED	1 2 3 4	
4 3 2 1	ACCEPTANCE OF WHAT IS HAPPENING	DISBELIEF IN WHAT IS HAPPENING	1 2 3 4	
4 3 2 1	NO FEELING OF GRIEF	GRIEF STRICKEN	1 2 3 4	
4 3 2 1	UNAFRAID	TERRORIZED	1 2 3 4	
4 3 2 1	SURE OF FEELINGS	NUMB	1 2 3 4	
4 3 2 1	BRAVE	PANICKY	1 2 3 4	

PART I				OPPOSITE	ITEM	PART II				PART III
				INTACT ROLE PERFORMANCE	THREATENED ROLE PERFORMANCE					
4	3	2	1			1	2	3	4	
				NO CHANGE IN DUTIES AS	CHANGE IN DUTIES AS MOTHER OR					
4	3	2	1	MOTHER OR FATHER	FATHER	1	2	3	4	
				RECALLING PAST PLEASANT	RECALLING PAST UNPLEASANT					
4	3	2	1	ACTIVITIES	ACTIVITIES	1	2	3	4	
				INTACT INTEREST	LOSS OF INTEREST					
4	3	2	1	IN OTHERS	IN OTHERS	1	2	3	4	
				NO THOUGHT ABOUT THE CANCER	PREOCCUPATION WITH THOUGHTS ABOUT					
4	3	2	1		THE CANCER	1	2	3	4	
				NO DIFFICULTY	DIFFICULTY					
4	3	2	1	SLEEPING	SLEEPING	1	2	3	4	
				USUAL APPETITE	DECREASED APPETITE					
4	3	2	1			1	2	3	4	
				EASILY AMUSED	TEARFUL					
4	3	2	1			1	2	3	4	
				ACCEPTING	ANGRY					
4	3	2	1			1	2	3	4	
				NO THREAT TO LIFE	LIFE THREATENED					
4	3	2	1			1	2	3	4	
				GLAD	SAD					
4	3	2	1			1	2	3	4	
				CERTAIN	UNCERTAIN					
4	3	2	1			1	2	3	4	

PART I				OPPOSITE	ITEM	PART II				PART III
4	3	2	1	ACCEPTED	REJECTED	1	2	3	4	
4	3	2	1	CLEAN	UNCLEAN	1	2	3	4	
4	3	2	1	FRIENDLY	HOSTILE	1	2	3	4	
4	3	2	1	QUIET	RESTLESS	1	2	3	4	
4	3	2	1	CHEERFUL	DISMAL	1	2	3	4	
4	3	2	1	UNCHANGED FEELINGS ABOUT MY BODY	FEELING DIFFERENT ABOUT MY BODY	1	2	3	4	
4	3	2	1	UNLIMITED FUNCTION	LIMITED FUNCTION	1	2	3	4	
4	3	2	1	INTACT BODY IMAGE	CHANGED BODY IMAGE	1	2	3	4	
4	3	2	1	NO CHANGE IN DUTIES AS WIFE OR HUSBAND	CHANGE IN DUTIES AS WIFE OR HUSBAND	1	2	3	4	
4	3	2	1	INTACT SEXUAL IDENTITY	LOSS OF SEXUAL IDENTITY	1	2	3	4	
4	3	2	1	NO CHANGE IN DUTIES AS PRODUCTIVE WORKER	CHANGE IN DUTIES AS PRODUCTIVE WORKER	1	2	3	4	
4	3	2	1	NO CHANGE IN DUTIES AS FAMILY PROVIDER	CHANGE IN DUTIES AS FAMILY PROVIDER	1	2	3	4	

PART I	OPPOSITE	ITEM	PART II	PART III
4 3 2 1	POWERFUL	POWERLESS	1 2 3 4	
4 3 2 1	OPTIMISTIC	HOPELESS	1 2 3 4	
4 3 2 1	HELPFUL	HELPLESS	1 2 3 4	
4 3 2 1	ENERGETIC	EXHAUSTED	1 2 3 4	
4 3 2 1	WORTHWHILE	WORTHLESS	1 2 3 4	
4 3 2 1	PURPOSEFUL	DISTRACTED	1 2 3 4	
4 3 2 1	CALM	NERVOUS	1 2 3 4	
4 3 2 1	IN CONTROL	OUT OF CONTROL	1 2 3 4	
4 3 2 1	EXTROVERTED	INTROVERTED	1 2 3 4	
4 3 2 1	ACCOMPANIED	ISOLATED	1 2 3 4	
4 3 2 1	USEFUL	USELESS	1 2 3 4	
4 3 2 1	ELATED	DEPRESSED	1 2 3 4	
4 3 2 1	ADJUSTED	FRUSTRATED	1 2 3 4	
4 3 2 1	HAPPY	UNHAPPY	1 2 3 4	
4 3 2 1	INNOCENT	GUILTY	1 2 3 4	
4 3 2 1	SOCIABLE	LONELY	1 2 3 4	
4 3 2 1	INDEPENDENT	DEPENDENT	1 2 3 4	

