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PATTERNS OF PSYCHOLOGICAL ADAPTATION IN DEATH AND DYING:  
A CAUSAL MODEL AND EXPLORATORY STUDY

by

Marjorie C. Dobratz, RN, MSN

A dissertation submitted in partial fulfillment  
of the requirements for the degree of

Doctor of Nursing Science  
UNIVERSITY OF SAN DIEGO

1990

Dissertation Committee

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## Abstract

### PATTERNS OF PSYCHOLOGICAL ADAPTATION IN DEATH AND DYING: A CAUSAL MODEL AND EXPLORATORY STUDY

The purpose of this study was to examine the interrelationships of the person-environment variables of age, sex, length of illness, pain, social support, and physical function as they effected psychological adaptation in dying. An adaptation paradigm of constructs from nursing, illness, and dying provided the theoretical framework which was used to formulate and test a causal model. This study, in addition, had a qualitative component that identified, from the participants' spontaneous responses, reactions to and perceptions of the dying process. A sample of 97 adults was recruited from two metropolitan home hospice programs, with testing occurring in the home.

Regression techniques were used to test the causal relationships. The predictor variables accounted for 38% of the adjusted variance in psychological adaptation. Analysis confirmed the significance of the variables of social support, pain, and age as direct predictors of the outcome.

The grounded theory method was used to record, code, and analyze the subjects' responses. The central construct that emerged was hierarchical process patterns of self-transactions which represented higher and lower levels of death awareness. These patterns were: transcending; becoming; reconciling; anguishing; avoiding;

relinquishing; and regressing. The core concepts contained within self-transactions were the "integrating forces" of the person and environment influences, and the "moving template" of the dialectical motion within dying. The dying persons in the higher patterns interpreted meaning, connected with others, accepted and adjusted expectations, and managed symptoms. In the lower patterns, the dying persons agonized in suffering, and avoided or repressed cognitions. The themes of spirituality, hope, personal control, acceptance, time, boredom, coldness, and asthenia emanated from the data. The subjective responses validated the quantitative findings in the study.

DEDICATION

TO

The memory of

My Grandfather, Jacob, and My Mother, Eunice  
who taught me  
the pursuit of wisdom  
and the love of humankind

AND TO

The persons in this study  
who taught me  
the beauty of living  
and the courage of dying

#### ACKNOWLEDGEMENTS

Of the many persons who believed in the purpose of this research undertaking, contributed to its fruition, and provided unending encouragement, first of all, I am deeply indebted to the hospice patients and their caregivers who opened the doors of their hearts and allowed me an entry into their lives. At the same time, this study would not have been possible without the cooperation and assistance of the hospice administrators and the staff members who created an environment of trust, caring, and empathy for their staff, patients, and families.

For her dedication to scholarly attainment, I am deeply grateful to Dr. Mary P. Quayhagen, my chairperson. Her research expertise and analytical ability provided me with the necessary guidance and direction for this study. I am indebted to both Dr. Patricia A. Roth, for her keen ability to perceive the theoretical underpinnings, and to Dr. Kathleen M. Burns, for her practical knowledge and wisdom. I greatly appreciate the support of Devin Milner and the library staff for their untiring assistance.

For their ability to understand, listen, and renew, I am most thankful to my husband, Ben, and to my children and their spouses, John and Benita, Margaret and Hans, James, and Thomas. Most importantly, my Grand-Children,

Jacob and Guen, were a vision of life's renewal and a continuation of the values of love, caring, and joy, as noted in the dedication. Along with my family, the unfailing support of my friends, peers, and hospice associates progressed me onward, toward the completion of my goal.

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## CHAPTER 1

### Introduction

Definitions of psychological adaptation in the dying person lack in theoretical clarity and empirical evidence. Although Kubler-Ross (1969) posited a stage theory of adaptive dying, the theoretical literature has reported that the widely acclaimed and accepted stage theory failed to provide theoretical clarification, lacked in predictive value (Schultz & Aderman, 1974; Kastenbaum, 1977), and isolated the dying individual from the context of one's life situation (Kastenbaum & Costa, 1977).

Empirical investigations with the dying population have, likewise, reported difficulties in establishing valid explanations for the stage theory of dying. Viney and Westbrook (1986-1987) found no evidence to support the stages of anger and acceptance, but established some indication for the stages of depression and bargaining. An extensive theoretical and empirical review found no evidence for the stages of reactions and multiple responses were proposed in situations of illness and dying (Silver & Wortman, 1980).

In studying responses of the dying, dimensions of psychological well-being have been indicated. In persons who died and the critically ill, studies have reported the

existence of as many positive feelings (Viney & Westbrook, 1986-1987) and more purpose in life (Thomas & Weiner, 1974), as in matched groups which included well persons. Bradburn (1969) substantiated that both negative and positive affects exist as separate, independent psychological dimensions in individuals. Likewise, Veit and Ware (1983) confirmed the presence of both psychological distress and psychological well-being in persons. However, investigators have focused on studying the dimension of psychological distress in illness, mostly depression, rather than psychological well-being.

Studies have reported that up to 40% of advanced cancer patients and dying persons experience depression (Achte & Vauhkohen, 1971; Craig & Abeloff, 1974; Plumb & Holland, 1977; Bukberg, Penman & Holland, 1984). Yet, in studying depression, dimensions of psychological adaptation have emerged. In advanced cancer patients, intact levels of self-esteem (Plumb & Holland, 1977; Buckberg, Penman & Holland, 1984), an absence of guilt, and a lack of a sense of worthlessness (Bukberg, Penman & Holland, 1984), are reported in studies on depression.

The theoretical literature (Shontz, 1975; Moos & Tsu, 1977) has described ill persons' psychological adaptation to the experience of illness. The empirical literature has reported the presence of intrapsychic processes that are directed towards achieving an adaptive state in severe

illness (Visotsky, Hamburg, Goss & Lebovits, 1961; Weisman & Worden, 1975, Bulman & Wortman, 1977; Taylor, 1983).

Yet, little is known of adaptation in death and dying.

Aldwin and Revenson (1987) noted the import of research that is focused on positive outcomes. As with any group of individuals experiencing a common stressful situation or life-threatening event, the particulars of their specific situation must be explored (Silver & Wortman, 1980; Folkman & Lazarus, 1988). However, problems in conceptualizing psychological dimensions that are unique to the situation of dying (Dush, 1985) and that define normal responses to the circumstance of threatened loss have been noted (Bukberg, Penman & Holland, 1984).

While both the theoretical and empirical literature report the ill persons' use of psychological processes in adapting to physical illness, studies are limited that describe this same process in the course of dying. Likewise, studies that identify the impact of variables upon psychological outcomes, during the situation of dying, are lacking.

#### Statement of the Purpose

The purpose of this study is to examine the interrelationships and to explain the effects of the person-environment variables upon psychological adaptation in the process of dying. An adaptation paradigm is used

to formulate and to test the adequacy of a predictive model for explaining psychological adaptation in the dying process. Another aim is to identify, through the spontaneous responses of the subjects, their perceptions, their reactions, and their patterns of psychological adaptation in the dying process.

### Theoretical Framework

The theoretical framework is derived from an adaptation paradigm which includes: (1) theoretical constructs of adaptation in illness, as reported in the theoretical literature; (2) theoretical constructs of psychological processes used by ill persons, as derived from the theoretical literature; and (3) adaptation nursing theory.

Within adaptation nursing theory (Roy, 1976, 1984), a person attempts to maintain a state of functional adaptation through described processes. Two basic internal control processes (the regulator and the cognator) explicate the person's coping processes and serve to maintain adaptation. The regulator and the cognator receive input from the internal state of the person and the external context of the environment to produce behavioral responses ( Roy, 1976, 1984).

According to Roy (1976, 1984), the regulator system processes inputs to the central nervous system, by way of chemical-neural-endocrine systems, and biological and



physiological mechanisms are utilized to maintain adaptive coping. In this same theory of adaptation, the cognator system, in addition to incorporating the physiological inputs from the regulator, involves the processing of social and psychological components. The social and psychological components are processed by way of four cognitive/emotive pathways described as: perceptual and information processing; learning; judgment; and emotion (Roy, 1984, p. 33). These four pathways process and produce responses which indicate the person's ability to respond to both internal and external influences from social and psychological effects (Roy, 1984).

Hence, a person's intrapsychic activities have cognitive and perceptual components; one's emotions have affective feeling states; and one's behaviors have actions and responses. All of the above represent dimensions of intrapsychic processes that are directed toward a desired outcome in illness--psychological adaptation--and which are termed coping (Lazarus, 1974; Haan, 1969, 1977), defending (Haan, 1969, 1977), and mastery (White, 1974).

The theoretical literature accounts the multidimensionals of psychological processes that include the following: (a) dimensions of responses to illness encompass intrapsychic, emotional, and behavioral components with cognitive and perceptual dimensions (Lipowski, 1969); (b) adaptation, as a mastery concept

encompasses intrapsychic activities of coping, defending (defenses) and mastery (Lipowski, 1970; Keily, 1972; Verwoerd, 1972; Haan, 1969, 1977, White, 1974; Lazarus, 1974); and (c) psychological processes are used by individuals to adapt to self and environment influences (Haan, 1969, 1977) and stressful life transitions (Parkes, 1971, 1982).

In addition, responses to intrapsychic activities in illness form dimensional patterns which promote and assist the dying person's adaptation through finding meaning in one's situation (Frankl, 1959, 1966; Visotsky, Hamburg, Goss & Lebovits, 1961; Bulman & Wortman, 1976; Weisman & Worden, 1975; Taylor, 1983) and maintaining one's self-integrity (Pearlin & Schooler, 1978; Taylor, 1983). These patterns are consistent with the dying individual's use of the human life processes of valuing and becoming, as described by Roy (1988).

#### Theoretical Background for Psychological Processes in Illness

A severe, physical illness is recognized as a disturbing event that results in psychological reactions and responses to the situation (Lipowski, 1969, 1970; Keily, 1972; Verwoerd, 1972; Caplan, 1981). A person's psychological reaction is a total human response (Lipowski, 1969, 1970) and includes: intrapsychic aspects of cognitive, emotional, and perceptual dimension, and

behavioral aspects of actions and communications (Lipowski, 1969, p. 1202). The ill persons use of these psychological dimensions to respond to illness have, for the most part, been termed the coping process (Lipowski, 1970; Kiely, 1972; Lazarus, 1974) and/or coping behavior (Verwoerd, 1972). However, different theorists have posited various theoretical meanings to coping in illness.

Verwoerd (1972) posited a hierarchical notion of coping processes and described psychological defenses as a sub-category of coping. In this description, an ill person uses both coping and defense mechanisms, simultaneously, to deal with the untoward effects of illness. Coping is broader than defense, thus, coping includes all the defense mechanisms used by a person to adapt to environmental demands (Verwoerd, 1972, p. 132).

Lazarus (1974) posited that ego-defenses used by an ill person, such as denial, are a mode of coping. When persons are unable to take direct action or successfully manage an environmental transaction, they resort to a palliative mode of coping and employ ego-defenses in an attempt to control the emotional aspects, or the somatic effects, of the threatening circumstance (Lazarus, 1974). Other theorists have viewed a defense, such as denial, in severe illness as a cognitive coping style, which is termed minimization (Lipowski, 1970; Kiely, 1972).

In Haan's (1969, 1977) theory, the ego actions

determine three separate modes of expression (coping, defense, and ego failure). The ego processes of coping and defense assist an individual to adapt to both self and environmental influences (Haan, 1977). Coping is said to be an encounter wherein people reach out and within themselves for resources to come to terms with difficulties (Haan, 1982, p. 265). Coping is, thus, active problem-solving behavior in stressful situations and the coping person is flexible, open, and able to assimilate information that promotes adaptation to reality (Haan, 1969, 1977, 1982).

According to Haan (1969, 1977), in contrast, a defensive person is "closed," distorts cognitive realities and believes anxiety can be removed without directly addressing the problem. When the individual experiences unmanageable stress and is unable to accommodate or adapt to threatening situations, ego failure or fragmentation occurs (Haan, 1969, 1977). Ego failure signals that the person's coping efforts have failed and that one's subjective reality is distorted (Haan, 1969, 1977).

To minimize ego failure and to maximize dynamic equilibrium or adaptation, all persons have been noted to employ a broad range of coping resources and processes (Lipowski, 1969, 1970; Silver & Wortman, 1980; Haan, 1982; Lazarus & Folkman, 1988). Furthermore, from studying normal populations, a variety of coping strategies have

been found used in response to life threats and to stressors (Pearlin & Schooler, 1978).

In illness, coping is referred to as all the cognitive and defensive activity employed by an ill person (Lipowski, 1970). Heim, Moser and Adler (1978) reported that defense processes, such as denial, cannot be separated from the adaptive processes in terminal illness. Moreover, coping in illness is a total human and psychological response (Lipowski, 1969), and refers to any and to all responses made by a person encountering a harmful or threatening situation (Silver & Wortman, 1980).

In summary, an ill person uses coping strategies, modes, actions, or defenses--all of which are psychological processes with cognitive, perceptual, behavioral, and emotional dimensions that are directed towards a desired outcome. Although coping is closely aligned to other constructs, such as goals of self-actualization or competence, coping is a process (Haan, 1969)--this process is directed toward adaptation.

#### Theoretical Background of Adaptation in Illness

In White's (1974) theory, adaptation is the encompassing master concept: coping is adaptation under difficult conditions, defenses are occurrences of adaptation where threat is present, and mastery is adapting to problems with a cognitive component (pp. 48-49). White (1974) described coping, defenses, and mastery

as adaptation strategies. Lipowski (1970) posited that the meaning of coping goes beyond threat or harm, and presented illness coping as an adaptation process: a set of tasks, challenges, and goals to be mastered or attained (p. 92). While coping, defenses, and mastery lead to a desired outcome of adaptation, the conceptual meaning of adaptation has been defined.

Cobb (1976) defined adaptation as a change in the self, in an attempt to improve the person-environment fit (p. 311), thus, adaptation implies the interrelationship of both the person-environment influences. When persons are unable to change their circumstances, such as in illness, a compromise or resignation occurs (White, 1974); their relationship to the environment changes (Caplan, 1981); they acquiesce to the terms of their situation (Cantril, 1966); and they experience a gradual increase in satisfaction (Campbell, Converse & Rodgers, 1976). These changes and compromises in the person, from the experience of illness, have been reported in the literature.

Shontz (1975) posited a model of reaction to physical crisis that described modes of adapting. According to Shontz (1975), the mode of containment (positive response to illness) has cognitive, evaluative, and emotional aspects. In containment, an ill person cognitively restructures or reorganizes one's situation so that essential activities are minimally disturbed and a full

awareness and appreciation of limitations and potentialities is evident (Shontz, 1975, p. 116). In the evaluative component, the individual changes one's personal value hierarchy by shifting person/object emphasis. Whereas, what was held in high regard and personal value, prior to the illness, may no longer hold the same value.

In effective and adaptive responses to illness, cognitive restructuring and shifting of personal values occurs. As a result, ill persons preserve their integrity, expand their personality, and personal growth is made possible (Shontz, 1975). Similarly, a theory of cognitive adaptation in readjustment to threatening illness was found to center around three themes: a search for meaning, an attempt to regain mastery over the event in particular and over one's life more generally, and an effort to enhance one's self-esteem (Taylor, 1983, p. 1161). In fact, the search for meaning is of importance, throughout both situations of illness and of dying.

The ill person's human need to find meaning in the experience of illness, in other stressful situations, and in dying (Moos & Tsu, 1977; Pearlin & Schooler, 1978; Porrit, 1979; Bulman & Wortman, 1979; Taylor, 1983; Frankl, 1962, 1965) is reported. The circumstances of illness become easier to manage, if a person can find a general purpose or pattern of meaning in the course of

events (Moos & Tsu, 1977, p. 14). Notably, in the course of illness and dying, the need to find meaning in a situation may be one of life's greatest forces (Frankl, 1962). To find meaning, various interpretations of the person-environment situations are noted.

Individuals control the meaning of a situation by reordering life's priorities, substituting rewards, and making positive comparisons (Pearlin & Schooler, 1978). From studying coping in normal life situations, themes were found that suggested the need for individuals to convert the endurance of unavoidable hardships into a moral virtue (Pearlin & Schooler, 1978, p. 7). Frankl (1965) explained that individuals despair, not so much from the suffering itself, but from a lack of meaning in the suffering. Hence, in the processes of dying and the endurance of suffering, life can receive its ultimate meaning (Frankl, 1965). As a result of finding meaning and value within their situation of illness, dying persons are able to maintain their sense of self.

Along with the ability to find meaning, the preservation of one's sense of self may, also, be one of life's important forces. In studying responses to threatening illness, Taylor (1983) identified a theme that centered on efforts to restore self-esteem. In a study of normal individuals, it was determined that the protection and enhancement of the self are fundamental goals for



which individuals strive (Pearlin, Lieberman, Menaghan & Mullan, 1981, p. 340). Along with the need to restructure the person-environment fit to find a sense of meaning, dying persons, likewise, need to restructure new patterns of thought activity (Parkes, 1971; Taylor, 1983) which preserve and enhance their self integrity.

In one's situation of dying, the psychological processes used by a dying person counterbalance the fears and anxieties of dying which include: the unknown; loneliness; and the losses of family, self-control, and identity (Pattison, 1967). Weisman (1972) depicted that a new orientation is required by a dying person to cope with the meaning of illness and personal extinction, and the need to replacement the intolerable parts with tolerable meanings (p. 96).

In summarizing adaptation in illness, dying persons have the potential to cognitively restructure patterns of thought, shift interpretations of meanings, and change cherished values. In this process, new adaptive orientations and outcomes in illness occur. These outcomes are explicable in adaptation nursing theory.

#### Theoretical Background for Adaptation Nursing Theory

In adaptation nursing theory (Roy, 1976, 1984), a person's responses to self and environment influences are an on-going, constantly changing, and accommodating process, as similar to Haan's (1977) theory. In

adaptation nursing theory, a person's adaptation level is defined as a constantly changing point that represents the person's own standard of the range of stimuli which can be tolerated with ordinary efforts (Roy, 1984, p. 30).

However, efforts to maintain a functional level of psychological adaptation for the dying person extend beyond the ordinary. Still, Roy's (1988) explication of the human life processes in adaptation nursing provides a theoretical framework, whereby, psychological adaptation in the dying person can be explained.

In further describing adaptation nursing theory,

Roy (1988) noted that the human life processes are thinking, acting, knowing, feeling, regulating, becoming, relating, and valuing. The human life processes are said to be mutually interactive with the total ecology, from which all the person's functional life patterns emanate, and from which the person reacts to health situations (Roy, 1988, p. 28). Although Roy (1988) did not link the human life processes with the four cognator processes of previous adaptation theory (Roy, 1984), it is assumed that the human life processes of valuing and becoming are processed by the same cognitive/emotive pathways which serve to maintain adaptation.

In transcending an earlier theoretical systems approach (Roy, 1976, 1984), Roy (1988) expanded the assumptions of the adaptation model to include principles

of humanism and veritativity which are incorporated into the theoretical framework of this study. Roy's (1988) humanistic beliefs about the person are: one shares in create power; one strives to maintain integrity and relate to others; one has innate holism; and one behaves purposefully (p. 32). Within veritativity, a person shares in the commonalties of human nature which are: a value and meaning in life; a purpose in existence; an activity and creativity for the common good; and a unity of purpose with humankind (Roy, 1988, p. 32).

In summary, ill and dying persons are viewed within the context of an adaptation paradigm. Psychological responses in illness are directed towards an adaptive outcome that derives meaning, maintains the self, and improves one's situation in dying--patterns of psychological adaptation.

#### Causal Framework

Based on adaptation nursing theory (Roy, 1976, 1984) and an adaptation paradigm, the theoretical framework guiding this study has person-environment influences: residual (presumed); contextual (within the immediate situation); and focal (most immediate), which impinge on the adaptive outcome of psychological adaptation in the process of dying. According to adaptation nursing theory (Roy, 1976, 1984), a variable that becomes known or identified, such as age, is no longer a presumed influence

or a residual stimuli. For this study, since the effects of the residual variables upon the situation of dying are undetermined, they are termed residual influences.

The person-environment influences of import include: age, sex, length of illness (residual variables); social support and pain (contextual variables); and physical function (focal variable). The interrelationship of the person-environment variables and their influence on psychological adaptation are delineated in Figure 1.

#### Theoretical definitions

Psychological adaptation: is a state of psychological well-being in the dying person which is derived from one's processing cognitive, perceptual, emotional, and behavioral dimensions of psychological processes in patterns that promote adaptive outcomes.

Adaptive patterns: are characteristic arrangements of psychological reactions which depict the dying person's value of finding meaning and maintaining one's self-integrity within one's situation of dying.

Physical function: is the ability of the individual to carry on normal activities, or degree of dependence on other persons for help and assistance (Karnofsky, Abelman, Craver & Burchenal, 1948).