PANEL OF EXPERTS CHOICES

PART I				OPPOSITE	ITEM	PART II				PART III
X				NO FEAR OF DEATH	FEAR OF DEATH				X	P
4	3	2	1			1	2	3	4	
X				NO FEAR OF UNKNOWN	FEAR OF UNKNOWN				X	P
4	3	2	1			1	2	3	4	
X				REWARDED	PUNISHED				X	P
4	3	2	1			1	2	3	4	
	X			NOT SURPRISED	SHOCKED				X	P
4	3	2	1			1	2	3	4	
	X			ACCEPTANCE OF WHAT	DISBELIEF IN WHAT			X		P
4	3	2	1	IS HAPPENING	IS HAPPENING	1	2	3	4	
X				ACCEPTING	ANGRY				X	P
4	3	2	1			1	2	3	4	
X				NO THREAT TO LIFE	LIFE THREATENED				X	P
4	3	2	1			1	2	3	4	
X				GLAD	SAD			X		P
4	3	2	1			1	2	3	4	
X				CERTAIN	UNCERTAIN				X	S
4	3	2	1			1	2	3	4	
X				LOVED	UNLOVED			X		P
4	3	2	1			1	2	3	4	
X				WHOLE	DISFIGURED			X		B
4	3	2	1			1	2	3	4	
	X			ACCEPTANCE	RESENTMENT				X	P
4	3	2	1			1	2	3	4	
	X			TRANQUIL	IN STATE OF TURMOIL			X		R
4	3	2	1			1	2	3	4	
X				CLEAR UNDERSTANDING	CONFUSED				X	P
4	3	2	1			1	2	3	4	
	X			SECURE	ABANDONED			X		P
4	3	2	1			1	2	3	4	

PART I				OPPOSITE	ITEM	PART II				PART III
X				ENERGETIC	EXHAUSTED	X				S
4	3	2	1			1	2	3	4	
X				WORTHWHILE	WORTHLESS			X		S
4	3	2	1			1	2	3	4	
			X	PURPOSEFUL	DISTRACTED				X	P
4	3	2	1			1	2	3	4	
X				CALM	NERVOUS			X		P
4	3	2	1			1	2	3	4	
X				IN CONTROL	OUT OF CONTROL				X	P
4	3	2	1			1	2	3	4	
X				EXTROVERTED	INTROVERTED				X	P
4	3	2	1			1	2	3	4	
	X			ACCOMPANIED	ISOLATED			X		S
4	3	2	1			1	2	3	4	
	X			USEFUL	USELESS			X		S
4	3	2	1			1	2	3	4	
X				ELATED	DEPRESSED				X	S
4	3	2	1			1	2	3	4	
X				ADJUSTED	FRUSTRATED				X	R
4	3	2	1			1	2	3	4	
X				HAPPY	UNHAPPY			X		S
4	3	2	1			1	2	3	4	
X				INNOCENT	GUILTY			X		P
4	3	2	1			1	2	3	4	
X				SOCIABLE	LONELY				X	P
4	3	2	1			1	2	3	4	
X				INDEPENDENT	DEPENDENT				X	R
4	3	2	1			1	2	3	4	
X				ACCEPTED	REJECTED			X		P
4	3	2	1			1	2	3	4	
X				CLEAN	UNCLEAN			X		B
4	3	2	1			1	2	3	4	
			X	FRIENDLY	HOSTILE				X	S
4	3	2	1			1	2	3	4	

PART I				OPPOSITE	ITEM	PART II				PART III
X				NO CHANGE IN DUTIES DUTIES AS FAMILY PROVIDER	CHANGE IN DUTIES AS AS FAMILY PROVIDER				X	R
4	3	2	1			1	2	3	4	
X				INTACT ROLE PERFORMANCE	THREATENED ROLE PERFORMANCE			X		R
4	3	2	1			1	2	3	4	
X				NO CHANGE IN DUTIES MOTHER OR FATHER	CHANGE IN DUTIES AS MOTHER OR FATHER			X		R
4	3	2	1			1	2	3	4	
X				RECALLING PAST PLEASANT ACTIVITIES	RECALLING PAST UNPLEASANT ACTIVITIES			X		P
4	3	2	1			1	2	3	4	
X				INTACT INTEREST IN OTHERS	LOSS OF INTEREST IN OTHERS			X		P
4	3	2	1			1	2	3	4	
X				NO THOUGHT ABOUT THOUGHTS ABOUT CANCER	PREOCCUPATION WITH THOUGHTS ABOUT THE CANCER			X		P
4	3	2	1			1	2	3	4	
X				NO SLEEPING DIFFICULTY	DIFFICULTY SLEEPING			X		P
4	3	2	1			1	2	3	4	
X				USUAL APPETITE	DECREASED APPETITE			X		P
4	3	2	1			1	2	3	4	
			X	EASILY AMUSED	TEARFUL				X	P
4	3	2	1			1	2	3	4	
X				POWERFUL	POWERLESS				X	S
4	3	2	1			1	2	3	4	
X				HELPFUL	HELPLESS			X		S
4	3	2	1			1	2	3	4	

PART I				OPPOSITE	ITEM	PART II				PART III
X				NO FEELING OF GRIEF	GRIEF STRICKEN			X		P
4	3	2	1			1	2	3	4	
X				UNAFRAID	TERRORIZED			X		P
4	3	2	1			1	2	3	4	
X				SURE OF FEELINGS	NUMB				X	P
4	3	2	1			1	2	3	4	
			X	BRAVE	PANICKY				X	P
4	3	2	1			1	2	3	4	
	X			QUIET	RESTLESS			X		S
4	3	2	1			1	2	3	4	
	X			CHEERFUL	DISMAL			X	X	S
4	3	2	1			1	2	3	4	
X				UNCHANGED FEELING	FEELINGS DIFFERENT				X	B
4	3	2	1	ABOUT MY BODY	ABOUT MY BODY	1	2	3	4	
X				UNLIMITED FUNCTION	LIMITED FUNCTION			X		R
4	3	2	1			1	2	3	4	
	X			INTACT BODY IMAGE	CHANGED BODY IMAGE				X	B
4	3	2	1			1	2	3	4	
				NO CHANGE IN DUTIES	CHANGE IN DUTIES					
X				DUTIES AS WIFE	AS WIFE OR			X		R
4	3	2	1	OR HUSBAND	HUSBAND	1	2	3	4	
X				INTACT SEXUAL	LOSS OF SEXUAL			X		B
4	3	2	1	IDENTITY	IDENTITY	1	2	3	4	
				NO CHANGE IN	CHANGE IN DUTIES					
X				DUTIES AS	AS PRODUCTIVE			X		R
4	3	2	1	PRODUCTIVE WORKER	WORKER	1	2	3	4	
X				OPTIMISTIC	HOPELESS			X		S
4	3	2	1			1	2	3	4	

APPENDIX B

SURVEY INSTRUMENT

The purpose of this exercise is to measure the feelings and behaviors that cancer patients' have. The items below are feelings and behaviors that the literature about cancer patients state that cancer patients have. There are two items on each line of the scale. In marking your responses, consider how you are feeling about each item now. Here is how you use the scale.

If you feel definitely strong you would mark the scale as follows:

STRONG__X__:____:____:____:____:____:____WEAK

If you feel definitely weak you would mark the scale as follows:

STRONG____:____:____:____:____:____:__X__WEAK

If your feeling is closely related to the item strong, you would mark the scale as follows:

STRONG____:__X__:____:____:____:____:____WEAK

If your feeling is closely related to the item weak, you would mark the scale as follows:

STRONG____:____:____:____:____:____:__X__WEAK

If your feeling seems only slightly related to the item strong, you would mark the scale as follows:

STRONG____:____:__X__:____:____:____:____WEAK

If your feeling seems only slightly related to the item weak, you would mark the scale as follows:

STRONG____:____:____:____:__X__:____:____WEAK

The direction of the item toward which you check, of course depends on which of the two items are most characteristic of how you feel now.