Pain: is the sensory, affective and evaluative components of the subjective experience of pain and the person's overall pain intensity, within the present time

# Residual Influences

# Contextual and Focal Influences

# Adaptive Outcome

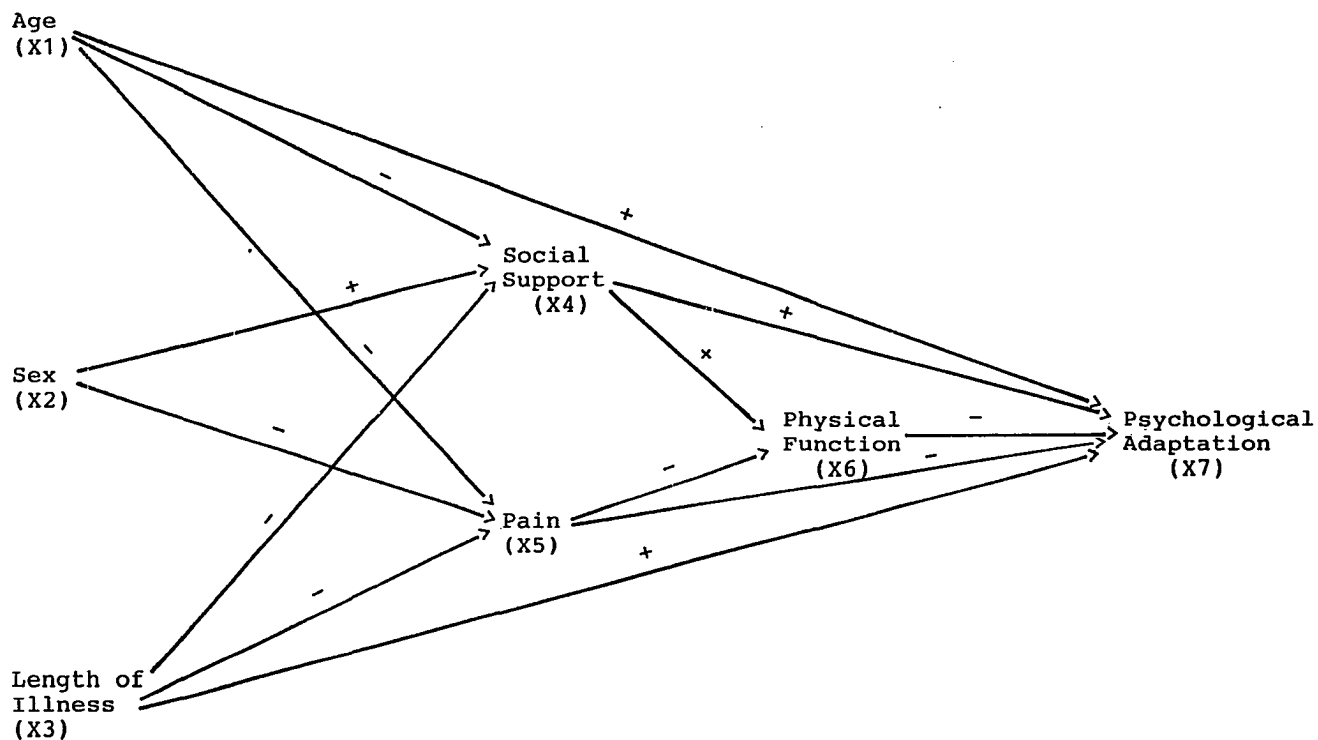


Figure 1. The Hypothesized Causal Model for Psychological Adaptation.

(Melzack, 1975).

Social support: is a person's perceived level of social support which includes that one is valued, is an integral part of a group, attachment/intimacy is provided for, one has the chance for nurturance, and that help is available (Brandt & Weinert, 1981; Brandt, 1985).

Length of illness: is the time, since diagnosed with a terminal illness, and sex and age are self-explanatory.

### Hypotheses

The expected relationships of the person-environment variables and their influence on psychological adaptation are summarized in the following hypotheses: The model for the study implies 18 direct hypotheses and 18 indirect hypotheses. Of the direct hypotheses, 13 are expected to reach significance at the .05 level and are written with arrows symbolizing directions, with plus and minus signs indicating the direction of the relationships. The hypotheses that summarize the expected relationships are:

#### Direct hypotheses:

H1: Age and length of illness have a direct negative effect on social support and pain (X1 ----> X4; X1 ----> X5; X3 ----> X4; X3 ----> X5).

H2: Age and length of illness have a direct positive effect on psychological adaptation (X1 ----> X7; X3 ----> X7).

H3: Sex (female) has a direct positive effect on social

support and a direct negative effect on pain  
(X2 ----> X4; X2 ----> X5).

H4: Social support has a direct positive effect upon  
physical function and psychological adaptation  
(X4 ----> X6; X4 ----> X7).

H5: Pain has a direct negative effect upon physical  
function and psychological adaptation (X5 ----> X6;  
X5 ----> X7).

H6: Physical function has a direct negative effect on  
psychological adaptation (X6 ----> X7).

Indirect Hypotheses:

H7: Age, sex, and length of illness will indirectly effect  
physical function through social support and pain  
(X1 ----> X4 ----> X6; X1----> X5----> X6)  
(X2 ----> X4 ----> X6; X2----> X5----> X6).  
(X3 ----> X4 ----> X6; X3----> X5----> X6).

H8: Age sex, and length of illness will indirectly effect  
psychological adaptation through social support and  
pain (X1 ----> X4 ----> X7; X1----> X5----> X7).  
(X2 ----> X4 ----> X7; X2----> X5----> X7).  
(X3 ----> X4 ----> X7; X3----> X5----> X7).

H9: Age, sex, and length of illness will indirectly effect  
psychological adaptation through physical function, by  
way of social support and pain  
(X1 ----> X4 ----> X6 ----> X7;  
X1----> X5----> X6 ----> X7).

(X2 ----> X4 ----> X6 ----> X7;

X2----> X5 ----> X6 ----> X7).

(X3 ----> X4 ----> X6 ----> X7;

X3 ----> X5 ----> X6----> X7).

### Significance of the Study

This study has significance in its potential for developing nursing theory which builds upon a previously established nursing model (Roy, 1976, 1984, 1988). An exploration of psychological adaptation, during the process of dying, has the ability to explain the human life processes of valuing and becoming and their inherent meanings in the transition from life to death. In addition, based upon an explanation of human life processes, this study has the capability to advance nursings' applied practice base and, also, the knowledge base of palliative care.

A clarification of the human life processes, which derive meaning and valuing in situations of illness and death, would assist professional nurses in developing interventions that focus on the promotion of psychological well-being in terminal illness, as opposed to dimensions of psychological distress. Nursings' concentration on positive aspects, within the situation of illness, has been recognized as an evolving theoretical concept, in the application of nursing knowledge (Moch, 1989).

Although nursing practice recognizes the unique



person and environment encounter in life's experiences (Roy, 1976, 1984), this study assumes that there are commonalties which effect the human experience of dying; that these shared influences are woven into observable and measurable patterns during the situation of dying; and that the selected methodological procedures will reveal psychological patterns of dying which can be generalized to other similar populations.

The patterns of dying refer to the processes, the outcomes, and the observable interactions of the dying person. Chick and Meleis (1986) defined that responses of persons during life transitions are arranged into patterns that refer both to the processes and the outcome of complex person-environment interactions (p. 240). Newman (1986) viewed the observable phenomena of person-environment interactions as manifestations that reflect the underlying pattern, and Roy (1988) described the person's functional life patterns, which emanate from the human life processes.

While previous nursing theorist have recognized the import of patterns in bringing a theory's conception into reality (Dickoff, James, & Weidenbach, 1968), for designing nursing's scientific inquiries, for providing the rational for nursing practice (Carper, 1978), and for developing nursings' theoretical metaparadigm (Sarter, 1988), pattern descriptions have remained at the abstract

level of theoretical development in nursing practice.

This study's attempt to generate patterns that can be generalized to the dying population, utilizes both a quantitative and a qualitative approach. The quantitative methodology is used to deduct the variables which impact upon an outcome of psychological well-being. The qualitative methodology is used to induce the processes and interactions which describe adaptation in dying. The unraveling of the patterns of human psychological processes, an understanding of the variables effecting situations of dying, and the comprehending of the dying persons' interactions would provide a greater insight into this complex, intense, and inevitable human phenomena.

## CHAPTER 2

### Review of the Literature

#### Psychological Adaptation in the Dying Process

Empirical studies with physically impaired individuals, who are unable to change their situation, have reported patterns of psychological adaptation that include the following: maintaining a sense of personal worth (Visotsky, Hamburg, Goss & Lebovits, 1961); finding meaning within the situation or events (Bulman & Wortman, 1977; Taylor, 1983); and gaining a sense of mastery over the events (Bulman & Wortman, 1977; Taylor, 1983).

In an early study of 81 poliomyelitis patients, patterns of responses were identified that maintained a sense of personal worth, managed psychological distress, mobilized hope, and restored personal relationships in coping with severe illness (Visotsky, Hamburg, Goss & Lebovits, 1961). Bulman and Wortman (1976) studied the coping ability of 29 paralyzed accident victims and found many responses that noted a search for meaning in existence and a need for an orderly, but not a controlled world. In the responses of 78 persons with breast cancer, Taylor (1983) reported psychological processes of cognitive adaptation in which they searched for meaning in their illness experience, attempted to regain mastery over

events and their life in general, and restored their level of self-esteem through various ways of self-enhancement.

With the far-advanced cancer patient, empirical studies have focused on correlates of psychological distress, such as depression. In separating the scores on a depression scale, the group scores of 97 advanced cancer patients and a matched group of 99 suicide patients were similar on somatic items (Plumb & Holland, 1977). In this study, when the somatic and non-somatic items were separated, the groups of cancer and suicidal patients differed on the items pertaining to a sense of failure, guilt, and self-dislike. The advanced cancer patient has been reported to have intact levels of self-esteem and, in addition, no significant correlations were found between scores and nearness to death (Plumb & Holland, 1984).

According to Bukberg, Penman and Holland (1984), 42% of hospitalized advanced cancer patients met criteria for nonbipolar depression, however, none of the depressed patients displayed profound changes in levels of self-esteem. In a systematic attempt to quantify levels of psychiatric symptomatology among 30 hospitalized cancer patients, Craig and Abeloff (1974) found mean scores on a standardized symptom inventory, for the total group, similar to those reported for normal populations and 70% of the subjects reported minimal levels of distress.

Although a paucity of studies exist in dying persons,

Hinton (1975) correlated interview data in a study of 60 terminal cancer patients and found that persons rated as emotionally unstable did not have more emotional distress, during the dying process. In this study, a sense of fulfillment in life was associated with an easier adjustment to dying. Similarly, a positive attitude was found related to less psychological distress in dying cancer patients, who were able to find something favorable regarding their illness (Weisman & Worden, 1975). In a study of 31 terminal patients, researchers found the defense processes of stoic behaviors and faith attitudes of import in dealing with terminal illness (Heim, Moser & Adler, 1978). Thomas and Weiner (1974) found unique psychological dimensions in a study of 25 critically, ill subjects, as compared to two matched control groups of non-critically, ill hospitalized and well patients. This study reported the critically ill to have more purpose in life and, also, more needs for affection than the other two groups of hospitalized non-critical and well subjects.

Viney and Westbrook (1986-87) analyzed the content of interviews from a group of 29 patients who died, a matched non-chronically ill group, and well subjects. In this study, although depression, guilt, and fear of bodily loss were found in the group of patients who died, as many good feelings existed in the dying, as in the well group. Viney and Westbrook (1986-87) described the patterns of

reactions in the dying as unique. These researchers proposed that dying persons direct their psychological processes towards an understanding of their situation and a prediction of their event of dying. Moreover, these same investigators found a lack of directly expressed anger and emotional withdrawal in the patients who died. However, not all researchers have reported positive expressions in the dying and dimensions of psychological distress have, for the most part, been described.

Through qualitative analysis, Kubler-Ross (1969) described the stage theory of adaptive dying. In the stage theory of dying, individuals were reported to use coping mechanisms of denial and isolation, anger, bargaining, depression, and acceptance during terminal illness. During the final stage of dying, acceptance was described as an absence of emotions and feelings, and was represented as emotional separation and withdrawal (Kubler-Ross, 1969). Likewise, other researchers have reported a similar coping strategy termed acceptance/resignation (Feifel, Strack & Nagy, 1987).

In a study of 223 medically ill patients, expectation of recovery was found to account for 27% of the variance in the coping strategy of acceptance/resignation (Feifel, Strack & Nagy, 1987). This study reported that persons, who utilized the acceptance/resignation coping strategy, responded with negative self-perception, expression of

negative affect, and narrowing of their external stimuli.

Evidence has been found that both psychological distress and psychological well-being exist as separate, independent, and distinct dimensions of psychological activity and mental health (Bradburn, 1969; Veit & Ware 1983). Bradburn (1969) defined two independent dimensions of mental health and low correlations between the positive and the negative affects were substantiated. In Bradburn's (1969) study, individuals who were high in anxiety were not necessarily those who were ill. When compared to non-ill individuals, also, with many physical symptoms, the ill, with high physical symptoms, had only slightly higher negative affects.

Other large-scale studies have found similar support for the separate psychological dimensions of both psychological well-being and psychological distress. In a sample of 5,089 subjects, Veit and Ware (1983) supported a hierarchical model defining distinct constructs of psychological well-being and psychological distress as components of mental health. A large scale longitudinal study of 4,942 subjects conducted over a nine year time-period provided compelling evidence for the stability of levels of well-being in adults (Costa, et al., 1987).

In summary, although few empirical studies have been found in the literature, evidence points to the dying persons attempt to maintain psychological well-being

by directing positive attitudes towards their illness (Hinton, 1975); by maintaining positive feelings (Viney & Westbrook, 1986-1987); by finding meaning within their situation (Weisman & Worden, 1976); and by deriving purpose in life (Thomas & Weiner, 1974). Studies with physically ill persons have identified adaptive processes directed towards the maintenance of their self-integrity (Visotsky, Hamburg, Goss & Lebovits, 1961; Bulman & Wortman, 1977; Taylor, 1983), and the finding of meaning within their situation (Taylor, 1983).

In investigations of psychological distress, a level of psychological adjustment consistent with that of the physically healthy population has been identified (Craig & Abeloff, 1974; Plumb & Holland, 1977; Bukberg, Penman & Holland, 1984) and persons with advanced physical illness have intact levels of self-esteem (Plumb & Holland, 1977; Buckberg, Penman & Holland, 1984). These empirical studies point to a dimension of psychological well-being, which exists as a distinct dimension in ill persons. This dimension is noted to exist separately from psychological distress (Bradburn, 1969; Veit & Ware, 1983).

In the literature, the descriptions of psychological processes used by dying individuals are inconsistently reported. A coping strategy termed acceptance/resignation (Feifel, Strack & Nagy, 1987) coincided both with the anger stage (expression of negative affect) and the



acceptance stage (narrowing of external stimuli), as reported by Kubler-Ross (1969). However, Viney and Westbrook (1986-1987) found directly expressed anger rare in the group who died, and did not support the anger stage of Kubler-Ross (1969) theory.

Psychological processes used by dying person have been termed: adaptive coping mechanisms (Kubler-Ross, 1969), defense processes that include stoic and faith attitudes (Heim, Moser & Adler, 1978), and, in late illness, coping strategies, such as acceptance/resignation illness (Feifel, Strack & Nagy, 1987). Indeed, these terms point to the multiplicity of psychological processes which can be used by a dying individual in adapting to the threat of death.

In light of the empirical findings that support an adaptive process in illness, that identify dimensions of psychological well-being in dying persons, and that report inconsistencies of psychological distress, this study assumes an outcome of psychological adaptation in the dying process. It has been hypothesized that the outcome variable of psychological adaptation is dependent upon the person-environment variables of physical function, social support, pain, length of illness, sex, and age which have been identified from the empirical literature.

#### Physical Function and Psychological Adaptation

The multiple physical symptoms encountered in

terminal illness and their effects on physical function have been empirically reported (Wachtel, Allen-Masterson, Reuben, Goldberg & Mor, 1989; Reuben, Mor & Hiris, 1988; Dobratz, Burns & Oden, 1989). In a study of 100 patients admitted to home hospice care, 41% were found with alterations in nutrition, 39% with functional limitations, and 30% with breathing difficulties (Dobratz, Burns & Oden, 1989). Also, it is reported that patients, who enter hospice care with multiple symptoms, have rapid declines of physical function (Reuben, Mor & Hiris, 1988). In home hospice patients, a rapid state of physical deterioration begins one to three weeks prior to death (Morris, Suissa, Sherwood, Wright & Greer, 1986; Hays, 1986).

Since the average length of hospice stay is 35 days (Greer et al., 1986), patients and their families have little time to adjust to the physical and psychological demands of a terminal illness. Upon hospice admission, the dying person may be overwhelmed by the effects of physical illness, and these effects predominate over any other variables within the situation (Cassileth, Lusk, Miller, Brown & Miller, 1985). The importance of integrating the variable of physical disability into studies with psychological components has been noted (Derogatis et al., 1983). Therefore, physical function becomes the focal variable within the situation of dying.

In most studies, decreased physical function has been associated with increased emotional distress and lessened psychological adaptation (Derogatis et al., 1983; Cassileth et al., 1984; Craig & Abeloff, 1974; Weisman & Worden, 1975; Bukberg, Penman & Holland, 1984; Linn, Linn & Harris, 1982; Goldberg, Wool, Glicksman & Tull, 1984).

A sample of 215 hospitalized cancer patients reported that the majority of psychiatric diagnoses (68%) were reactive adjustment disorders of depressive and anxiety states which correlated with physical impairment (Derogatis et al., 1983). In this study, an improvement in the patient's physical status or physical intervention was found to decrease levels of depression and anxiety.

Cassileth et al. (1984) studied 758 patients in six groups of chronic illness categories and reported a direct relationship between declining physical function and changing mental-health scores in the direction of psychological distress. This study reported no differences in components of psychological well-being (emotional ties and positive affect) for any of the groups of chronically ill persons, with the exception of a chronically depressed control group.

Of 30 hospitalized cancer patients studied, Craig and Abeloff (1974) noted the group of patients with the highest level of emotional distress was, also, the most physically impaired. Similarly, Weisman and Worden (1975)

found a relationship between emotional distress and advanced stages of disease. Only the degree of physical function was found to correlate with depression (Bukberg, Penman & Holland, 1984). In this study, of the patients who scored 40 or less on the Karnofsky Performance Scale (Karnofsky, Abelmann, Craver & Burchenal, 1948), 77% met criteria for non-polar depression.

In a group of end-stage lung cancer patients, Linn, Linn and Harris (1982) found that, although self-esteem and life satisfaction scores improved with counseling, levels of depression did not change and correlated with decreasing physical function. Likewise, in a group of 29 lung cancer patients studied over a six month period, physical status was correlated to depressive symptoms, while a measure of social-environmental status was not significant (Goldberg, Wool, Glicksman & Tull, 1984).

No relationship between decreasing physical function and decreasing emotional well-being was found in investigations by Schmale et al. (1982-83) and Silberfarb, Herbert-Maurer and Crouthamel (1980). Schmale et al. (1982-1983) found no association between extent of disease and problem ratings in 66 patients undergoing radiation therapy. In a study of breast cancer patients, it was reported that decreasing physical disability was not related to increasing emotional disturbance (Silberfarb, Herbert-Maurer & Crouthamel, 1980).

In summary, most studies have reported that progressing physical disability is related to decreasing psychological effectiveness, therefore, decreasing physical function is expected to effect the outcome variable of psychological adaptation.

Pain, Physical Function, and Psychological Adaptation

During dying, pain is a significant variable in studies detailing psychological outcomes, as approximately 50% of cancer patients with metastatic disease have pain (Daut & Cleeland, 1982; Ahles, Ruckdeschel & Blanchard, 1984). Pain is present in 68% to 85% of terminal home care patients (Dobratz, Burns & Oden, 1989; McKegney, Bailey & Yates, 1981). Studies report that from 10.3 to 11 percent of patients have uncontrollable pain, when admitted to hospice care services (Dobratz, Burns & Oden, 1989; Reuben, Mor & Hiris, 1988).

The impact of pain upon physiological and psychological variables has been identified (Bond & Pilowsky, 1969). The complexities and the interrelationships of both physical and psychological aspects--to pain--have been supported (Ahles, Blanchard & Ahles, 1983). Hence, pain has been demonstrated to impact upon both physical function and psychological outcomes. Pain has been demonstrated to impact upon physical function (Rankin, 1982; Daut & Cleeland, 1983; Cleeland, 1984; Ahles, Blanchard & Ruckdeschel, 1983; Ahles,

Ruckdeschel & Blanchard, 1984; Daut, Cleeland & Flanery, 1983). Ahles, Blanchard and Ruckdeschel (1983) compared 40 cancer patients with pain and a matched group of 37 non-pain patients, by site and level of function. This study reported that the pain group demonstrated less physical activity, and activity level was negatively correlated with the affective (-.38) and the evaluative (-.43) components of the McGill Pain Questionnaire (PRI).