If you consider your feelings to be neutral concerning the item, having no feelings of being either strong or weak, you would place your check in the middle space:

STRONG____:____:____:__X__:____:____:____WEAK

IMPORTANT

(1) Place your check mark in the middle of the spaces not on the boundaries:

THIS NOT THIS

____:____:__X__:____:____X____:____

(2) Be sure to make a check mark for each line on the scale. Do not omit any.

(3) Never put more than one check mark for each line on the scale.

Sometimes you may feel as though you have had the same item before in this exercise. This will not be the case, SO DO NOT LOOK BACK AND FORTH through the items. Do not try to remember how you checked similar items earlier in the exercise. Make each item a separate and independent judgment. Work at a fairly high speed through this exercise. Do not worry or puzzle over individual items. It is your first impressions, the immediate feelings about the items, that we want. On the other hand please do not be careless, because we want your true impressions. Remember there are no right or wrong answers. Please complete as you are feeling now.

1.	FOCUSED	___	___	___	___	___	___	___ DISTRACTED
2.	POWERLESS	___	___	___	___	___	___	___ POWERFUL
3.	CLEAN	___	___	___	___	___	___	___ UNCLEAN
4.	NERVOUS	___	___	___	___	___	___	___ CALM
5.	IN CONTROL	___	___	___	___	___	___	___ OUT OF CONTROL
6.	FRUSTRATED	___	___	___	___	___	___	___ ADJUSTED
7.	OPTIMISTIC	___	___	___	___	___	___	___ HOPELESS
8.	GUILTY	___	___	___	___	___	___	___ INNOCENT
9.	SOCIABLE	___	___	___	___	___	___	___ WITHDRAWN
10.	DEPENDENT	___	___	___	___	___	___	___ INDEPENDENT
11.	HELPFUL	___	___	___	___	___	___	___ HELPLESS
12.	REJECTED	___	___	___	___	___	___	___ ACCEPTED
13.	RECALLING PAST PLEASANT ACTIVITIES	___	___	___	___	___	___	___ RECALLING PAST UNPLEASANT ACTIVITIES
14.	FATIGUED	___	___	___	___	___	___	___ ENERGETIC
15.	UNLIMITED FUNCTION	___	___	___	___	___	___	___ LIMITED FUNCTION
16.	LOSS OF INTEREST IN OTHERS	___	___	___	___	___	___	___ INTACT INTEREST IN OTHERS
17.	NO THOUGHT ABOUT THE CANCER	___	___	___	___	___	___	___ PREOCCUPATION WITH THOUGHTS ABOUT THE CANCER
18.	WORTHLESS	___	___	___	___	___	___	___ WORTHWHILE
19.	NO CHANGE IN DUTIES AS WIFE OR HUSBAND	___	___	___	___	___	___	___ CHANGE IN DUTIES AS WIFE OR HUSBAND
20.	DIFFICULTY SLEEPING	___	___	___	___	___	___	___ NO DIFFICULTY SLEEPING
22.	IN CONTROL OF EMOTIONS	___	___	___	___	___	___	___ TEARFUL

22. CHANGE IN DUTIES AS PRODUCTIVE WORKER ____:____:____:____:____:____:____ NO CHANGE IN DUTIES AS PRODUCTIVE WORKER

23. EXTROVERTED ____:____:____:____:____:____:____ INTROVERTED

24. DECREASED APPETITE ____:____:____:____:____:____:____ USUAL APPETITE

25. ACCEPTING ____:____:____:____:____:____:____ ANGRY

26. FEELING DIFFERENT ABOUT MY BODY ____:____:____:____:____:____:____ UNCHANGED FEELING ABOUT MY BODY

27. ACCOMPANIED ____:____:____:____:____:____:____ ISOLATED

28. LIFE THREATENED ____:____:____:____:____:____:____ NO THREAT TO LIFE

29. GLAD ____:____:____:____:____:____:____ SAD

30. HOSTILE ____:____:____:____:____:____:____ FRIENDLY

31. INTACT BODY IMAGE ____:____:____:____:____:____:____ CHANGED BODY IMAGE

32. UNLOVED ____:____:____:____:____:____:____ LOVED

33. ACCEPTANCE ____:____:____:____:____:____:____ RESENTMENT

34. DISMAL ____:____:____:____:____:____:____ CHEERFUL

35. NO CHANGE IN DUTIES AS FAMILY PROVIDER ____:____:____:____:____:____:____ CHANGE IN DUTIES AS FAMILY PROVIDER

36. CONFUSED ____:____:____:____:____:____:____ CLEAR UNDERSTANDING

37. SECURE ____:____:____:____:____:____:____ ABANDONED

38. DISFIGURED ____:____:____:____:____:____:____ WHOLE

39. CERTAIN ____:____:____:____:____:____:____ UNCERTAIN

40. FEAR OF DEATH ____:____:____:____:____:____:____ NO FEAR OF DEATH

41. NO FEAR OF UNKNOWN ____:____:____:____:____:____:____ FEAR OF UNKNOWN

42. RESTLESS ____:____:____:____:____:____:____ QUIET

43. INTACT ROLE PERFORMANCE ____:____:____:____:____:____:____ THREATENED ROLE PERFORMANCE

44. PUNISHED____:____:____:____:____:____:____REWARDED

45. NOT SURPRISED____:____:____:____:____:____:____SHOCKED

46. USELESS____:____:____:____:____:____:____USEFUL

47. NO CHANGE IN DUTIES AS MOTHER OR FATHER____:____:____:____:____:____:____CHANGE IN DUTIES AS MOTHER OR FATHER

48. GRIEF STRICKEN____:____:____:____:____:____:____NO FEELING OF GRIEF

49. UNAFRAID____:____:____:____:____:____:____TERRORIZED

50. UNHAPPY____:____:____:____:____:____:____HAPPY

51. TRANQUIL____:____:____:____:____:____:____IN STATE OF TURMOIL

52. NUMB____:____:____:____:____:____:____SURE OF FEELINGS

53. BRAVE____:____:____:____:____:____:____PANICKY

54. LOSS OF SEXUAL IDENTITY____:____:____:____:____:____:____INTACT SEXUAL IDENTITY

55. ELATED____:____:____:____:____:____:____DEPRESSED

56. DISBELIEF IN WHAT IS HAPPENING____:____:____:____:____:____:____ACCEPTANCE OF WHAT IS HAPPENING

Please complete the following information:
MALE____FEMALE____

AGE____

SITE OF CANCER_____

WHEN DIAGNOSED_____

INDICATE TREATMENT RECEIVED

SURGERY____RADIATION____CHEMOTHERAPY____

APPENDIX C

TOTAL RESPONSES SURVEY GROUP

1.	FOCUSED	12	1	5	0	15	10	8	DISTRACTED
2.	POWERLESS	10	6	16	0	17	1	1	POWERFUL
3.	CLEAN	36	3	2	0	7	2	1	UNCLEAN
4.	NERVOUS	10	4	18	0	6	4	9	CALM
5.	IN CONTROL	14	6	13	0	10	2	6	OUT OF CONTROL
6.	FRUSTRATED	16	9	11	0	2	5	8	ADJUSTED
7.	OPTIMISTIC	21	3	13	0	8	3	3	HOPELESS
8.	GUILTY	6	4	6	0	6	2	27	INNOCENT
9.	SOCIABLE	11	2	5	0	14	9	10	WITHDRAWN
10.	DEPENDENT	7	6	10	0	12	6	10	INDEPENDENT
11.	HELPFUL	4	3	17	0	18	3	6	HELPLESS
12.	REJECTED	3	2	10	0	10	2	24	ACCEPTED
13.	RECALLING PAST PLEASANT ACTIVITIES	11	7	8	2	16	2	5	RECALLING PAST UNPLEASANT ACTIVITIES
14.	FATIGUED	22	6	21	0	1	1	0	ENERGETIC
15.	UNLIMITED FUNCTION	7	2	0	0	8	11	23	LIMITED FUNCTION
16.	LOSS OF INTEREST IN OTHERS	5	2	14	0	1	4	25	INTACT INTEREST IN OTHERS
17.	NO THOUGHT ABOUT THE CANCER	2	2	5	0	20	9	13	PREOCCUPATION WITH THOUGHTS ABOUT THE CANCER
18.	WORTHLESS	3	5	12	1	12	7	11	WORTHWHILE
19.	NO CHANGE IN DUTIES AS WIFE OR HUSBAND	9	4	3	10	6	4	15	CHANGE IN DUTIES AS WIFE OR HUSBAND
20.	DIFFICULTY SLEEPING	18	3	11	0	3	9	7	NO DIFFICULTY SLEEPING
21.	IN CONTROL OF EMOTIONS	12	3	5	0	6	6	19	TEARFUL