Investigators studied an outpatient population of 208 patients and the group with pain, as measured by nurses' rating performance level, demonstrated a higher level of physical disability than the non-pain group (Ahles, Ruckdeschel & Blanchard, 1984). Daut and Cleeland (1982) reported that a mean pain rating of five or more, on a scale of ten, was found to interfere with physical activity (Daut & Cleeland, 1982). Conversely, in 47 patients receiving specialized pain management, a reduction in pain was found to correlate with improvement in physical activity, however, no statistical correlations were given (Cleeland, 1984).

In establishing construct validity for a developing pain scale, researchers established the relationship between pain and activity interference (Daut, Cleeland & Flanery, 1983). In this study, the 101 subjects in the worst pain group had significant correlations between the relationship of pain and activity interference: walking

(.39); work (.47); sleep (.34). Of the 81 subjects who were in the usual pain group, as compared to the worst, no significant relationship in activity interference was demonstrated (Daut, Cleeland & Flanery, 1983).

Dobratz, Burns and Oden (1989) reported significant differences between a pain and a non-pain group of home hospice patients in physical function. These investigators reported that 28 (48.2)% of the pain patients had a problem with functional limitations, as compared to 11 (26.1%) of the non-pain group. In a descriptive study Rankin (1982), reported that 76% of patients with pain had interference with activities, notably decreased mobility.

In cancer subjects, empirical studies have reported the association of pain with psychological outcomes of depression and anxiety (Woodforde & Fielding, 1978; Ahles, Ruckdeschel, & Blanchard, 1983; Bukberg, Penman & Holland, 1984; Kane, Bernstein, Wales & Rothenberg 1985). A study of 137 terminal cancer patients in inpatient hospice care and a control group of 110 patients in traditional medical care reported significant correlations (.26 to .45) between pain and levels of depression and anxiety in both groups of subjects (Kane, Bernstein, Wales & Rothenberg, 1985).

A controlled study of a pain group and a matched non-pain group identified elevated scores on measures of

depression, and not anxiety, for the pain group (Ahles, Ruckdeschel & Blanchard, 1983). Although personality disturbances were found to distinguish a group of 54 pain patients, the disturbances reported included: depression; somatic effects of psychosomatic symptoms; gastro-intestinal symptoms; hypochondriasis; and asthenia (Woodforde & Fielding, 1978). In studying depression, pain was described as more severe in the depressed and most disabled group, but this finding did not reach significance (Buckberg, Penman & Holland, 1984).

Other researchers report the association of pain and mood disturbances. Pain was significantly related to total mood disturbance in a group of 109 breast cancer patients (Speigel & Bloom, 1983). Using a regression equation, this study identified that total mood disturbance, frequency of pain medications, and the explanation of pain (beliefs about the meaning of pain) accounted for 50% of the variance. In addition, patients who experienced greater pain had more depression, anxiety, and fatigue, as measured by a mood profile instrument (Speigel & Bloom, 1983). Both patients and physicians have noted the relationship between pain and emotional state, as measured by interview data (Peteet, Tay, Cohen & McIntyre, 1985).

Not all investigators support the relationships between pain and distressed psychological outcomes. Some



researchers contend that the subjective interpretation or cognition of pain is an important outcome variable (Shacham, Reinhardt, Raubertas & Cleeland, 1983; Cleeland, 1984; Spiegel & Bloom, 1983). A group of researcher found weak correlations ( $-.31$  to  $.30$ ) between mood variables and pain intensity ratings in a longitudinal study (Shacham, Reinhardt, Raubertas & Cleeland, 1983). While this same study reported that pain was positively correlated with negative mood, and negatively correlated with positive mood, mood ratings improved over time with pain treatment interventions and decreased pain intensity.

Cleeland (1984) reported no significant differences in the pain intensity ratings of 120 patients who were grouped into depressed and non-depressed groups. For this study, differences were found, only, in the patient's subjective interpretation of pain. In their study, Bloom and Spiegel (1983) found no support for the relationship of pain--to the variables of physical illness--and noted the importance of the patient's psychological interpretation of the meaning of pain. Consequently, pain is an indicator of a progressive, disease state and a reminder of an outcome that cannot be controlled. Thus, it is the person's subjective, interpretation of the pain that is the cause of the depression, rather than the pain itself which is the cause of the mood disturbance.

In summarizing pain, most studies reported the

negative impact of pain upon physical function. Due to the strong associations of these variables, this study supports the negative effect of pain upon physical function. In addition, the direct effects of pain upon lessened psychological adaptation have been reported. The interpretation of the meaning of pain, as a direct cause of depression is unknown in the dying. For this study, pain is expected to directly effect psychological adaptation, and it is anticipated that dying persons have lessened psychological adaptation, when pain is present.

Social Support, Physical Function, and Psychological Adaptation

Researchers have noted the importance of the inclusion of a social support variable in illness studies that relate to psychological outcomes (Bukberg, Penman & Holland, 1984). Though few studies have been found that examine the effects of social support in the dying process, studies with other populations have indicated that social support protects individuals from physical decline (Miller, Ingham & Davidson, 1976; Phifer & Murrell, 1986), and has a direct effect upon an outcome of psychological well-being (Andrews, Tennant, Hewson & Valliant, 1978; Lin, Ensel, Simeone & Kuo, 1979; Turner, 1981; Aneshensel & Stone, 1982).

For this study social support is conceptualized and defined as "perceived" social support (Cobb, 1976). Cobb

(1976) defined social support as information conceived by individuals which leads them to believe that they are loved and cared for, esteemed and valued, and belong to a network of communication and mutual obligation (p. 300). Hence, it is the individual's perception of one's social support that is the vital variant, as social support is likely to be effective only to the extent that it is perceived (House, 1981, p. 27). According to Cobb's (1976) definition, perceived social support is "esteem support" and leads the individual to reaffirm their sense of personal worth and self-esteem.

Although the processes by which social support is effective are unknown (Thoits, 1985), perceived social support may be effective through processes that enhance the individual's sense of self-esteem (Turner, 1983; Cohen & McKay, 1984; Caplan, 1984). Turner (1983) stressed that Cobb's (1976) definition of social support, as the experience of being valued, care for, and loved, cannot be independent of self-esteem and self-love (p. 145). Cohen and McKay (1984) posited that support systems increase an individual's level of self-esteem through affirmation and positive comparisons.

External sources of social support come from three sources: (1) the emotional; (2) the cognitive; and (3) the material components (Jacobson, 1986). These external sources of support have been termed supportive acts and

behaviors (House, 1981, p. 24). Emotional support enhances one's feelings of being loved and cared for. Cognitive support refers to information, knowledge, and/or advice that helps persons understand and adjust to changes within their world; and material support involves the giving of goods and services (Jacobson, 1986). For this study with the dying, the emotional component of social support has been determined the influence of importance.

Social support is stated to consist essentially of emotional assistance from significant others (Thoits, 1985, p. 52). Emotional support is said to involve caring, love, and trust (House, 1981). For individuals to perceive themselves as loved and cared for (Cobb, 1976), the emotional component of social support must be present, within the environment, and "perceived", as such, by persons. Also, individuals with higher levels of self-esteem may more readily seek emotional social support, as personal factors have been found to account for most of the variance in the emotional component of social support (Dunkel-Schetter, Folkman & Lazarus, 1987).

Studies with normal populations have determined that emotional support and its perception are directly related to psychological outcomes (Aneshensel & Stone, 1982; Lin, Ensel, Simeone & Kuo, 1979; Williams, Ware & McDonald, 1981). In a large-scale study of 1000 individuals, perceived social support was found to negate depressive

symptoms (Aneshensel & Stone, 1982). Social support accounted for 62% of the explained variance and was negatively related to psychiatric distress (Lin, Ensel, Simeone & Kuo, 1979). Through regression techniques, a model supported the direct, positive effects of social supports and was predictive of mental health outcomes (Williams, Ware, & McDonald, 1981).

In studies of normal populations, social support has been determined to have a direct and mediating effect in stressful situations (Andrews, Tennant, Hewson & Valliant, 1978; Turner, 1981). Social support, in times of crisis, was found to have a mediating effect on psychological impairment (Andrews, Tennant, Hewson & Valliant, 1978). This study identified that individuals, who were most at risk for psychological distress, had poor crisis support and poor coping ability in high stress situations. Turner (1981) analyzed the effects of social support on psychological well-being and found significant main effects between social support and psychological well-being. In this study, the association between social support and psychological well-being was significantly higher for individuals in the high-stress group.

Studies, with the ill population, have determined that perceived social support is empirically related to and beneficial to psychological adjustment in illness (Carey, 1974; Weisman & Worden, 1976-77; Peters-Golden,

1982: Porrit, 1979; Mages, et al., 1981). In interviewing 100 breast cancer patients, those persons who perceived themselves as having inadequate social support reported adjustment problems, with feelings of isolation and avoidance (Peters-Golden, 1982). Weisman and Worden (1976-1977) reported poor psychological outcomes, in newly diagnosed cancer patients who perceived little or no social support from other persons. This study identified that highly distressed persons were pessimistic, had lower ego strength, tend to blame others, and expected little help from family members.

In adjustment to cancer, Mages et al. (1981) correlated social supports with an outcome variable of psychological adaptation. A study of the functionally disabled reported that perceived availability of social support, rather than use of social supports, was significantly related to coping effectiveness (McNett, 1987). Porrit (1979) identified that the quality of social support, rather than the quantity and availability of supports, in a time of crisis, determined psychological adjustment for accident victims. In this study, processes of social support that emerged as important correlates for enhancing the self-esteem of the victim included: empathic understanding, respect, and constructive genuineness. The same correlate of empathic understanding was identified, as a most important factor in giving emotional

support to persons who need and who seek social assistance (Thoits, 1986).

Studies with the dying population (Weisman & Worden, 1975; Carey, 1974; Heim, Moser & Adler, 1978; Hinton, 1975) indicate that perceived social support is an variable which effects psychological outcomes. In a descriptive study, Weisman and Worden (1975) identified that individuals, who perceived satisfactory relationships with significant others, survived for a longer period of time. The quality of support from significant others was associated with less depression, anger, anxiety and emotional withdrawal in dying persons (Hinton, 1975).

A significant association was reported to exist between interpersonal relationships and emotional adjustment in dying persons (Carey, 1974). In this investigation, when the median score was divided into two groups and the gamma statistic used, a feeling of emotional concern from one's significant other was correlated with emotional adjustment (.37), and emotional adjustment was defined as inner peace and self-possession. Emotional concern from clergy was found significant (.76), whereas, concerns from friends and physicians were not (Carey, 1974). In a study of 31 terminal patients, Heim, Moser and Adler (1978) reported a successful degree of social adaptation was linked with the effective use of coping behavior. For this study, social adaptation was

not defined and effective coping behaviors were stoicism and faith.

A study reports that the dying have increased needs for emotional social support, and desire affection and close relationships with others (Thomas & Weiner, 1974). Thomas and Weiner (1974) identified that a group of 30 critically ill patients differed, from other hospitalized and well groups, in needing inclusion in social relationships and close interpersonal relationships.

Cassileth et al. (1985) researched the interrelationships of psychological responses to illness in 201 cancer patients and their families, who were grouped into those receiving follow-up care, active treatment, and palliative therapy. In this study, the cancer patients perceived closer and more satisfactory emotional relationships, with their families, than their next-of-kin perceived. Interestingly, the palliative care group was found to display the same higher levels of perceived emotional relationships (Cassileth, et al, 1985), as the other two groups.

An appropriate death has been noted to include the continuity of important relationships (Weisman & Hackett, 1961), however, not all social support in far-advanced illness is perceived, by the person, as effective for psychological well-being. Studies have indicated that the effect of perceived social support upon psychological



well-being is dependent upon physical function, as a mediating variable.

As measured by patient self-reports, Bukberg, Penman and Holland (1984) studied the quality of social support in 62 far-advanced cancer patients. These researchers found that depression was associated with poor social supports, for the moderately disabled group of individuals, but not for the 26 patients categorized in the most physically disabled group. In a sample of 32 non-hospitalized cancer patients, the relationship between supportive behaviors and adjustment to illness was negatively associated with self-esteem (-0.54) and mastery (-0.72), in the most physically limited group (Revenson, Wollman & Felton, 1983). This study reported that social support had a strong association with personal growth (.80), for the group with many functional limitations. Conversely, social support lost its negative impact, for the higher functioning patients who were in active treatment, and less personal growth (.33) was noted (Revenson, Wollman & Felton, 1983).

Since, the above studies report different social support needs in the illness course, the timing of social support appears of import (Jacobson, 1986). Along with timing, the individuals perception of social support is of concern. Social support that is poorly perceived can add to the psychological distress of individuals in stressful

life situations (Weisman & Worden, 1976-1977; Peters-Golden, 1982; Wortman & Conway, 1986; Lehman, Illard & Wortman, 1986).

The preceding studies indicate that social support, regardless of mediating or direct effects, is most beneficial in times of crisis and stressful life events, for the normal population (Andrews, Tennant, Hewson & Valliant, 1978; Turner, 1981), and protects individuals from psychological distress (Aneshensel & Stone, 1982; Lin, Ensel, Simeone & Kuo, 1979; Williams, Ware & McDonald, 1981).

Investigations with the ill population report similar benefits of emotional social support that protect individuals from psychological distress in times of crisis and were the following: the time of diagnoses (Weisman & Worden, 1967-1977); recovery from severe disability (Porrit, 1970); and recovery from breast cancer (Peters-Golden, 1982). However, emotional social support needs for the dying population are less clearly defined.

While Carey (1974), Weisman & Worden (1975), and Hinton (1975) determined that emotional social support was associated with less psychological distress and improved adjustment to dying, other researchers have related the variable of social support with physical disability (Bukberg, Penman & Holland, 1984; Revenson, Wollman & Felton, 1983). The findings, by the latter group of

investigators, suggest that emotional social support needs of dying individuals change in the final phase of illness.

Although social support is linked to physical function, this variable needs further examination, to determine its effects in the dying population. Since this study population is targeted toward those individuals in the initial and intermediate phase of terminal illness, emotional support is predicted to positively effect physical function and psychological adaptation. Moreover, empirical studies on social support indicate the need to consider the effects of the demographic variables, such as length of illness, when studying social support.

#### Demographic Variables in the Adaptive Process

Length of illness. Progression of illness was found related to social support needs (Bukberg, Penman & Holland, 1984; Revenson, Wollman & Felton, 1983) and may indicate the need of the dying person for withdrawal of emotional support, as physical function decreases.

Jacobson (1986) noted the importance of the timing of social support needs and their changes over temporal dimensions. As differing social support needs have been suggested during the course of illness (Revenson, Wollman & Felton, 1983), likewise, psychological processes may change with the length of illness. Furthermore, persons are reported to employ psychological process at differing times in their illness which are: the time of diagnoses

(Weisman & Worden, 1967-1977; Worden and Sobel, 1978), the time of illness recurrence (Silberfarb, Herbert-Maurer & Crouthamel, 1980); and the time of final illness (Weisman, 1974; Feifel, Strack & Nagy, 1987).

In the dying, an acceptance/resignation coping strategies was found associated with longer duration of illness (Feifel, Strack & Nagy, 1986; Kubler-Ross, 1969). The relationship between increasing emotional distress and advancing illness has been reported Weisman & Worden, 1976; Cassileth et al. 1985). Cassileth et al. (1985) reported higher levels of mood disturbances for the group of palliative care patients, as compared to a follow-up group and a treatment group.

Conversely, persons with longer durations of illness have been noted to have less psychological distress and increased psychological adaptation (Achte & Vauhkonen, 1971; Craig & Abeloff, 1974, Hinton, 1975; Cassileth et al., 1984). The importance of time-related effects in adaptation has been reported (Campbell, Converse & Rodgers, 1976). A mean illness duration of 24.5 months was associated with less mood disturbance and researchers theorized that patients may have adjusted to the life-threatening aspects of their disease (Shacham, Reinhardt, Raubertas & Cleeland, 1983). Length of illness has been shown to have a negative influence on pain. Pain intensity has been shown to increase with the progression

of illness and approaching death (McKegney, Bailey & Yates, 1981; Daut & Cleeland, 1982; Ahles Blanchard & Ruckdeschel, 1984). But Speigel and Bloom (1983) found no association between pain and time since diagnoses.

In summary, studies have reported increasing psychological adaptation with longer durations of illness. Therefore, individuals with a longer time of illness are predicted to have greater psychological adaptation. The empirical literature strongly supports the negative relationship of length of illness with the variable of pain. The effects of length of illness upon the variable of social support is less clearly defined. Although social support needs may change throughout the course of dying, it is predicted that length of illness has a negative influence upon social support. As reported by two studies, the dying person may need to withdraw from emotional support needs, with increasing length of illness.

Age. Increased age has been reported to effect social support. Aging results in declining social supports (Kuhlen, 1959) and the dying, elderly have previously experienced more social withdrawal and loss (Kalish, 1976).

Likewise, increased age has been found associated with psychological outcomes in situations of illness. In advanced cancer, younger persons experienced more

depression (Plumb & Holland, 1977) and psychiatric symptomatology (Craig & Abeloff, 1974). A direct relationship between better mental-health scores and increasing age were found in all six categories of chronic illness, including cancer (Cassileth et al., 1984). However, in a study of cancer patients, Derogatis et al. (1983) found no age differences in psychological outcomes.

Few studies are reported in the literature that associate age with the variable of pain. Pain severity was found to correlate with patient and physician ratings in individuals 55 years of age, or older (Peteet, Tay & McIntyre, 1986). No association between age and pain control was found in a sample of home hospice patients (Austin, Eyres, Hefferin & Krasnow, 1986). The preceding studies support that increased age is expected to relate to increased psychological adaptation. Younger persons have been identified as having less psychological well-being in the dying process. The effects of increasing age upon social supports are predicted to have a negative influence. As a few studies reported, age is expected to have a negative impact upon pain.

Sex. Few sex differences have been found in relation to the variables in this study. For women, the quality of social resources was predictive of psychological outcomes (Billings & Moss, 1981). The subjective experience of

pain was reported to differ in women (Bond & Pilowsky, 1966). A study of psychological outcomes in cancer treatment reported that males expressed more denial (Leigh, Ungerer, & Percarpio, 1980). Very few studies have been found to support the linkages of sex with pain and with social support. Pain has been identified as having more impact on women. Likewise, women have been identified as having more quality in social supports.

In summary, few studies are found that support the linkages of age to pain, sex to social support and pain, and length of illness to social support. Of the studies that were found, findings are inconsistent and the relationship of age to social support is unknown in the dying process.

#### Summary

The uniqueness of this study is the combination of the selected variables. As no other studies have been found that have examined these linkages in combination, this design lends distinction and credence to the import of predicting psychological adaptation in the dying population.

In the literature, the empirical findings have noted the inconsistencies in defining the psychological processes that are utilized during the dying process. Correspondingly, the lack of clarity on social support needs in terminal illness is evident. The dimensions of

human growth and positive well-being that take place during situations of dying are, also, apparent: the maintenance of positive feelings, the derivation of satisfactions, and the subjective meanings of the dying experience have been overshadowed by dimensions of psychological distress. Therefore, the focus of this study is upon an outcome of psychological adaptation in death and dying.



## CHAPTER 3

### Method

#### Design

A correlational design using causal modeling techniques was utilized in this study. The causal model was time-ordered. In the first time-ordering, the exogenous variables of age (X1), sex (X2), and length of illness (X3) were assumed to be influenced by variables outside the model and in turn influenced variables in other time-orderings. The endogenous variables at the second time-ordering, namely, social support (X4) and pain (X5) were directly influenced by the exogenous variables, and, in turn, directly impacted the remaining two endogenous variables of physical function (X6), in the third time-ordering, and psychological adaptation (X7) in the fourth and final time-frame.

Of the 18 implied direct hypotheses, 13 were expected to reach significance at the .05 level. The depicted model is over-identified according to Pedhazer (1982), therefore, the structural equations were formulated in accord with the hypothesized relationships. Specifically all direct hypotheses were tested. These structural equations are as follows:

$$X1 = e1$$

$$X2 = e2$$

$$X3 = e3$$

$$X4 = P41X1+ P42X2+ P43X3+ e4$$

$$X5 = P51X1+ P52X2+ P53X3+ e5$$

$$X6 = P64X4+ P65X5+ e6$$

$$X7 = P71X1+ P73X3+ P74X4+ P75X5+ P76X6+ e7$$

### Subjects

The subjects were recruited from two large metropolitan home hospice programs. To qualify for the study, participants met the following criterion: (1) current recipient of hospice care services which included their receiving palliative care services and their being informed of terminal illness; (2) 30 years of age or older; (3) English-speaking; (4) able to function cognitively; and (5) willing consent to participate.

The investigation sample was comprised of 97 adult hospice patients. Selected demographic information was obtained with the patients' permission and included marital status, religion, education, race, and home situation, along with the exogenous variables of age, sex, and length of illness. The patients' diagnoses were obtained from the medical record.

Descriptive analysis was conducted on the demographic data and the following described the study population: 58 males and 39 females totaled the sample; ages ranged from 30 to 89 with a mean age of 65.7 (SD=14.3); 54.6 % (53)

were married, 23.7% (23) were widowed, 12.3% (12) were divorced/separated, and 9.2% (9) had never married; 57.7% were Protestant, 24.7% (24) were Catholic, 15.4% (15) indicated other, and 2% (2) were Jewish; 88.6 percent (86) of the population was white, five were Mexican-American, two were Afro/Americans, one was Asian, and three were Filipino; 47 (48.4%) of the subjects lived with a spouse, 27 (27.8%) with a family member, 5 (5.1%) with a friend, 12 (12.3%) with attendant care, and 6 (6.1%) lived alone. The mean for the length of illness was 22.0 months.

Of the subjects in the sample, 76 (78%) had a diagnosis of cancer; 10 (10%) were diagnosed with acquired immune deficiency syndrome (AIDS); 6 (6%) with amyotrophic lateral sclerosis (ALS); and 5 (5%) with other diagnoses which were end-stage cardiac (3), end-stage renal (1), and end-stage gastric ulceration (1).

Of the cancer patients, these primaries were most frequently recorded and were: 25 (32.8%) lung cancer; 14 (18.4%) colon/rectal; 9 (11.8%) breast; 6 (7.8%) prostate; 5 (6.6%) for gastric, 4 (5.2%) for pancreas, and 3 (3.9%) for liver. Other primaries had one or two subjects each in the categories. Table 1. lists the primary sites of the cancer patients and the other diagnoses for the participants.

#### Procedure

Permission from the Human Subjects Committee of the

Table 1. Primary sites of Cancer and Other Diagnoses  
for the Sample.

Diagnosis	Number of Subjects N=97
Cancer: Primaries	
Lung	25
Colon	14
Breast	9
Prostate	6
Gastric	5
Pancreas	4
Liver	3
Other: Throat, kidney, esophagus, melanoma, unknown primary, abdominal mesothelioma, myeloma, leukemia.	10
Acquired Immune Deficiency Syndrome	10
Amyotrophic Lateral Sclerosis	6
Other Diagnoses	5

University of San Diego and the participating institutions was obtained. In accord with hospice policy, prior to contacting a potential subject, the primary physician was asked to give his/her consent for patient participation in a research study. Given the physician's permission, a subject was initially contacted by telephone and the risks and benefits, the instruments to be completed, the time required to participate, the confidentiality of the study, and one's right to refuse participation was explained. If a subject agreed to participate, a time that was convenient to the participant was scheduled.

Prior to the start of a study session, a subject was fully informed of human subject protection, assured of confidentiality, given an explanation of informed consent, the study requirements, the risks of minimal psychological discomfort and fatigue, the benefits of the study, and given another opportunity to refuse participation in the study, without jeopardy to one's receiving hospice care services.

To further minimize any risks of psychological discomfort, a subject and /or primary care person was informed to notify the investigator or one's hospice personnel if difficulties or problems ensued. The investigators phone number was on the copy of the consent form that participants were given for their records. A copy of the consent form is in Appendix A.

Completion of the instruments took place in the subjects' place of residence. The time required to complete the 90 items was approximately 45 minutes to one hour. Notes were kept of all the spontaneous responses and reactions of the subjects during the testing sessions.

An additional 16 subjects, who participated in the pilot study (Dobratz, in press), were included in the data reduction analysis (see Chapter 4, p. 67). These subjects increased the factor analysis sample to a total of 113.

### Measures

#### Demographic Variables

A demographic questionnaire was constructed to collect data and other demographic variables of importance and included: age, sex, length of illness, marital status, religious affiliation, educational level, and social support affiliation. Current pain medications were noted on the pain measurement instrument.

#### Psychological Adaptation

This variable was assessed by two measures: (1) The Life Closure Scale (LCS) developed by Dobratz (1988, in press) which measures psychological adaptive processes and (2) The Affect Balance Scale (ABS) designed by Bradburn (1969) which measures psychological well-being. Since the Life Closure Scale is newly constructed, and psychometric properties are being established, a decision was made to include a well-established scale to strengthen the outcome

construct. A composite score of the two measures was to be obtained for psychological adaptation, if justified statistically.

The LCS scale was developed (Dobratz, 1988, in press) to measure psychological processes used in adaptation to terminal illness. Using a retroductive approach to instrument construction (Quayhagen & Quayhagen, 1988), the dimensions of adaptive psychological processes were identified from theoretical and empirical sources, along with content analysis of data derived from interviews, using a phenomenological approach.

The Life Closure Scale (LCS) is a 27 item five-point Likert scale with a scaling format from 1 (a little of the time) to 5 (most of the time). High scores on the LCS indicate a higher level of psychological adaptation and score ranges for high, medium, and low levels of psychological adaptation are being determined. During instrument construction, content validity was verified with an index of .83.

The theoretical-conceptual framework of the Life Closure Scale substantiated three patterns of psychological processes in adaptation to terminal illness. Initial psychometric testing on a group of 20 hospice subjects determined the existence of two independent, distinct subscales: the self-reconciled and the self-restructuring. A Pearson correlation coefficient of  $-.10$

substantiated the uniqueness of the subscales. An internal consistency reliability coefficient alpha of .85 and .86 was obtained on pilot testing for the self-reconciled and self-restructuring subscales, respectively.

Construct validity of the LCS was determined with the use of convergent and discriminant measures. The City of Hope Medical Center Quality of Life Survey (QOL) modeled after the previous Quality of Life Index (Padilla et al., 1983; Padilla & Grant, 1985) was used to show convergent validity. A Pearson correlation coefficient of .37 was obtained for the self-reconciled subscale and .69 for the self-restructuring subscale on those items relating to psychological well-being. The Zung Depression Scale (SDS) (Zung, 1965) was used as a measure of discriminant validity. Pearson correlation coefficients of -.38 for the self-reconciled subscale and -.46 for the self-restructuring subscale on items denoting psychological disturbances demonstrated discriminant validity.

The Affect Balance Scale (Bradburn, 1969) is a 10 item interviewer assisted scale in which respondents are asked to answer Yes to the experience of a positive or negative affect during the past week. The Affect Balance Scale (ABS) measures five positive and five negative affects of psychological well-being and the responses are give a numerical value of one. The five items on each affect measure score, from a -4 (negative affect) to +4



(positive affect). Differences in scores between the positive and negative scales are tabulated and a numerical value of 5 is added to the score to obtain a positive number. The range of scores, from 1 to 9, indicate the current level of psychological well-being.

Reliability estimates for the ABS were determined on 174 subjects at two time-intervals (average time three days). Coefficients of association between affect items were determined and gamma coefficient of .83 (positive affect); .81 (negative affect); and .76 (total scale) were obtained (Bradburn, 1969). In this same study of instrument testing, Q values for both groups of positive and negative items were uniformly high with all, but one, over .90.

#### Physical Function

Physical function was measured by the Karnofsky Performance Scale (KPS). The Karnofsky Performance Scale (Karnofsky, Abelmann, Craver & Burchenal, 1948) is an interviewer rated 11-point scale of physical function with performance status levels ranging from normal function (100 points) to death (0) points. The KPS has been used extensively to rate the level of physical function in cancer patients.

From data obtained in the use of the Karnofsky Performance Scale in the National Hospice Study, the interrater reliabilities of 47 interviewers were a

reported .97 (Mor, Laliberte, Morris & Wiemann, 1984). These same investigators determined construct validity and found a relationship of .35, as indicated by Kendall's tau statistic, between the KPS and a measure of physical activity. In addition, the predictive value of the KPS in determining length of survival was established (Mor, Laliberte, Morris & Weimann, 1984)

### Pain

Pain is measured by Part 4 and Part 2 of the McGill-Melzack Pain Questionnaire devised by Melzack (1975). Part 4 of the McGill Pain Questionnaire the Present Pain Intensity Scale (PPI) is a widely used word descriptor scale to rate pain intensity in hospice care. Part 2-The Pain Rating Index (PRI) is used to determine word descriptions of the subjective experience of pain and includes sensory, affective, evaluative, and miscellaneous descriptors of pain.

The Present Pain Intensity Scale (PPI) (Part 4) is a 5 point word descriptor scale ranging from 1 (mild pain) to 5 (excruciating pain). The Pain Rating Index (PRI) is a set of 78 verbal descriptors in 20 categories of 2-6 words each which are used to rate the sensory, affective, evaluative, and miscellaneous subjective experience of current pain. Within each category, subjects are asked to select one word that best describes their pain. The words chosen by the subject are ranked on a continuum from low

pain (value of 1) to intense pain (value of 5).

A summated score is obtained for each of the sensory, affective, evaluative, and miscellaneous categories (a score value based on the rank value of the chosen words), a total score for all of the categories, a score for the number of words chosen, and a score for the number-word combination as the indicator of overall pain intensity on the word-descriptor scale (PPI).

In a study of 248 pain patients, correlations between percentage changes on the PPI word descriptor scale and PRI indices were significant and were: sensory, 0.90; affective, 0.82; evaluative, 0.96; miscellaneous, 0.92; and total 0.94 (Melzack, 1975). Subject consistencies in pain descriptor category choices were found and the affective and evaluative components correlated with pain intensity (0.40 and 0.36 respectively) (Graham, Bond, Gerkovich & Cook, 1980).

In further study, a group of investigators reported alpha coefficients for three of the PRI subscales and were: sensory, .78; affective .71; evaluative .46; and total PRI scale .84 (Turk, Rudy & Salovey, 1985). Using factor analysis, this group of investigators found support for the sensory, affective, and evaluative components of the PRI, but questioned discriminant validity and suggested that the total score of the PRI is a more valid index than the subscores.

### Social Support

Social support was measured by the Personal Resource Questionnaire 85 (PRQ 85-Part 2) developed and described by Brandt and Weinert (1981) and Weinert (1985). Part 2 of the scale was selected to measure quality of social supports, as perceived by the subject, rather than the quantity of social support networks. Part 2 of the Personal Resource Questionnaire 85 is a seven-point Likert scale of 25 items scaled from 7 (strongly agree) to 1 (strongly disagree) that measures the subject's perceived level of social support. The scale consists of five dimensions four of which measure support perceived from others (intimacy, social interaction, worth, and assistance). The remaining dimension measures social support provided to others (nurturance).

An internal consistency reliability coefficient of .90 was obtained on initial testing and subscale alphas ranged from .62 to .75 (Brandt & Weinert, 1981). An alpha of .87 was reported in later testing (Weinert, 1985). Evidence of construct validity has been reported and moderate correlations were obtained between measures of depression (-.33) and anxiety (-.39) and the revised PRQ 85-Part 2 (Weinert, 1985).

### Data Analysis

Demographic data was categorized and analyzed using descriptive statistics. Data reduction techniques were

used where appropriate to validate the formation of composite measures. Bivariate correlations examined the relationships among the variables. Residual analysis was performed to assess for violations in assumptions. Regression techniques were used to test the structural equations, with each endogenous variable serving as the dependent variable to other (independent) variables in earlier time-orderings. The regression output was examined for amount of variance (R squared), population effects (adjusted R squared), beta weights, and level of significance. The SPSSX (1988) system of computation was used to analyze the data.

The subjects' spontaneous responses to the measurement tools, which validated perceptions and reactions to the dying process, were recorded. This data was coded and analyzed for conceptual relationships of relevance to the study and to emerge patterns that described adaptation in dying.

#### Assumptions

This study, since it was predictive in nature, assumed causal explanation (Krathwohl, 1985). On the basis of the theoretical and empirical predictions the following assumptions were made:

- (1) that psychological adaptation is a distinct and measurable dimension in the dying population.
- (2) that the psychological processes of dying persons are

effected by physical and social influences.

The possibility of alternative explanations is feasible and a concern within the design. For example, the side-effects from treatment intervention and the lessening of cognition from metabolic changes could influence the variables and provide alternative explanations.

There are, in addition, basic assumptions that underlie causal modeling (Kerlinger & Pedhauser, 1973; Asher, 1976; Hinkle, Weirsma & Jurs, 1979; Waltz & Bausell, 1981; Ferketich & Verran, 1984). These assumptions are the following:

- (1) that the associations among the variables are causally ordered, are in a linear combination, and are additive composites.
- (2) that the variables are measured on an interval scale.
- (3) that the residual variables are neither related to each other nor related to any other variables within the model.
- (4) that causality flows in one direction within the model.
- (5) that all the variables included within the model are relevant.

## CHAPTER 4

### Results: Testing the Causal Model

#### Data Reduction

Before the hypotheses could be addressed, it was necessary to perform data reduction techniques on selected constructs within the model. These techniques included statistical computations to establish psychometric properties and to determine theoretical entirety.

Since the Life Closure Scale (Dobratz, 1988, in press) was a newly developed instrument, with pilot testing conducted on a small sample of subjects, analysis of the tool for additional psychometric properties was first undertaken. The total scale of 27 items was subjected to reliability testing and all of the following criterion were assured: (1) an alpha coefficient of  $> .70$  which is needed for basic research; (2) a mean of  $> .25$  for the inter-item correlations; and (3) a corrected item to total scale correlation of  $> .35$  for each of the scale items (Nunnally, 1978).

In reliability testing, nine items failed to meet the required item to total scale correlation of  $> .35$  and were deleted from the scale. The retained 18 items had corrected item-total correlations that ranged from .37 to .67; the inter-item correlations provided a mean of .26;

and the alpha coefficient for the scale was .86. To assure theoretical completeness, factor analysis was next conducted on the Life Closure Scale. When factor analysis is performed, the correlations between the variables are ordered and simplified (Child, 1970), and theoretical simplification or parsimony is provided (Munro, Visintainer & Page, 1986).

On the initial alpha extraction, two factors with Eigenvalues of 1.0 or greater and a percent of variance of 5.0 or greater (Munro, Visintainer & Page, 1986) accounted for 53.8% of the total variance. However, the first factorial column explained 26.9 percent of the total variance. With one factorial extraction, all the 18 items produced criterion coefficients which ranged from .39 to .74 and accounted for 26.8% of variance. Thus, all the retained items of the Life Closure Scale exceed the established criterion level of  $> .35$  (Nunnally, 1978) and demonstrated saliency.

A Pearson correlation coefficient of .53 between the two subscales of the Life Closure Scale substantiated their theoretical interrelationship. The association between the two scales and the one factor loading determined that the scale was a multidimensional construct which reduced to a unidimensional scale. This multidimensional construct was clarified as adaptive psychological processes. This construct supported the



theoretical interpretation and simplified the scale structure by identifying a unidimension that described two extremes of the following: (1) the reconciled-self; and (2) the restructuring-self (the inverse of the reconciled-self). This inverse relationship indicated two poles of the same dimension. The retained items of the Life Closure Scale and the factor loadings for the items are listed in Table 2. These 18 items formed the criterion variable of psychological adaptation that was entered into regression output and path analysis.

Since the Life Closure Scale is in early testing, the construct validity of the tool necessitated analysis. The outcome variable of adaptive psychological processes correlated highly ( $r = .62$ ,  $p < .001$ ) with the Affect Balance Scale (Bradburn, 1969). The scale is an established measure that posits two separate and independent conceptual dimensions within the Affect Balance Scale (ABS) which are the Positive Affect Scale (PAS) and the Negative Affect Scale (NAS). To determine the conceptual independence of the two subscales, the Positive Affect Scale (PAS) and the Negative Affect Scale (NAS) were correlated. The resulting low correlation ( $r = -.22$ ,  $p < .01$ ) indicated the theoretical independence of the two subscales.

The two dimensions of the Affect Balance Scale are related to different sets of variables (Bradburn, 1969).

Table 2. Adaptive Psychological Processes.


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<u>The Reconciled-Self</u>	<u>Factor Loading</u>
L3 That your life has been worthwhile	.47
L7 That you are peaceful and serene	.62
L8 That you can always find something cheerful to think about	.47
L10 That you have happy memories to help you	.50
L12 That life is still worth living	.49
L26 Like you can still find humor in things	.60
 <u>The Restructuring-Self</u>	
L2 Like you are overwhelmed by everything	.56
L5 That you aren't important anymore	.43
L6 Like you want another chance to do things over	.43
L9 That you experience time passing without you	.46
L13 Like you are losing control of your emotions	.74
L14 That you would like to go to sleep and not wake up	.40
L16 That you have no course of action left to follow	.50
L18 Like you say and do things for which you are sorry	.39
L19 That you are afraid of being alone	.44
L20 That nothing has worked out right for you	.56
L23 Like you are frozen and unable to move	.60
L24 That you are alone even when others are near	.55

---

The positive dimensions is related to positive mental outcomes, such as life satisfaction and the contribution of persons within the environmental (Bradburn, 1969). On the other hand, the negative dimension (NAS) is related to variables of mental health distress, such as anxiety, physical symptoms of ill health, and fears of a nervous breakdown (Bradburn, 1969).

It has been established that the difference between the Positive Affect Scale (PAS) and the Negative Affect Scale (NAS) (the global or balance score) is the best predictor of overall psychological well-being (Bradburn, 1969; Moriwaki, 1974; Harding, 1982). Thus, as empirically established, the balance score was the variable that was entered into regression analysis.

To ascertain whether the theoretical construct of the Life Closure Scale (LCS) was supported, scores on the Positive Affect Scale (PAS), the Negative Affect Scale (NAS), and the balance scale (ABS) were correlated. The balance score (ABS) was significantly and positively correlated with the Life Closure Scale ( $r = .62$ ,  $p < .001$ ) indicating that the LCS is a measure of psychological adaptation. The correlation between the LCS and the PAS yielded  $r = .36$  ( $p < .001$ ). This finding also indicated a positive and significant correlation of the LCS with positive mental health components. The correlation between the LCS and the NAS was  $r = -.59$

( $p < .001$ ) and indicated a significant and negative association of the LCS with mental distress. These findings substantiated the construct validity of the Life Closure Scale, as a measure of psychological adaptation. The LCS converged with the subscale that measured psychological well-being, and discriminated with the subscale that measured components of psychological distress. Consequently, the data reduction techniques and construct testing confirmed that a reliable and valid measurement tool was being entered into the path analysis.

#### Path analysis

Bivariate Correlations. First, before multiple prediction was determined, the independence of the variables was established (Waltz & Bausell, 1981). To account for different portions of variance in the criterion variable, predictor variables that have low correlations among themselves are required (Hinkle, Weirsma & Jur, 1979, p. 402). Therefore, to establish the relationships among all the predictor and criterion variables, Pearson correlation coefficients were computed, were examined, and are depicted in a matrix in Table 3.

As necessitated in multiple prediction, the low interrelationships of the variables (see Table 3) provided explanatory value and assured that the model was correctly inferred (Kerlinger, 1973). Correspondingly, none of the bivariate correlations reached a level of .65, with the

Table 3. Correlation Matrix for all Variables within the Model.

Age	Sex	Length of Illness	Social Support	Pain	Physical Function	Outcome ABS LCS	
Age(X1)	.20	-.19	.04	-.15	-.05	.14	.30
Sex(X2)		.19	-.05	-.05	-.10	-.07	.05
Length of Illness (X3)			-.07	.02	-.11	-.07	-.13
Social Support (X4)				-.07	.03	.36	.53
Pain (X5)					.04	-.09	-.25
Physical Function (X6)						.32	.14
ABS (X7A)--Psychological Well-Being							.62

exception of the intercorrelation of .62 between the two outcome variables, thereby, determining the independence of the selected variables.

Residual analysis. Second, to assure that all the relationships within the causal model were stated accurately and that outside, or residual, effects had not been introduced within the model, scatterplots were computed. In residual analysis, outside influences are limited to that portion of variance being tested, as residuals from one linear equation are not related with residuals from another equation (Ferketich & Verran, 1984, p. 45). Residuals are detected by a scatter of plots that form a curvilinear relationship away from the zero line (Ferketich & Verran, 1984). For the selected variables in this study, the scatterplots were equally fixed and randomly scattered around the zero line in a linear relationship. Thus, no evidence of residual effects was found within the causal model, and the relationships were assumed as stated accurately.

Multiple correlation and prediction. To test the causal model and determine the hypothesized relationships, the selected person-environment predictor variables of age, sex, length of illness (exogenous), social support, pain, and physical function (endogenous) were entered into regression analysis with psychological adaptation as the final criterion variable. Since a causal model is linear

and additive (Kerlinger & Pedhauser, 1973; Asher, 1976), the regressions were time-ordered and started with the earliest, predictor variables and ended with the last, criterion variable.

In regression output, the following statistical computations are examined: (1) multiple R which is the Pearson product-moment correlation coefficient between the criterion variable and the predictor variables (assumes only positive values from 0.0 to 1.0); (2) multiple R squared which is that proportion of variance accounted for by the predictor variables in each equation; (3) adjusted multiple R squared which is an adjustment of the sample population in relation to the number of predictor variables; (4) the path coefficients which indicate the contribution of each variable in the equation (represented by beta weights); and (5) the criterion levels which are established beta weights of  $> .10$ , and significance set at  $p > .05$  (Kerlinger, 1973; Hinkle, Weiersma & Jur, 1979; Waltz & Bausell, 1981; Munro, Visintainer, Page, 1981).