22.	CHANGE IN DUTIES AS PRODUCTIVE WORKER	22	5	1	10	2	4	7	NO CHANGE IN DUTIES AS PRODUCTIVE WORKER
23.	EXTROVERTED	13	3	13	0	16	2	4	INTROVERTED
24.	DECREASED APPETITE	21	3	8	0	5	1	13	USUAL APPETITE
25.	ACCEPTING	10	9	11	0	5	4	12	ANGRY
26.	FEELING DIFFERENT ABOUT MY BODY	12	15	12	0	0	1	11	UNCHANGED FEELING ABOUT MY BODY
27.	ACCOMPANIED	22	3	6	0	6	6	8	ISOLATED
28.	LIFE THREATENED	19	10	12	0	1	0	9	NO THREAT TO LIFE
29.	GLAD	11	13	14	0	6	2	5	SAD
30.	HOSTILE	5	2	7	0	7	7	23	FRIENDLY
31.	INTACT BODY IMAGE	14	0	1	0	12	8	16	CHANGED BODY IMAGE
32.	UNLOVED	5	4	3	0	8	3	28	LOVED
33.	ACCEPTANCE	18	6	3	0	8	5	11	RESENTMENT
34.	DISMAL	8	9	13	0	4	3	14	CHEERFUL
35.	NO CHANGE IN DUTIES AS FAMILY PROVIDER	3	2	1	18	4	3	20	CHANGE IN DUTIES AS FAMILY PROVIDER
36.	CONFUSED	11	10	16	0	4	0	10	CLEAR UNDERSTANDING
37.	SECURE	31	7	7	0	5	1	0	ABANDONED
38.	DISFIGURED	11	5	10	0	3	3	19	WHOLE
39.	CERTAIN	5	2	1	0	17	8	18	UNCERTAIN
40.	FEAR OF DEATH	16	7	9	0	2	1	16	NO FEAR OF DEATH
41.	NO FEAR OF UNKNOWN	10	0	1	0	13	10	17	FEAR OF UNKNOWN
42.	RESTLESS	16	10	13	0	3	1	8	QUIET

43.	INTACT ROLE PERFORMANCE	9	3	0	0	13	10	16	THREATENED ROLE PERFORMANCE
44.	PUNISHED	4	7	7	23	3	4	3	REWARDED
45.	NOT SURPRISED	13	3	2	0	6	5	22	SHOCKED
46.	USELESS	8	2	21	0	11	6	3	USEFUL
47.	NO CHANGE IN DUTIES AS MOTHER OR FATHER	11	4	2	11	2	4	17	CHANGE IN DUTIES AS MOTHER OR FATHER
48.	GRIEF STRICKEN	13	4	16	0	4	2	12	NO FEELING OF GRIEF
49.	UNAFRAID	13	2	4	0	18	5	9	TERRORIZED
50.	UNHAPPY	7	3	16	0	14	5	6	HAPPY
51.	TRANQUIL	8	5	5	0	12	8	13	IN STATE OF TURMOIL
52.	NUMB	10	6	10	0	3	4	18	SURE OF FEELINGS
53.	BRAVE	14	2	1	0	18	7	9	PANICKY
54.	LOSS OF SEXUAL IDENTITY	12	6	14	0	0	3	16	INTACT SEXUAL IDENTITY
55.	ELATED	3	1	0	0	12	9	26	DEPRESSED
56.	DISBELIEF IN WHAT IS HAPPENING	13	5	12	0	2	4	15	ACCEPTANCE OF WHAT IS HAPPENING

Please complete the following information:
MALE___ FEMALE____

AGE____

SITE OF CANCER_____

WHEN DIAGNOSED_____

INDICATE TREATMENT RECEIVED

SURGERY____RADIATION____CHEMOTHERAPY____

VITA 2

Carol Ann Morris

Candidate for the Degree of

Doctor of Education

Thesis: DEVELOPMENT OF AN INSTRUMENT TO ASSESS DIAGNOSED CANCER PATIENTS' SELF-CONCEPT

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