In this causal model study, the beta weights (path coefficients) of the person-environment predictors indicated the relative contribution of the antecedent variables on each of the dependent variables. Both the direction and the prediction of these influences were diagrammed in Figure 1. From this diagram (see Figure 1), the path analysis was depicted in structural equations.

The results of these equations are as follows:

$$X1 = e1$$

$$X2 = e2$$

$$X3 = e3$$

$$X4 = (.042 X1) + (-.052 X2) + (-.046 X3) + e4$$

$$X5 = (.139 X1) + (-.028 X2) + (-.007 X3) + e5$$

$$X6 = (.028 X4) + (.031 X5) + e6$$

$$X7A = (.144 X1) + (.025 X3) + (.339 X4) + (-.066 X5) + (.311 X6) + e7A$$

$$X7B = (.237 X1) + (.045 X3) + (.503 X4) + (-.185 X5) + (.145 X6) + e7B$$

As noted from the above structural equations, there were two outcome or criterion variables (X7A & X7B). All the direct effects that were diagrammed in the causal model (See Figure 1) are in a matrix of direct effects and the amount of variance is accounted. Both the matrix of direct effects and the variance are listed in Table 4.

In the first regression, age, sex, and length of illness were regressed on social support and pain. For the unadjusted variance, the variables of age, sex, and length of illness explained less than 1% of the variance in social support. These same variables accounted only 3% of the unadjusted variance in pain. The direct effects of age explained most of the variance in pain ( $b = -.139$ ).

In the second regression, age, sex, length of illness, social support, and pain were regressed on the



Table 4. Matrix of Direct Effects

Variables	X4	X5	X6	X7A	X7B
Age (X1)	.042	-.139	-.051	.144	.237**
Sex (X2)	-.052	-.028	-.070	-.061	.046
Length of Illness (X3)	-.046	-.007	-.100	.025	-.045
Social Support (X4)		-.065	.028	.339***	.503***
Pain (X5)			.031	-.066	-.185**
Physical Function (X6)				.311***	.145
R Squared	.007	.026	.022	.250	.414
Adjusted R Squared	-.024	-.016	-.031	.200	.375
F Ratio	.23	.62	.42	5.00	10.61
<p>p &lt; .05*</p> <p>p &lt; .01**</p> <p>p &lt; .001***</p>					

dependent variable of physical function. Similarly, these variables accounted for only 2% of the unadjusted variance in physical function. Again one predictor variable was most explanatory of the variance. With a negative influence, length of illness ( $b = -.100$ ) accounted most of the variance in physical function.

In the last two regressions, the variables of age, sex, length of illness, pain, social support, and physical function were regressed, first, on the outcome variables of psychological well-being and, subsequently, on adaptive psychological processes. Because the criterion variable of psychological adaptation was assessed with an established measure of psychological well-being (X7A) (Bradburn, 1969), and a new measure of adaptive psychological processes (X7B) (Dobratz, 1988, in press), the effects of the predictor variables on both outcome criterion were analyzed.

In path analysis, all the interrelationships within a causal model are examined. Thus, the correlations are decomposed into direct causal, indirect causal, and non-causal components (Munro, Visintainer & Page, 1986, p. 296). These direct and indirect effects within the model, and the non-causal effects outside the model are presented in Table 5. Column A depicts the correlation coefficients of the variable pairs; column B lists the direct, causal effects of the beta weights (path coefficients), from the

Table 5. Decomposition Table of Total Covariance

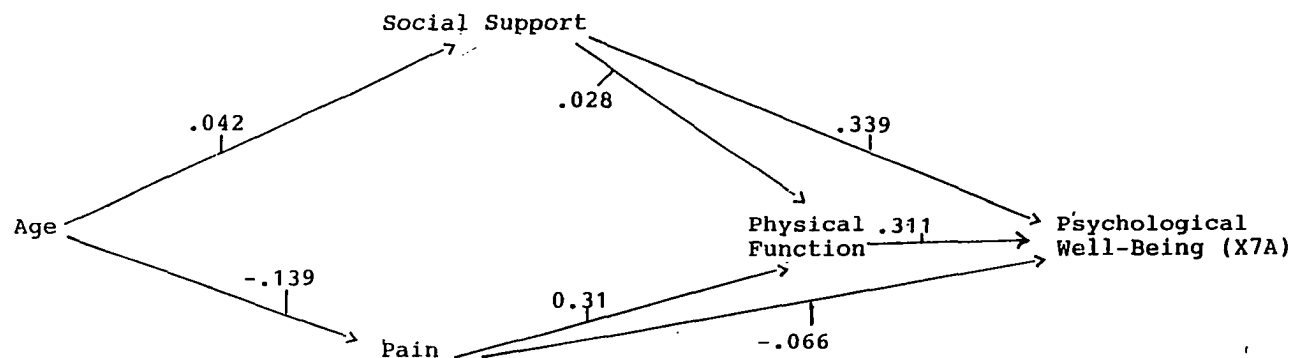
Bivariate Relations	Causal				
	(A) Total Covariance	(B) Direct Effects	(C) Indirect Effects	(D) Total B & C	(E) Non-Causal Effects A-D
Psychological Adaptation					
X7B X6	.143	.145		.145	-.002
X7B X5	-.252***	-.185*	.005	-.180	-.072
X7B X4	.531***	.503***	.004	.507	.024
X7B X3	-.134	-.045	-.037	-.082	-.052
X7B X1	.296**	.237**	.047	.284	.012
Psychological Well-Being					
X7A X6	.316***	.311***		.311	.005
X7A X5	-.094	-.066	.010	-.056	-.038
X7A X4	.362***	.339***	.009	.348	.014
X7A X3	-.070	.025	-.046	-.021	-.049
X7A X1	.135	.144	.022	.166	-.031
Physical Function					
X6 X5	.039	.031		.031	.008
X6 X4	.034	.028		.028	.006
X6 X3	-.105	-.100	-.001	-.101	-.004
X6 X1	-.049	-.051	-.003	-.054	.005
Pain					
X5 X4	-.068	-.065		-.065	-.003
X5 X3	.018	-.007		-.007	.025
X5 X1	-.146	-.139		-.139	-.007
Social Support					
X4 X3	-.065	-.046		-.046	-.019
X3 X1	.041	.042		.042	-.001

p .05\*  
p .01\*\*  
p .001\*\*\*

regressions listed in Table 4; column C denotes the indirect, causal effects which are the sum of the products of the involved pathways; column D is the sum of both the direct and indirect paths which gives the total causal effect; and column E is the non-causal effect which is derived from subtracting the total effect (column D) from the paired correlations in column A (Asher, 1976; Munro, Visintainer & Page, 1986). The indirect effects of the predictors of age and length of illness upon psychological well-being (X7A) and adaptive psychological processes (X7B) are depicted in Figures 2 to 5.

As the decomposition table (see Table 5) noted, both the criterion variables were examined for causal and non-causal effects and entered into the analysis. This was done to closely scrutinize and to conclude the most explanatory value of the outcome variables.

The analysis determined that the predictor variable of adaptive psychological processes was the more powerful outcome variable. Few differences were noted in the indirect effects (see Figures 2-5) between the two criterion. The direct effects had similar influences (see Table 4) with social support highly significant for both outcomes. The predictors variables of age, sex, length of illness, social support, and pain explained 38% of the adjusted variance for adaptive psychological processes, as compared to 20 percent of the adjusted variance for



Total Effects	.166
Direct Effects	.144
Indirect Effects	<u>.022</u>

Figure 2. Indirect Effects of Age on Psychological Well-Being (X7A).

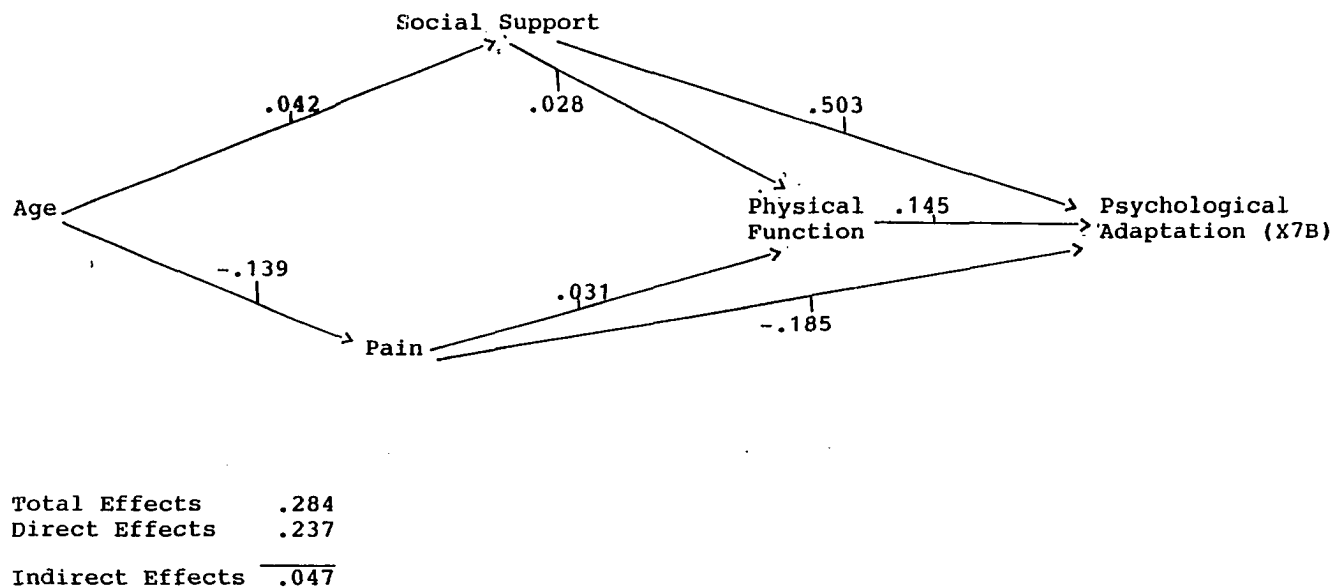
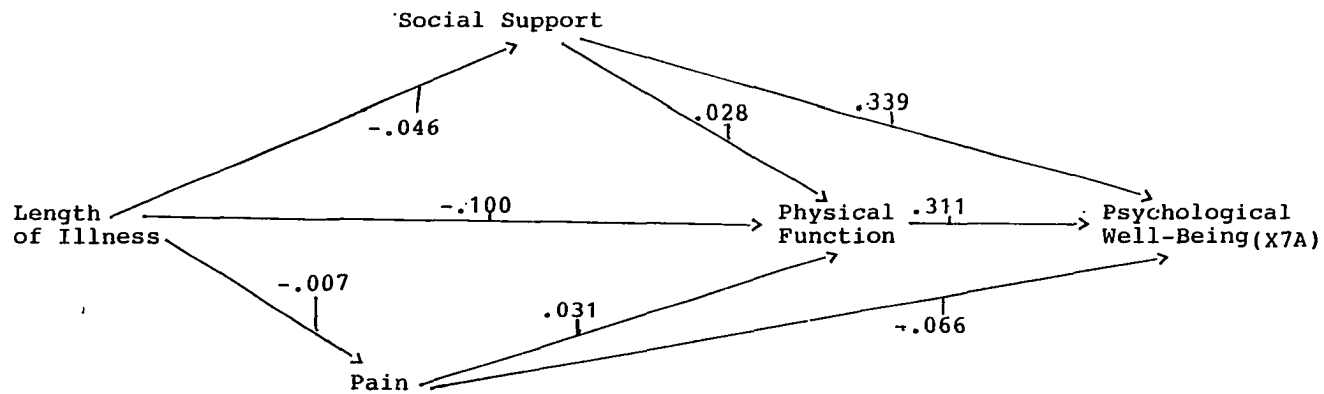
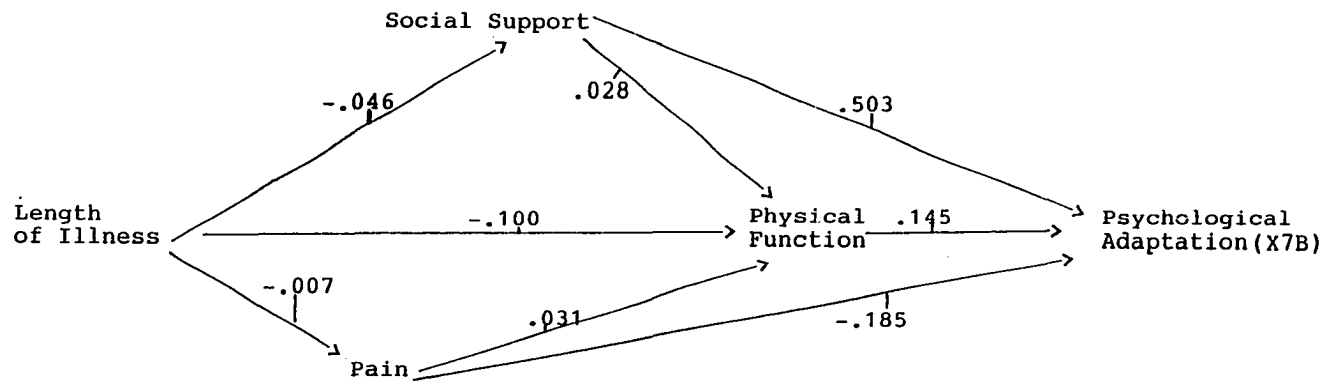


Figure 3. Indirect Effects of Age on Psychological Adaptation (X7B).



Total Effects	$-.021$
Direct Effects	$.025$
Indirect Effects	$-.046$

Figure 4. Indirect Effects of Length of Illness on Psychological Well-Being(X7A).



Total Effects	$-.082$
Direct Effects	$-.045$
Indirect Effects	$-.037$

Figure 5. Indirect Effects of Length of Illness on Psychological Adaptation (X7B).



psychological well-being. The path coefficients for psychological adaptation (X7B) substantiated the significance of social support, and the significance of both pain and age. From the comparative analysis, psychological adaptive processes (X7B) was retained as the outcome variable and entered into the simplified model for discussion in the hypotheses.

Length of illness had a negative influence ( $b = -.100$ ) on physical function and this pathway was retained within the model. The predictor variable of sex with no predictive validity was deleted from the causal model. The simplified causal model is depicted in Figure 6.

In summary, an examination of the path analysis revealed the direct and indirect effects of the person and environment influences. The endogenous variables of social support and pain, and the exogenous variable of age emerged as the strongest predictors of psychological adaptation. The predictor variables accounted for 38 percent of the adjusted variance in psychological adaptive processes, therefore, this variable was entered into the simplified model. These effects are now examined more closely in the testing of the hypotheses.

#### The Testing of the Hypotheses

To test the hypotheses, a significance level of  $p < .05$  was set. Figure 1. depicted the hypothesized causal model for psychological adaptation and noted the direction

and prediction of the effects. Figure 6. represents the simplified model with the retained path coefficients ( $b = < .10$ ) and the significant pathways ( $p < .05$ ). The direct effects, as hypothesized, are first discussed.

Hypotheses 1 which predicted that age and length of illness have a direct, negative effect on social support and pain was not supported. Although age had a negative effect on pain, it did not reach a significant level. There was no direct, negative effect of either age or length of illness on social support.

Hypotheses 2 which predicted that age and length of illness have a direct, positive effect on psychological adaptation was partially supported. As hypothesized, age had a positive direct effect on psychological adaptation ( $b = .237$ ,  $p < .01$ ). Length of illness was not predictive of psychological adaptation, but was negatively correlated ( $b = -.100$ ) with physical function. This linkage was not hypothesized and, although it failed to reach significance, indicated a trend in the reversed hypothesized direction.

Hypotheses 3 which predicted that sex (female) has a direct, positive effect on social support and a direct, negative effect on pain was not supported. The predictor variable of sex was deleted from the model, due to its weak predictive validity.

Hypotheses 4 which predicted that social support has

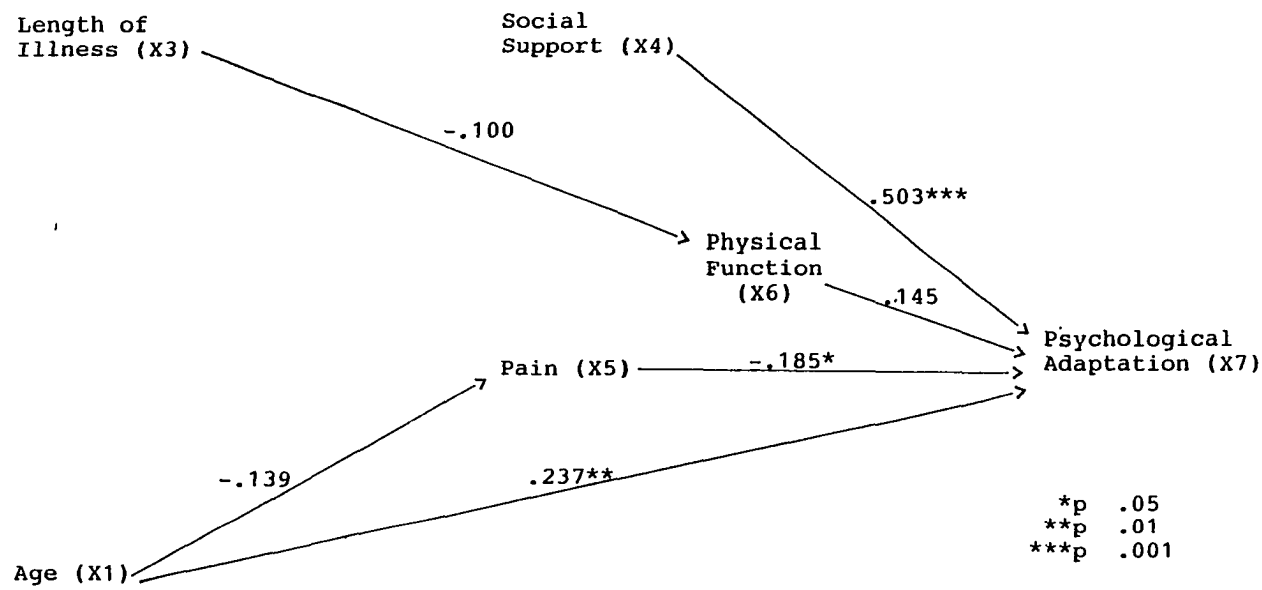


Figure 6. The Simplified Model Relating Psychological Adaptation to the Predictor Variables (path coefficients .10).

a direct, positive effect upon physical function and psychological adaptation was also partially supported. Social support, as hypothesized, was a potent predictor ( $b = .503, p < .001$ ) of psychological adaptation. However, social support was not a positive, direct predictor of physical function.

Hypotheses 5 which predicted that pain has a direct, negative effect upon physical function and psychological adaptation was partially supported. Pain, as hypothesized, had an inverse, direct, negative effect on psychological adaptation and reached a level of significance ( $b = -.185, p < .05$ ). The hypothesized inverse, direct effect of pain upon physical function was not supported.

Hypotheses 6 which predicted that physical function had an inverse, direct effect on psychological adaptation was not supported. However, there was a trend for physical function to effect psychological adaptation ( $b = .145$ ), but in the positive direction. The inverse, direct effect that was hypothesized was not confirmed.

In summary, of the 13 direct hypotheses that were expected to reach significance, three reached predictive validity. Age had a positive, direct significant effect on psychological adaptation. Social support was a positive, direct indicator of psychological adaptation and exerted a powerful influence. Pain had an inverse, direct

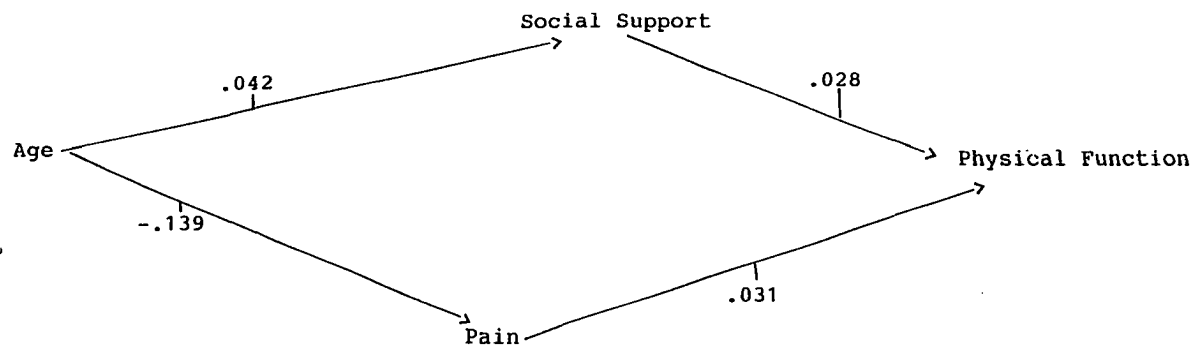
effect on psychological adaptation. The hypotheses that were numbered 1, 3 and 6 were totally rejected. The hypotheses that were numbered 2, 4, and 5 were partially accepted.

The theoretical model implied 18 indirect hypotheses that were presented in three complex hypotheses: H7; H8; and H9. The first complex hypothesis (H7) which stated that age, sex, and length of illness will indirectly effect physical function through social support and pain was not supported. These results of these indirect effects are presented (see Figures 7 & 8).

The second complex indirect hypothesis (H8) which predicted that age, sex, and length of illness will indirectly effect psychological adaptation through social support and pain was not supported. The products of the path coefficients did not reach significance and the results are given (see Figures 9 & 10).

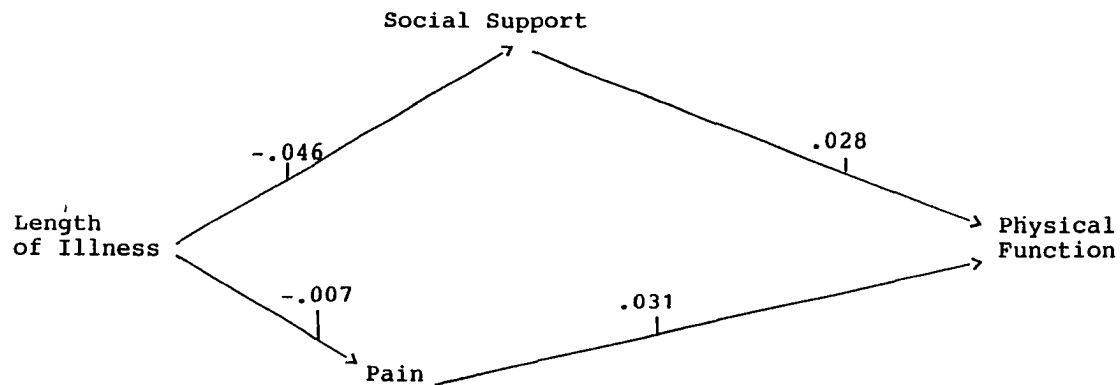
The third complex hypothesis (H9) which stated that age, sex, and length of illness will indirectly effect psychological adaptation through physical function, by way of social support and pain was not accepted. The non-significant indirect effects of age, sex, and length of illness, as hypothesized, on psychological adaptation are represented (see Figures 11 & 12).

In summarizing the testing of the hypotheses, social support and age emerged as positive, direct predictors of



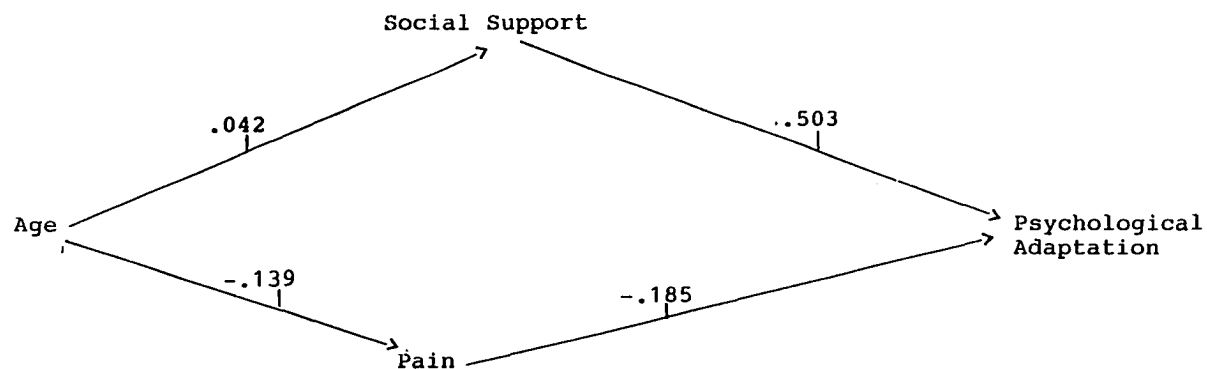
Total Effects	-.054
Direct Effects	-.051
Indirect Effects	<u>-.003</u>

Figure 7. Indirect Effects of Age on Physical Function through Social Support and Pain.



Total Effects	$-.101$
Direct Effects	$-.100$
Indirect Effects	$-.001$

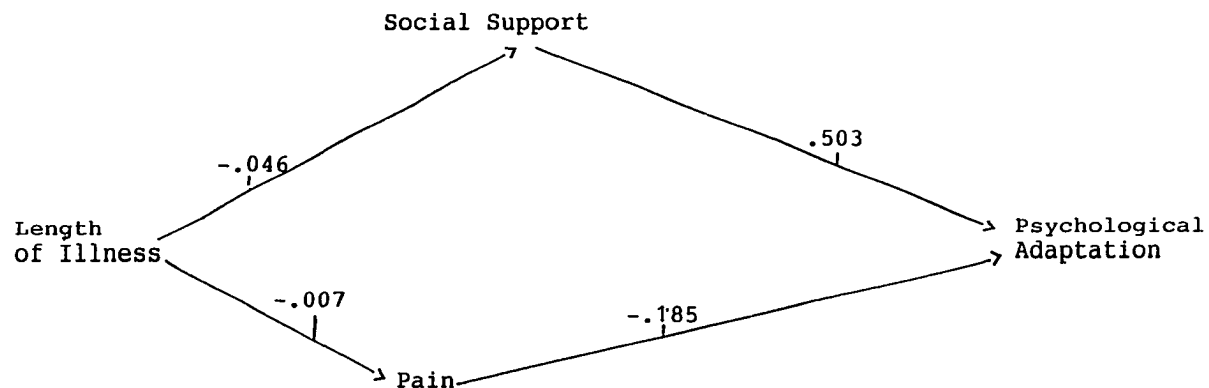
Figure 8. Indirect Effects of Length of Illness on Physical Function through Social Support and Pain.



Total Effects	.284
Direct Effects	.237
Indirect Effects	<u>.047</u>

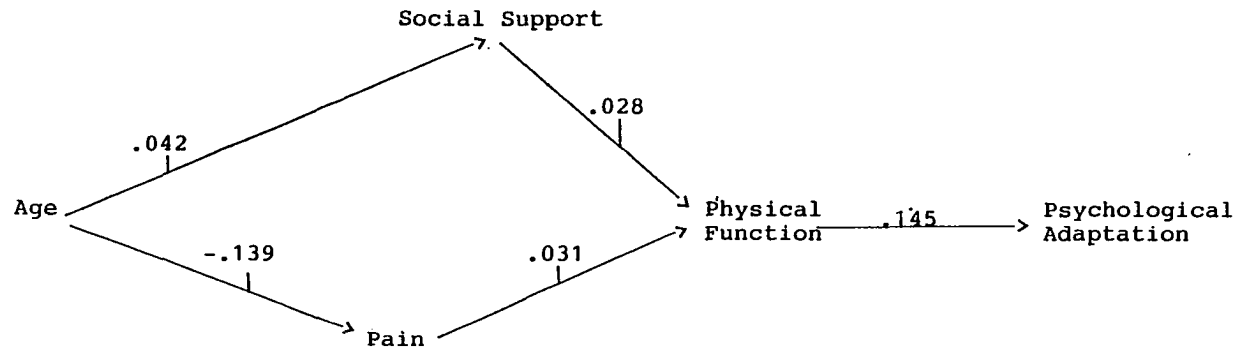
Figure 9. Indirect Effects of Age on Psychological Adaptation through Social Support and Pain.





Total Effects	$-.067$
Direct Effects	$-.045$
Indirect Effects	$-.022$

Figure 10. Indirect Effects of Length of Illness on Psychological Adaptation through Social Support and Pain.



Total Effects	.237
Direct Effects	.237
Indirect Effects	<u>-.000</u>

Figure 11. Indirect Effects of Age on Psychological Adaptation through Physical Function by way of Social Support and Pain.

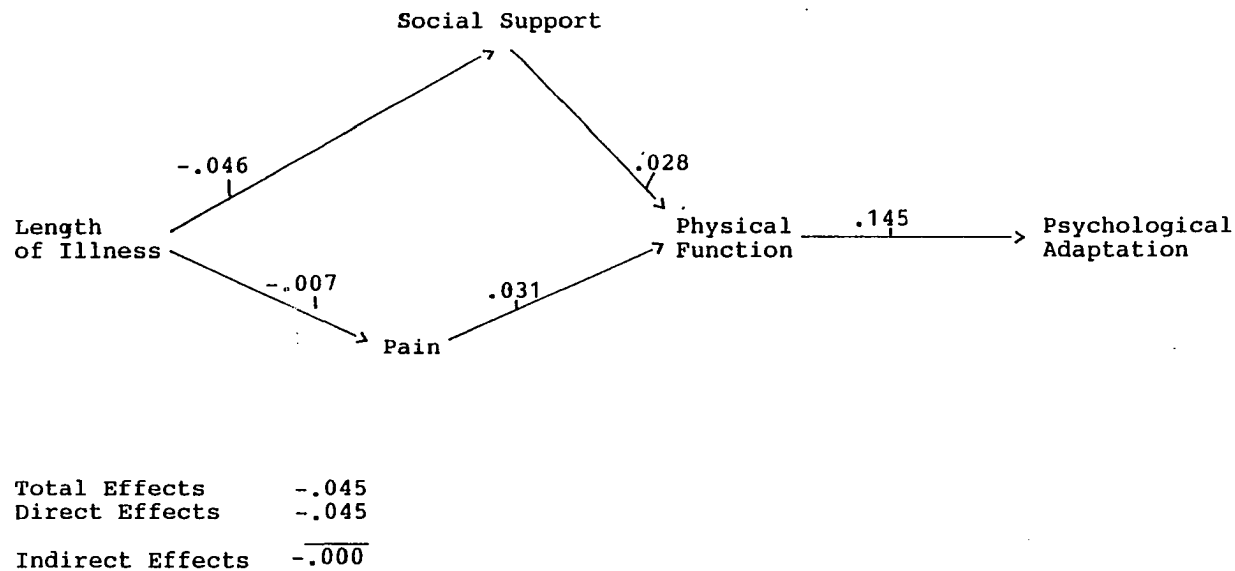


Figure 12. Indirect Effects of Length of Illness on Psychological Adaptation through Physical Function by way of Social Support and Pain.

psychological adaptation. The predictor variable of pain was inversely, directly associated with psychological adaptation. The indirect effects of the predictor variables were not supported. There was a trend in the analysis for physical function to positively, directly effect psychological adaptation, and for age to inversely, directly effect pain.

### Discussion

In this path analytic study, regression analysis confirmed the significance of the interrelationships of the variables of social support, pain, and age as direct predictors of psychological adaptation in the dying process. As a result, a predictive model of psychological adaptation in dying has explanatory value, as based on the findings of this study. In the empirical literature, no previous studies have been found that have investigated the interrelationships of this study's variables and/or that have studied this criterion variable with dying subjects. However, the predictor variables have been researched and supported the significant findings of this study.

The positive, direct effects of social support upon psychological well-being have been substantiated (Williams, Ware & McDonald, 1981; Turner, 1981; Aneshensel & Stone, 1982). The present finding is similar to that of Turner (1981), who found a positive, direct effect of

experienced social support on psychological well-being that reached significance. Interestingly, in Turner's research, the association between social support and psychological well-being was significantly higher ( $r = .47$ ) for individuals in the high stress group, as opposed to the medium stress ( $r = .43$ ) and to the low stress ( $r = .32$ ) groups.

Similarly, the direct, positive effects of social support on mental health outcomes, regardless of experienced life events was confirmed by a group of investigators (Williams, Ware & McDonald, 1981). In fact, Aneshensel and Stone (1982) identified that perceived social support was negatively related to depression, as this study supported.

The present study's finding on the influence of social support points to the importance of this variable in adaptation to illness, as supported by the investigations of Porrit (1979), Mages et al. (1982) and Peters-Golden (1982). Also, this study determined that social support is a significant influence in effecting psychological adjustment in dying, as identified in previous studies by Carey (1974), Weisman and Worden (1975), Hinton (1975), and Hiem, Moser and Adler (1978).

Importantly, the mean of the social support scores for the sampled subjects approximated the means for groups of healthy individuals. From reliability testing on the

Personal Resource Questionnaire 85-Part 2, the mean scores of three groups, from the general population, ranged from 139.03 to 142.78 (Weinert, 1985). The subjects in this study had a mean score of 138.84 on the PRQ-Part 2. However, there was a wide variation in the range of scores, from a low of 56 to a high of 173. The wide range of scores would indicate that the selected measurement tool was a good predictor of perceived social support in the dying population.

As hypothesized, the inverse, direct effect of pain on psychological adaptation was supported. Several studies have associated pain with psychological distress (Woodeford & Fielding, 1978; Ahles, Ruckdeschel & Blanchard, 1983; Spiegel & Bloom, 1983; Bukberg, Penman & Holland, 1984; Ahles, Ruckdeschel & Blanchard, 1983). This study's finding was similar to a reported inverse relationship of pain with a positive mood outcome (Shacham, Reinhardt, Raubertas and Cleeland (1983). Conversely, Spiegel and Bloom (1983) hypothesized pain as a positive, direct predictor of increased mood disturbance and confirmed their prediction ( $r = .25, p < .05$ ). As this study substantiated, pain is negatively associated with psychological adaptation, and, conversely, positively related to psychological distress.

Positive mood states have been found to increase over time with pain intervention (Shacham, Reinhardt, Raubertas

& Cleeland, 1983). From this study, the effects of pain upon psychological adaptation over time are unknown. However, this study's findings support the effects of treatment intervention.

Researchers have reported a wide variation in the scores on the sensory, affective, evaluative, and miscellaneous components (total score) of the McGill Pain Questionnaire (Melzack, 1975). In analyzing nine studies on cancer pain, the means of the total scores of the four components ranged from a low of 5.4 to a high of 44.4 (Wilke, Savedra, Holzemer, Tesler & Paul, 1990). For the sampled population, the mean of the total score was 12.02 and the scores ranged from 1 to 39. In addition, the mean of the Present Pain Intensity Scale (PPI) was 1.70. The PPI has a range from 1 (mild pain) to 5 (excruciating pain) and the integer is attached to a word descriptor. A PPI mean of 1.70 described pain that was more than mild, but less than discomforting. Given a total pain score mean of 12.02 and a PPI mean of 1.70 treatment intervention for pain is supported.

The direct effect of pain upon physical function was not supported, as hypothesized. Using the same measurement tool, no association between pain and physical function was found by another group of researchers (Mor, Laliberte, Morris & Wiemann, 1984). In contrast, other studies have reported the impact of pain upon physical

function (Daut & Cleeland, 1983; Cleeland, 1984; Ahles, Blanchard & Ruckdeschel, 1983; Daut, Cleeland & Flanery; Rankin, 1982). However, these studies reported a wide variety of measures that were used to assess physical function.

It is a possibility that the broad measure selected to assess physical function was not precise enough to differentiate between pain and physical function. The majority of the subjects in this study were either at low levels of physical function (mean = 44.02) and/or lower ranges of pain variation (mean = 12.02). Consequently, there is a possibility that the results of treatment intervention on pain may have weakened the influence of these variables.

However, the positive, direct effect of physical function on psychological adaptation almost reached significance ( $p < .07$ ) and was incorrectly hypothesized. Higher levels of physical function positively effect the outcome variable. Conversely, decreasing levels of physical function are related to decreasing levels of psychological adaptation (Derogatis et al., 1983; Cassileth et al., 1984; Craig & Abeloff, 1974; Weisman & Worden, 1975; Bukberg, Penman & Holland, 1984).

Although the inverse, direct influence of age on pain ( $b = -.139$ ) missed significance, this trend warrants discussion. In studies of larger populations, this



relationship was demonstrated. In a sample of 1,119 National Hospice Study subjects, pain was more prevalent in the younger age groups: 21 to 64 years (62.5%); 65 to 74 years (53.2%); and 75 and onward (45.3%) (Wachtel, Masterson, Reuben, Goldberg & Mor, 1988). Had there been a larger number of subjects in the sample, this variable may have demonstrated that increasing age is negatively related to pain and may have reached significance.

The positive, direct effect of age on psychological adaptation was supported. The present study reported findings similar to Cassileth et al. (1984), who identified a significant direct relation between advancing age and higher mental health scores. In other studies with similar populations of advanced cancer patients, younger subjects have reported more psychological distress (Craig & Abeloff, 1974; Plumb & Holland, 1977). Increasing age, as confirmed in this study, is associated with greater psychological adaptation.

Length of illness, as hypothesized, had no effect on either social support or pain. Length of illness was predictive of physical function ( $b = -.100$ ), although this linkage did not reach significance and was not hypothesized. As predicted, the positive, direct effect of length of illness on psychological adaptation was not confirmed. Interestingly, a mean illness duration of 24.5 months was related to less mood disturbance (Shacham,

Reinhardt, Raubertas & Cleeland, 1983). These investigators posited that adjustment to life-threatening disease may occur over time. Given that the mean length of illness for this study was 22.09 months, there is the possibility that this same phenomenon may have occurred. Consequently, the mean length of illness in this study may have accounted for the lack of prediction of this variable on the outcome.

As an indicator of psychological adaptation, the scores on the Life Closure Scale showed a wide variation. Given a possible score of 90 points, the mean score was 70.69 and ranged from 33 to 88. Of particular interest was a group of six patients who had amyotrophic lateral sclerosis, with a mean score of 57. Since the LCS had a significant association with the positive scale (PAS), a significant inverse relation with the negative scale (NAS), and the overall balance score, comparisons of Affect Balance Scale scores was advised.

On the balance score, Moriwaki (1974) reported a mean score of 8.27 for a normal group of aged subjects and a mean score of 4.5 for a group of psychiatric subjects. These means were based on a balance score of 10, and a score of 9 was computed for this study, as recommended by Bradburn (1969). This study's mean balance score was 5.9 which exceeded the mean of the psychiatric group, but lessened the mean of the normal population. On the

negative affect scale (NAS), a mean of 1.30 was found for a group of cancer patients (Revenson, Wollman & Felton, 1983). The dying subjects, with a negative affect scale mean of 1.59, were above the mean for the cancer group. Few studies were found, with similar populations, by which comparisons could be made.

In summary, this path analytic study supported the person-environment influences of social support, pain, and age on psychological adaptation and is substantive and parsimonious. The predictors variables accounted for 38 percent of the adjusted variance in psychological adaptation. The interrelationships between the variables were empirically supported and the findings were substantiated. Through statistical analysis, the use of path analysis provided strength in defining a predictive model of psychological adaptation in dying.

## CHAPTER 5

### Results: Generating Theory

One of this study's aims was to identify the spontaneous responses of the studied population, which validated dying persons' perceptions and reactions to this occurrence. The goal of this part of the study was to generate a theory that accounted for a pattern of behavior which is relevant for those involved (Glaser, 1978, p. 91). Therefore, the grounded theory method of qualitative analysis was utilized to emerge patterns of behaviors in situations of dying.

When the above method of investigation is selected, theory is induced by comparing relationships and clusters of relationships to reach theoretical completeness (Glaser, 1978). At the completion of this process, a core category that accounts for all the described theory is determined, a set of core concepts that integrate into the central theoretical construct are emanated, and, in addition, the categories, within, which provide for the theoretical descriptions are accounted (Glaser, 1978).

### Method

All the 97 subjects, who completed the study tools, were included in the qualitative study. The majority of the participants were able to complete data collection in

one setting. However, three subjects required second sessions for instrument completion. All the subjects were asked an open-ended question at the end of their study session which was: What comments (additional) do you have about the questions? This question was incorporated into the study to allow each of the participants the same opportunity to validate their reactions. Following the grounded theory method (Glaser & Strauss, 1967, Glaser, 1978), all the subjects' spontaneous responses to the measurement tools were recorded by the investigator at, or near, the time of data collection.

To generate the grounded theory, these steps were followed: a guiding theoretical orientation was established; the coding and analysis of data was on-going; the theory was further validated through literature searches; and the interrelationships of the categories and the inherent concepts were analyzed and compared (Atwood & Hinds, 1986). As the subjects' spontaneous responses were elicited, the step that called for the structuring of the data was omitted (Atwood & Hinds, 1986).

Several study questions drew frequent responses, were avoided, and/or clustered in patterns of responses. Frequently, the investigator had to redirect the subjects back to the focus of the session. The questions triggered feelings, responses, and cognitions; giving the subjects an opportunity to emote. The willingness of dying persons

to share their feelings, experiences, and responses has been validated in previous studies (Feifel, 1959; Simmons & Given, 1972; Hinton, 1975). These responses were recorded, coded, and analyzed and grouped into relationships which emerged the theoretical framework and findings.

#### The Emerged Theoretical Framework

In the previous chapter, the causal model was built from existing and predetermined theoretical formulations. That is, the conceptual relationships were inferred from theoretical findings, the particulars were arranged, and the data analysis confirmed the specified relationships. In theory generation, the specifics, from the data itself, determine the theoretical model which surfaces and guides the conceptual formulation. Thus, for this inductive approach, the theoretical framework was evolved, from within the data analysis. Therefore, no preexisting model guided the inferences and a new theoretical model emerged.

Psychological reactions to the dying process, as disclosed by the dying subjects' responses, were organized around a central concept of self-transactions. The concept of self-transaction inferred a process of both person and environment relationships that are moving and unfolding over time or across situations (Lazarus & Folkman, 1987); and an integration of both person and environment variables that are reintegrated and changed

into a new higher-order meaning (Labouvie-Vief, 1980; Lazarus & Folkman, 1984; Lazarus & Folkman, 1987).

The concept of self-transactions, also, contained the notion of movement. The dying responded of both their inner person and outer influences being integrated, reintegrated, and changed through the movement of time. Fromm (1976) ascertained notions of movement that were embodied in aspects of the "self", or "Being." Likewise, Lifton and Olson (1972) integrated movement in their ontological discourse on death and life imagery. Hence, contained within the notion of self-transactions are the concepts of integration, process, and movement.

The processes that emerged, from the self-transactions of the dying persons, implied a developmental hierarchy of both higher and lower levels of psychological integration. These interrelationships formed process patterns that were descriptive of the dying persons' adaptability to integrate their situations of dying. The process patterns of self-transactions which emerged in death and dying were (from the highest to the lowest order): (1) the transcending-self; (2) the becoming-self; (3) the reconciling-self; (4) the relinquishing-self; (5) the anguishing-self; (6) the avoiding-self; and (7) the repressing-self.

The process patterns of self-transactions are connected to the "moving template" which represents the

movement in death and dying. The "moving template" is lines of motion over time which flow in two directions. The motion of dying flows in a hierarchical progression (up and down), from a higher to a lower level, and from a lower to a higher level. The motion of dying, also, moves in a back and forth direction (from one side to another) in a dialectical of opposing positive and negative forces.

Moreover, the process patterns of self-transactions are attached to the "integrating forces" which represents the person-environment influences of dying. The emerged theoretical framework and conceptual schemata for self-transactions is represented in Figure 13.

The integration between the dying person's "self" and the environment was defined as the "integrating forces." Within the core concept of the "integrating forces", were six categories that described the self and the environment in dialectical motion. These categories were the following: (1) interpreting meaning (finding vs losing); (2) bodily feelings (managing vs agonizing); (3) connecting others (connecting links vs missing links); (4) weighing expectations (accepting vs rejecting) (5) adjusting expectations (resolving vs grieving); and (6) sustaining acts (maintaining vs restraining). Figure 14. lists the categories of the core concept "integrating forces" and the opposing negative and positive dialectical forces of the categories.



## HIERARCHICAL PROCESS PATTERNS OF SELF-TRANSACTIONS

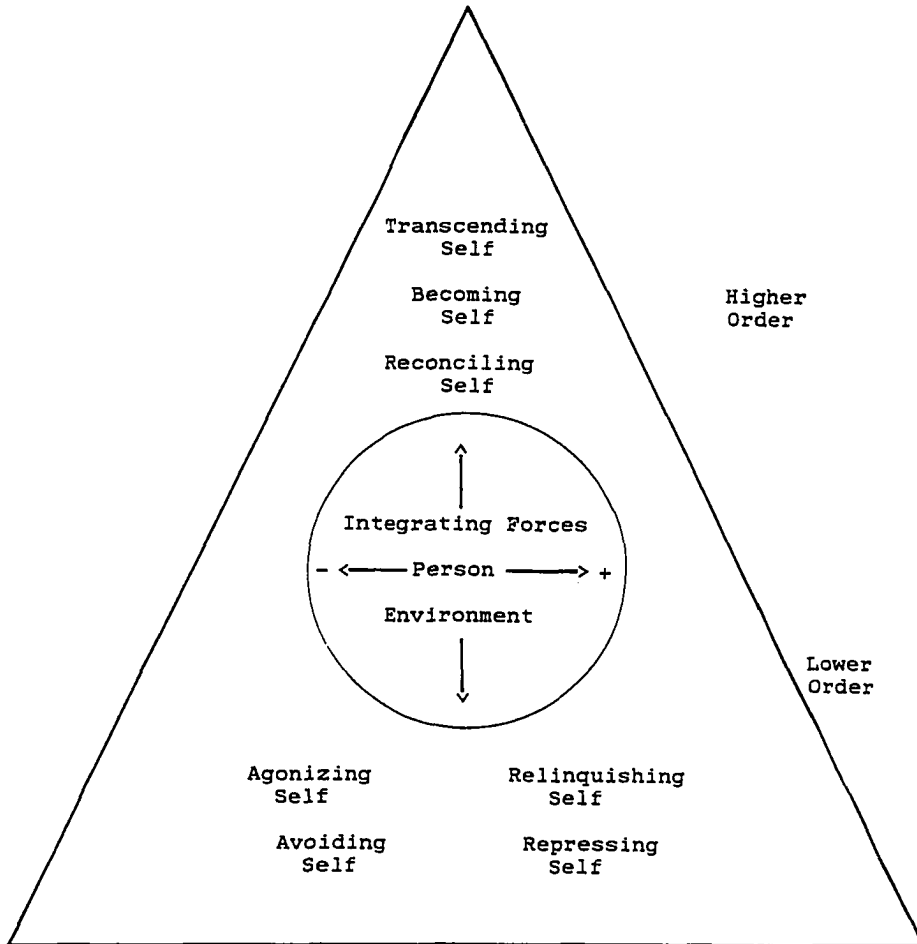


Figure 13. The Conceptual Framework for Self-Transactions.

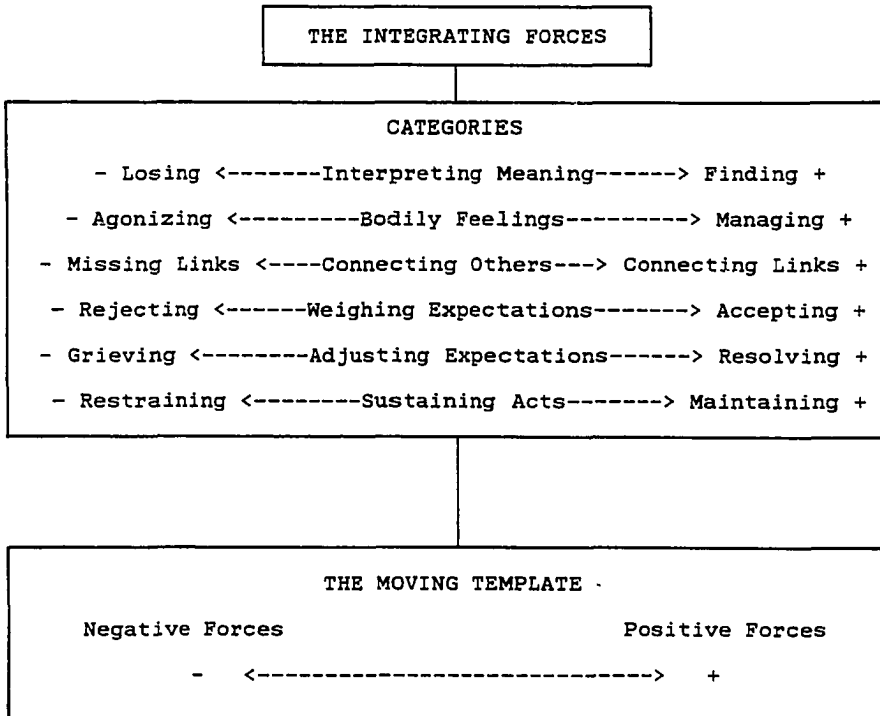


Figure 14. Categories of the "Integrating Forces" with dialectical forces of the "Moving Template".

### Self-Transactions

The self-transactions: hierarchical processes of person-environment interactions, within the influences of dying, which describe patterns of psychological adaptability. In transactions, individuals restructure or join their internal and external variables together to form a new relational meaning (Lazarus & Folkman, 1984). When restructured, these new relationships represent a higher level of integration (Labouvie-Vief, 1980), of abstraction, and a meaning derivation that differs from previous interpretations (Lazarus & Folkman, 1984).

As an individual confronts variables or influences that represent deficits, such as in a life-threatening illness, a trade-off situation between perceived losses and gains occurs (Labouvie-Vief, 1980). To compensate for these losses, an individual shifts to a higher level of cognitive processing--meaning--in place of detail processing. Moreover, in moving to a higher level of cognition, the lower levels below are dissolved (Labouvie-Leif, 1980). In meaning processing, as a persons continues to think about a threatening situation, differing meanings are included and others occluded, (Lazarus, 1978). Likewise, in a recurring situation that is menacing, the mind reorganizes, or reintegrates, and becomes capable of accepting what it previously was unable to comprehended (Fromm, 1976).

According to Fromm (1976), the distinctiveness of one's "Being" is inner activity and cognition, rather than outward activity and productivity. For a dying person with one's loss of body function and, consequently, one's loss of outward activity; the inner activity of the cognitions, feelings, and emotions becomes the center of import. With increasing cognitive activity, trade-offs are made, lower levels are dissolved, meanings are attached, and, even, the probability of death is accepted --all signs that the person has shifted to meaning processing.

In the change to meaning processing, a dying person is able to maintain one's sense of "self", or "Being", that is, who the person really is. In securing the reality of one's inner essence, rather than one's outward appearance, one's "self", or "Being", can be maintained (Fromm, 1976). Hence, for a dying person with one's loss of outward body appearance, the inner sense of the "self", remains secured.

The responses of these subjects implied a shift or non-shift to meaning processing; the import of inner activity to replace outer activity; the inclusions and occlusions of differing meanings; the reintegration or non-integration of threatening situations; and the ability or inability to reach higher levels of consciousness. Therefore, the central concept of self-transactions, with

its core concepts of integration, movement, and process, emerged to form the theoretical construct that accounted for completeness.

The "moving template": the movement of the dying person represented through time. The participants spoke of physical, psychological, and social influences that changed and occurred over time. Moreover, the subjects remarked of their resolution and dissolution of conflicting forces, such as accepting or rejecting and resolving or grieving--a dialectical. This constant interchange of the internal and external influences resulted in an up and down, and a back and forth motion--a dialectical movement between opposing positive and negative forces, and between higher and lower levels of progression.

To maintain the "self", dying persons dissolve lower levels that represent losses and move to higher levels of integration in which gains are represented (Labouvie-Vief, 1980). For the dying with, often, rapidly changing person-environment influences, movement in the opposite direction from gains to losses, also, occurs. In situations of dying, whether, or not, a loss or a gain is incurred, or a higher or lower level of integration is reached, is, dependent upon the meaning of the situation to the individual.

According to Lazarus (1968), positive emotional

states, most likely, occur when an individual views one's situation as non-threatening. In these instances, a threat would seem to have positive aspects only when it has been or is being resolved (Lazarus, 1968, p. 196). Furthermore, in situations where a serious threat has been overcome, or is absent, and/or an individual feels a sense of security, self-esteem, a sense of identity, and belonging, positive emotions are present (Lazarus, 1968). To secure positive emotions, the dying, spoke of a dialectical approach in searching for answers, in resolving threats, and in deriving meaning--all which were used to maintain positive emotional feelings.

The "integrating forces": the person-environment influences that effect integration and progression to higher levels of consciousness in self-transactions. The "integrating forces" are categories of person-environment influences that described the persons' transactions in dying and the dialectic movement within. These categories that emerged were: (1) interpreting meaning (finding vs losing); (2) bodily feelings (managing vs agonizing); (3) Connecting others (connecting links vs missing links; (4) sustaining acts (maintaining vs restraining); (5) weighing expectations (accepting vs rejecting); and (6) adjusting expectations (resolving vs grieving);

In the category of "interpreting meaning", the dying persons transacted their situation by deriving meaning

from their circumstances. The dying, who are unable to change the events of physical illness, protected themselves with responses that controlled the meaning of the experience or functioned to control the harmful situation (Perlin & Schooler, 1978). Furthermore, these responses indicated the dying persons' attempts to understand their problems so as to derive meaning from them and to accept them (Rothbaum, Weisz & Snyder, 1982). Hence, a dying person is able to maintain control of the uncontrollable event of death, by deriving meaning within and accepting one's situation.

When meaning is derived and problems are accepted, a person uses a form of control that is termed secondary or interpretive control (Rothbaum, Weisz & Snyder, 1982). In secondary control the "self" changes and the types of interpretive control are as follows: (1) attempts to predict events so as to avoid disappointment (predictive control); (2) attempts to associate with chance (illusory control); and (3) attempts to associate with powerful others (vicarious control) (Rothbaum, Weisz & Snyder, 1982, p. 12).

Similar to the shift that takes place from outer activities to inner cognitions, dying persons transfer to inward forms of behavioral control that allow them to sustain, rather than relinquish a sense of personal control. When individuals are faced with negative

information, they resort to the use of positive illusions which are forms of adaptive processes (Taylor, Collins, Skokan & Aspinwall, 1989). This group of investigators reasoned that the mind processes negative information differently and that positive illusions assist an individual to preserve positive self-conceptions.

Some of the subjects in this study described forms of secondary control that indicated their need to understand and accept their problems. Their responses varied, along a template from finding meaning to lacking meaning, and assisted to differentiate the various process patterns of self-transactions contained within dying. In this study, certain subjects maintained illusions, associated with powerful others and, also, emerged a different type of secondary control. In situations where individuals are unable to predict events (the first type of secondary control), such as in situations of dying, the subjects revealed attempts to predict their own "self". That is, a self-prediction, rather than events prediction, was disclosed.

The category of "bodily feelings", revealed, disclosed, and indicated answers concerning the persons' physical and emotional states. In early death and dying theory, Feifel (1959) identified that reactions to impending death included the severity of the disease process. This category described the actual feelings that



the dying persons responded to. Along the dialectical template, the subjects replies indicated they were managing their bodily feelings or were agonizing in their sensations.

The tasks, the jobs, and responsibilities encountered in the various situations of dying defined the category of "sustaining acts". The dialectical motion of the dying process defined their ability to maintain or restrain from activities that assisted in integration. The category of "connecting other" included responses directed to the social supports and significance of others within the dying situation. The participants responded that they had connections with others or had missed connections with other persons--the "connecting links" or the "missing links."

In this study, numerous responses centered around a theme of adjusting to physical, psychological, and social changes. Therefore, the category of "adjusting expectations" described the dying persons' attempts to adjust to the myriad of problems encountered in the dying process. In the process of integration, dying persons resorted to resolving, grieving, and making the necessary adjustments and changes. In last category of "weighing expectations", their replies indicated an awareness of future expectations. These contemplations ranged from complete acceptance to total rejection of one's dying.

### Processes of Self-Transactions

The transcending-self: a pattern of dying in which a person has extended cognitive thought and meaning beyond one's particular environment toward unity with death. In this pattern of dying, the reality of death has become "objectified", its meaning determined, and death is within the conscious awareness of the dying person. In uniting with death, the "transcending-self" has dissolved fears, threats, and losses of the present life; and resolved the benefits and gains of future expectations. For the "transcending-self", psychological union, or synthesis, of the dying process has taken place and the dying individual asserts a sense of serenity, peacefulness, and watchfulness.

When death has become "objectified", it becomes real or actual, is given certain particulars, and is anticipated and extant. In Hegelian thought, an entity, such as death, becomes known when it performs in a steady and reliable way in the environment (Hoffman, 1983). Furthermore, an object becomes known, through the dialectic, in which conflicting forces, or influences, are contested and battled until resolution is reached. In fact, it is only through the life and death struggle that the reality of the "other" (death) can be known (Hoffman, 1983, p. 19). Through the dialectic, the distinctness of the "other" (death) becomes an absolute and, at this

point, one's fate is decided and resolved.

As death becomes known or distinct, a person is then able to form a conception of the object. This something, or object, can be given a name, can be adequately conceptualized, and can be given definable qualities, that is, "objectified" (Hoffman, 1983). In the interpretation of Hegelian philosophy, when death becomes "objectified", the life and death struggle is resolved, a higher form of consciousness is reached, and the "self" is, at last, set free (Hoffman, 1983).

In accordance, Maslow (1968) identified and described "Being" cognitions that were ego-transcending in which persons reached a higher level of consciousness. At this higher level of human consciousness: states of finality, completion, and ending exist in which nothing was lacking and nothing more was wanted or needed (Maslow, 1971, p. 127). Furthermore, at this highest level of "Being" cognition, one is reconciled with the necessity of death (Maslow, 1971, p. 271).

In this study, two subjects described themselves as the "transcending-self" in which the impending reality of death was upon them. For these persons, they had progressed to a higher level of conscious awareness which recognized the impending reality of encroaching death. In disclosing their approaching death, these following comments were given by the "transcending-self":

"I know I don't have much longer". "It's a matter of time."

The category of "weighing expectations" was of import in this pattern of dying. The subjects spoke of death as an object, death was given the name of "It", and was death was separated from the self, as the accompanying responses noted:

"Well, I feel like I can give in that I can look and see "It". "Sometimes I think I'd like for "It" to come and go." "I'd like to get "It" over with."

Both of the subjects responded to these questions: (1) That life is still worth living (LCS #12); and (2) Like you can give in to whatever happens (LCS #25). Their responses indicated that death had been accepted, in fact, welcomed. The ensuing responses verified this abstraction:

Subject one. LCS #12-- "If I was able and healthy, life would be. But since I'm sick, it's not anymore."

LCS # 25--"Well, I feel I can give in...I tell her if she (wife) comes home and I'm sleeping forever, I tell her not to worry. I told her I'm not afraid. It's just like going to sleep."

Subject two. LCS #12-- "The sooner the better. I wake up every day and hope I'm going downhill ...I want to get "It" over with".

LCS # 25-- "I wish I knew how long "It" will take, but every day I feel a change. I'd like to know how "It" will go. They tell me I'll probably go into a coma. I'd just really like to go to sleep....I want to be out of this more than I want to be in it."

In the category of "bodily feelings" both subjects spoke of their physical suffering, as noted in the

following:

"I have a feeling at times that my body is just an empty shell and there's nothing in there but coldness." "I've got a bed sore and it feels like my tail-bone is touching."

Yet, at the higher levels of consciousness, many dichotomies, polarities, and conflicts are fused, and transcended (Maslow, 1971, p. 91). In fact, what is seen as conflict and dissociation is perceived as inevitable, necessary, or fated, and even the concept of sickness can blur (Maslow, 1968), as the dying persons above responded.

In the category of "interpreting meaning" new levels of perception appeared to over-shadow bodily losses and pain. In such states, there appears to be transient disappearance of the negative (Maslow, 1971, p. 127). The following responses verified this level of perception:

"I don't have no problems." "Well, I'm not upset."  
"Maybe sickness like mine isn't really trouble."

One of the subjects previously experienced near-death and found a reason for his special allotment of time. In fact, attributions to severely limited ability enhance the individual's ability to find the meaning of a situation (Rothbaum, Weisz & Snyder, 1982). The ensuing was replied:

"I feel like I can talk to my wife. I think that is what God let me come back to straighten out. It's like everything I told her came true."

The subject, who had made a decision to discontinue life-saving treatment, had found meaning in her situation of

dying and replied the following:

"I had asked for a sign on what to do. It came and I knew that was what I had to do. It seem so silly just to prolong living. I asked and asked, and when I made the decision, I felt over-whelming peace."

Although there were few "adjusted expectations" or "sustaining acts" disclosed for the persons in this pattern, one person noted:

"I guess I'm really pleased about getting to the bathroom just one more time. It gets harder and harder and I don't know if it's the last time or not."

At the same time, she was resolving a concern, as the preceding remark indicated:

"I hate the thoughts of losing control of myself, but they tell me I'll probably go into a coma."

The other directed his "sustaining acts" toward helping his wife maintain her grief. He commented the following:

"My wife cries a lot lately. When she comes in here crying, I feel real bad. I tell her not to worry. I tell her the same thing is going to happen to her some day....I try to keep my wife laughing."

Thus, the importance of "connecting others" for this subject was noted. Likewise, the other subject affirmed the import of others in commenting the following:

"Everyone is giving me very loving care."  
"I've got all the ladies from the hospice."

In summary, the "transcending-self" embraced the closeness of death and welcomed release from bodily suffering. These subjects had weighed their expectations

and accepted the inevitable, their fears and anxieties were dispelled, and their sufferings were transcended. Too, one of the subjects described a period of questioning and answering--a dialectical. In her resolution of conflict, a feeling of release and over-whelming peacefulness ensued.

For these subjects, death was within their conscious awareness, was given the name of "It", was a desired goal, and for one person, assumed the attribute of the "forever sleep." In "interpreting meaning", one person had found meaning in helping his wife and the other had found meaning in her decisiveness. Moreover, both subjects remained connected to their family and hospice. For one subject, his last few "sustaining acts" were to help his wife laugh.

The becoming-self: a pattern of dying in which a person has integrated higher levels of cognitions that are directed towards deriving the most meaning possible from one's situation. At this level of cognitive integration, the present is experienced fully, an inner essence or attainment of one's real "self" is felt, fears are overcome, and there is an acceptance of whatever is to happen (Maslow, 1971). The "becoming-self" in dying, has reached one's potentialities, that is to say, has become fully human, everything that the person can become (Maslow, 1959, p. 123).

It is the realization of death which gives the individual permission, even freedom to be themselves, rather than extensions or mirrors of other people's values (Feifel, 1976, p. 426). When one's true self "Being" is experienced, the person is able to become, what the person wants to be and the self is able to move forward and grow (Maslow, 1968, p. 59). When this growth of the self occurs, a kind of fusion between the inner and outer, the internal and external exists in the essential "Being" of the person (Maslow, 1968, p. 95).

This fusion of the inner and outer, of fact and value is, in reality, none other than the meaning of acceptance (Maslow, 1971). Acceptance comes from a redefining of expectations so that they come closer and closer to actuality and therefore to attainability (Maslow, 1971, p. 112). Therefore, as the possibility of death becomes more actual and the aspects of physical illness can no longer be contained, the "becoming self" directs activities toward that which is attainable and reachable--the inner "self".

For the fifteen subjects in this pattern of dying, frequent responses appeared in the category of "interpreting meaning", which became the category of import. The subjects responses indicated that they were making the best of their situations by adjusting their expectations, aligning themselves with chance, and



submerging themselves with a powerful other (Rothbaum, Weisz, Snyder, 1982). Unlike the transcending self who had objectified death, the inevitability of death remained more distant and more detached from the self, but was confirmed by all. The ensuing comments were given regarding their movement toward death:

"I don't know how much time I have." I know I have a disease that will kill me at some time."  
 "I know I'm a terminal case."

For three of the becoming-self, although death was acknowledged it could be, perhaps, escaped. For example, the notion of a personal death was accompanied by illusive hoping, an adaptive psychological function (Taylor, Collins, Skokan, Aspinwall, 1989). Three subjects spoke of illusive hoping, which is a form of "interpreting meaning", and their responses were the following:

"If I could beat this, I could do a couple of things." "I can still hope for a miracle, although my chances are slim". "I'm expecting a miracle you know."

According to Maslow (1968), at the higher "Being" level of cognition, as a person turns away from the real world, a healthy regressing occurs--individuals feel fortunate, graced, lucky, and free of fears and doubts (p. 96). The subjects comments included the proceeding:

"Everything is working out beautifully". "I give thanks everyday." A lot of good has come from my being sick." "I'm more fortunate than the others." "I can't think of anything else I need." "I've got a perfect situation."

To continue in the category of "interpreting meaning", three of the subjects, also, had relinquished control of their dying to Providential control with the following statements:

"He (God) will take me when He's ready." "I have no fear of going, when God says He's ready, I'm ready." "I believe that God is in control and He is in charge". "It's not for me to say when I go, It's when He (God) wants me."

In addition, subjects in this pattern of dying displayed illusory control by aligning themselves with chance (Rothbaum, Weisz & Snyder, 1982), as the ensuing indicate:

"They told me a year ago that I'd live six months, well I'm still here. There must be a reason for that." "I've got the Doctors confounded, they don't know when I'm going to die!"

For these dying persons, most felt they were better off than others by responding to the following question: I feel no one has the same problems as I (PRQ #16).

Subjects expressed the following comments:

"They got them worse." "I think there's always someone worse than you. My problems are little."  
 "I feel there's many more problems than mine."  
 "People have problems, I don't care who they are."  
 "That's not true, a lot of people have worse ones."

Likewise, subjects in this pattern responded frequently to the question that asked the following: That you have grown through this experience (LCS #17). They replied:

"I look at everything differently...I've completely changed. I've enjoyed the last two years more than any." "I think I've grown all my life." "I have grown throughout all of this."

For the "becoming-self", few references to bodily

suffering were given. Brief statements such as the following were given:

"I can't move my lower legs." " My soul gets tired." "Sometimes the pain bothers me, sometimes not." "I do get cold that's because some of my body muscles are gone." "I don't have a lot of pain now. I took those pills."

However, three subjects noted in responses to the Affect Balance Scale (Bradburn, 1969) that they felt bored at times and one felt restless, some of the time.

In the category of "weighing expectations", unlike the self-transcending, who waited for and welcomed death, the self-becoming respond differently to the following questions: (1) That life is still worth living (LCS #12); and (2) That you would like to go to sleep and not wake up (LCS #14). The following comments were given:

"It's still worth living." "I feel that way all the time (worth living)." "I want to hang on, as long as I can." "Go to sleep, never!"

However, for the "becoming-self", when expectations were weighted, death had been cognitively accepted and no fears were expressed such as:

"I know where I'm going to be...I can go, if I want." "When the time comes, I'm going to a better place." "I have no fear of going." "I want to go home." "I tell Him (God) every night to hang in and wait for me."

Yet, subjects spoke of different times in their illness course, when the above answers would have been different and/or when living was contingent upon other influences, with the following responses:

"There have been times I wanted to go to sleep, when I was depressed." "I had a turn around this week, if you had come last week, when I was down, it would have been different." "Life is still worth only if I can remember things." "When I was in pain, I wanted to go."

Consequently, the persons in this pattern of dying spoke of willful activities and deliberate cognitions that were required to adjust to their situation. In the category of "sustaining acts", subjects revealed that they repressed negative emotions, as told:

"I stopped thinking about "It" and I feel so much better." "I don't hang on to those attitudes" "I don't dwell on what's wrong with me." "I replace the negative with the positive."

Religiosity was a source of strength and acts of prayer and meditation were frequently mentioned by the self-becoming person, as responded:

"I pray every day for God to help me." "We listen to religious broadcasts." "I pray to God." "I've been in prayer all morning...I feel so up-lifted." "I place myself in God's hands." "I give thanks for every day."

Not only the presence of God, was a sustaining force to the self-becoming, but the closeness and importance of others was revealed--the "connecting others."

The "becoming-self", often, connected themselves to multiple sources of support. In response to the question: There is someone I feel close to who makes me feel secure (PRQ #1), subjects indicated multiple others who provided closeness and security. The subjects made these comments:

"There's more than one, my God, my daughter-in-law."  
 "That's my husband and daughter." "My daughter,  
 people from the Church." "I've got all of hospice."

For others, a single connecting other of import was indicated, such as the following responses:

"God is the most important person in my life."  
 "That's my daughter." "My daughter is everything to me."

In addition, responses of subjects verified their "connecting links", as the following indicated:

"I can count on people." "People are always wanting to come over." "My husband is always there." "I have strong supports." "I'm never alone God is always with me." "I've got wonderful people to help out." "I know I'll be taken care of." "My friend from church he comes all the time."

The subjects in this pattern of dying had adjusted their expectations and accentuated their remaining functions, as evidenced by the following responses:

"I can always use my mind." "I can still give love." "I give wherever I can." "I set a small goal everyday." "My best friend came to visit. I was too tired to talk much, but she held my hand." "It's the little things that are so meaningful."

In summarizing, those in the pattern of dying described as the "becoming-self", recurrently found meaning in their situations of dying. The "becoming-self" maintained illusive hope, converged with the power of God, aligned with chance, and regressed from the world of illness. When expectations were weighed, death was accepted and was not feared. However, death (with the

exception of one person who wanted to go "home") had not, yet, become a welcomed goal. Life was still viewed as worth living, however, contingencies to the furthering of their existence were given.

The importance of "connecting links" to other persons, including a personal Deity, were indicated. These subjects felt protected, secured, and comforted by family and professional members. Moreover, a heightened awareness of approaching death, along with managed bodily feelings, allowed them to focus on inner cognitions. From functions that remained in life, and others, they had learned to derive great meaning. These persons felt blessed, graced, fortunate--they had become.

The reconciling-self: a pattern of dying in which a person strives to bring one's person-environment influences into harmony in order, to maintain psychological integration. For those in this pattern of dying, the possibility of impending death was, usually, not acknowledged. However, responses belied actions which spoke to a conscious awareness of death. The reconciling-self was busy mobilizing, connecting, and maintaining one's "integrative forces." At the same time, persons in this pattern of dying placed emphasis on the present--the here and now.

As with a previous description, the majority of the dying are in a category termed "middle knowledge" in which

cognitions process both internal perception and external information (Weisman & Hackett, 1961). In middle knowledge there is neither complete acceptance, nor utter repudiation of death (Weisman & Hackett, 1961, p. 250). In agreement, 37 of the subjects in this study, the majority, appeared in this "middle world"--suspended between life and death.

While the "reconciling-self" strives to reorganize the external information of the world, at the same time, actual bodily feelings and internal perceptions are a constant reminder of the realities of one's situation. In situations of on-going change, when an influence is repeatedly presented, or as one continues to think about it and reappraise it, various meanings are excluded, or others added (Lazarus, 1968, p. 195). Likewise, whether an emotional response is negatively toned or positively toned, is dependent upon the cognitive process by which the stimulus is evaluated and its personal significance to the person (Lazarus, 1968). Consequently, to maintain integration in the midst of physical changes, the "reconciling-self" was continually striving to sustain one's positive emotions.

For the "reconciling-self" the "moving template" became a category of import and concern. The subjects spoke of, often, rapidly changing situations, they swung back and forth, and they were pushed and pulled, along the

dialectical of opposing forces. They told of moving back and forth between agonizing and managed bodily feeling, as noted by the following responses:

"I still haven't recovered from that terrible night last week." "I feel different every day. I get depressed some days." "I had the pain last night." "I don't have that pain in my side today, it's a good day." "The last couple of weeks have been bad."

Likewise, three subjects spoke of progressing from a lower level of psychological integration earlier in their illness course. These persons told how they cognitively processed their situation, dissolved their lower level of thinking, and moved themselves to a new and higher level of integration, as indicated by the following:

Subject One--"When I first got it, I was ready to throw it all up. I felt depressed a while back, but I got over it."

Subject Two--"When I found out about the cancer, I said to myself, Well you have choices you can make, go ahead and live or let it get the best of you--I decided to live and go ahead."

Subject Three--"When I got the diagnosis I was devastated, but I decided to go on...I know there will be rough times, but now I feel positive things."

In the category of "bodily feelings", the subjects in this pattern spoke of their difficulties in maintaining emotional feelings. In response to the following question: Like you are losing control of your emotions (LCS #13), they replied:

"Some days I feel like that." "Sometimes I lose control of my emotions."



"There are days when I feel that."

These subjects, also, responded to bodily sensations. For some there was a feeling of coldness and asthenia as said:

"I've lost so much weight. I feel so cold all the time." "I've just been so cold all the time, I just couldn't get warm." "I get cold, when I get the pain." "I'm just getting tired." "I don't have as much energy." "The pain, it's a tiring thing." "I feel over-whelmed when I'm tired."

Others in this pattern spoke of other distressing bodily feelings, such as the following:

"I feel nauseated." "I feel panicky, when I can't get my air." "I can't swallow." "It hurts in my neck, back, and shoulder."

Yet, in spite of pain and physical and emotional distress, the integrating-self persons found meaning from being able to predict their "self." Frequent responses indicated that these subjects "interpreted meaning", from predicting themselves. They spoke the ensuing comments:

"I think I'm handling things pretty well." "I think positively about myself." "I'm doing well at being sick." "It seems all my life that I've been building to come through this." "I think I've had excellent mental discipline all my life." "I'm doing the best I can."

Thus, the "reconciling-self" predicted one's own inner strength in one's unpredictable situation of dying. However, as with the other patterns of dying, these persons, also, attested to finding meaning within their situations and the use of illusory control. In response to the following question: I feel no one has the same problems as I (PRQ # 16), subjects replied the following:

"There's nothing more ridiculous." "Some people have problems that make mine look like jelly."  
 "No, everyone has problems." "Well, I disagree with that." "No, I don't agree with that."

In addition, three subjects spoke of illusory control:

"Well, I'm still here!" "Things had to be going my way or I wouldn't still be here." "It's a miracle that I've lived for 50 years." "I think things are going my way--maybe even better."

For the subjects in this pattern, hope had a different meaning and was not attached to the illusion of being saved from death, as with the "becoming-self." It was more a feeling of trust and reliance, of wanting to get through, and of facing one's difficulties. These pursuing responses were given:

"I have hope." "As long as there's life, there's hope." "I feel hopeful."

Rothbaum, Weisz and Snyder (1982) reported active, persistent behavior during extremely difficult situations (p. 12). Likewise, these subjects affirmed active behavior in their connecting to others. The "reconciling-self" actively sought, utilized, and depended on the support of connecting others. In confirming "connecting links," the following responses were given:

"Hospice has helped me a lot. I don't know what I would do without them." "I don't think I could have made it without Alcoholics Anonymous. It has been my rock." "I don't know what I would do if I had to sit here all day by myself, the hospice people come and spend time with me."  
 "I'm going to the Wellness Clinic that helps me a lot."

Subjects responded to the following questions: (1) There

is someone I feel close to who makes me feel secure (PRQ #1); and (2) There is no one to talk to about how I am feeling (PRQ #10). In response these ensuing comments were given:

PRQ #1-- "I have several people I feel close to." "That's my wife." "My husband has stuck by me." "I feel close to my wife." Could that person be my hospice nurse?"

PRQ #10-- "I've got people from hospice to talk to." "Oh, no, I can always talk to my wife." "yes, now that I'm hooked up with hospice, I'd have to disagree with that."

Moreover, the "sustaining acts" of the integrating-self denoted active, persistent behavior which was directed toward maintaining positive feelings, such as:

"I like to keep my mind busy." "I talk on the phone, it makes the pain feel better." "I talk daily to AA members." "I have a group of friends with cancer that I call up and support." "I have a friend with leukemia--we talk to each other." "I have a friend who calls me every day." "Some days are better than others, but I try not to think about things."

Three subjects with feelings of coldness spoke of seeking sources of energy to sustain themselves, as follows:

"I wait for the sun to come out." "When I get the pain, I have to go to bed and turn on the electric blanket for about an hour." "I sit in the sun, but that's tiring too."

Moreover, subjects spoke of such "finishing activities" as completing living trusts, teaching their spouse about business, and planning a family gathering. However, in spite of directed activities, some subjects reported the

occurrence of negative feelings and of time needed to reconcile the "self" with dying. These responses were as follows:

"I wake up in the middle of the night and try not to dwell on things, but you do." "There are times that I just want to be by myself." "My family keeps me so busy, sometimes I just need to be by myself--to cry, if I need to." Sometimes I'll just be sitting there and, all at once, I'll just cry."

In "weighing expectations", the persons in this pattern of dying occasionally respond to the actual probability of their death. Their responses were brief and no further elaboration on dying was given. These following comments were given:

"I can accept." "I expect to die."

For most of the subjects, the actuality of dying was put aside and the focus was on the here and now, as the following responses indicated:

"As long as I'm still around, I might as well do." "I'm dying, but I say let me do while I can."

In response to the question: That you would like to go to sleep and not wake up (LCS #14), the following responses were made:

"I thought I'd like to go to sleep a few times, but not often." "I sure wouldn't want to do that, but that would be a good way to go." "Not wake up? That would be the way to go."

However, two of the subjects referred to their desire for a fast death. Feifel (1959) noted the majority of subjects wanted to die quickly without suffering (p. 119).

"The trouble is having to die. I always wanted a fast death." "I want to go fast."

In this pattern of dying time was, also, moving rapidly, as noted by two subjects:

"Time?. It seems like it's going too fast."  
 "It's going too fast--that means I'll die sooner."

In "adjusting expectations", subjects responses indicated they were accepting and integrating, such as:

"I've learned what I can do." "I've learned to live with the pain." "I guess I've gotten used to the pain." The pain, it used to be frightening, but I know what to expect now. I can accept it more."

The "reconciling-self" was, also, grieving losses, as responded:

"I always used to be so busy." "I'd like to do more." "I'm not able to work anymore."

In summary, the "reconciling-self", attempted to make the best of one's situation by going forward, prided one's self on inner virtues, connected one's self to the support of others, and maintained hopefulness. Although changed bodily feelings and emotions were a realization of the possibility of death, albeit, those in this pattern of dying choose to direct their energy and activity towards the "here and now". The "reconciling-self" adjusted one's expectations and, although losses were grieved, attempted to accommodate to person-environment influences, and utilized the support of others. When expectations were weighed, life was still found worth living. The "self-reconciling" was diligently striving to manage feelings,

maintain one's balance, and not lose one's foot-hold in the "middle-world" between life and death.

The anguishing-self: a pattern of dying in which a person experiences undo physical, psychological, and/or social suffering and one's integration processes are impeded. For the 19 persons in this pattern of dying, the over-whelming effects of their situations prevented them from deriving meaning or an understanding of their problems.

In this pattern of dying, frequent agonizing "bodily feelings" were expressed. Moreover, the negative forces, which were felt by the dying person, could not be understood or comprehended by another. These subsequent responses were given:

"No one could possibly know what it feels like to have this." "I find that it is very hard for anyone to understand what being this helpless is."  
 "Even professionals can't understand what it's like."

Some of their agonizing feelings are as follows:

"I feels like pins and needles are over." "It's a sensation of drowning." "My legs feel like there's cold water in them." "I can't even breathe." "I feel like burlap that must be rasping." "Right now I feel lousy." "I have two pains--one inside and one outside of my skin. It really hurts. We've had to up the morphine every day."

Along with bodily suffering, the anguishing-self questioned one's situation and could find no meaning within, as the following remarks noted:

"I don't know why this had to happen to me."  
 "I don't think about life being worthwhile."

" I never thought that I would get cancer."  
 " Why did this happen to me? " "To many people  
 have problems like mine--I feel sorry for them."  
 "I feel there's just no reason to go on."  
 "Memories don't help me, they depress me." "I  
 can't decide on faith that would be guessing."

Yet, in spite of their agonizing bodily and emotional feelings, three subjects, still, felt others were worse off (response to PRQ #16) than themselves.

In this pattern of dying, none of the subjects affirmed personal growth. Two subjects responded to the following question: That you have grown through this experience (PRQ #17). These remarks were given as follows:

"Not grown, but I'm different. Just look at all my bones!" "I feel that I'm different, but I don't know if I've grown."

For some in this pattern, time, as indicated by the "moving template", had played its cruel hand upon them and the grip of affliction had thrown them off balance to the negative side. They responded the following:

"Everything changed the last couple of weeks."  
 "The pain was really getting bad this week."  
 "This week I feel different." "Up to a month ago I had a lot of life in me."

For one person, time passed too slowly and the rapid passage of time was not mentioned in this pattern.

However, time was mentioned in response to the following question: That you are afraid of being alone (LCS #19).

These pursuing comments were made:

"There are times I get panicky, but it's not

fear of being alone." Lately, I don't want to be alone." "I don't like to be alone."

When these subjects weighed their expectations, they responded frequently to the following questions: (1) that life is still worth living (LCS #12); (2) that you would like to go to sleep and not wake up (LCS #14); and (3) that you can give in to whatever happens (LCS #25). Their responses indicated that they rejected life in its present state and accepted the notion of death. The pursuing remarks were made:

LCS #12-- "Life is not at all worth living like this." "I'm looking forward to dying--its getting dead that's so hard."

LCS #14-- "That would be the way to go." "I pray for going to sleep." "That's what I want." "I've thought of that a lot." "I wish."

LCS #25-- " Give in? I don't have any choice." "You have to accept your fate."

Although expectations for death were weighed and accepted, death itself was feared, as the following spoke:

"I'm afraid of the pain, not dying." "I know I I'll feel the suffocation."

Although dying was not mentioned, other subjects in this pattern had weighed other expectations. They remarked the following:

"I don't want to be a burden." "I just want to leave life peacefully." "The Dr. said I'll give you until Christmas." "Do you suppose, when I'll get to the next plane, that I'll get a gold star?"

One person even objectified death and said, "I'd just like to get "It" over with". However, unlike those



persons in the transcending pattern who viewed death as a goal and denied the presence of negative feelings, the opposite feelings were expressed. Comments from the "anguishing-self" included the following.

"I don't have any positive feelings." "I feel depressed quite a lot." "No I'm not content with myself." "You feel depressed every day because you have a sickness." "When you're in pain, you're always restless."

In "adjusting expectations", persons in this pattern grieved their losses, as indicated by the following:

"Can't do nothing that's the worst." "If only I could be doing more." "Don't know what I'll do when I can't do things." "I'd just like to go outside and take a walk." "If I could be able to just get outside."

Too, in this pattern of dying, "sustaining acts" were infrequently mentioned. Examples were:

"If I feel like talking, I talk to God." "I sit and worry about things."

Two subjects remarked of being bored and their were the following:

"I got used to being bored." "I get so bored."

For some of the subjects, the category of "connecting others" was mentioned. One "anguishing-self" remarked:

"I never thought I'd lose my wife. I think it would be different, if she were around."

Another in response to this question: There is someone I feel close to who makes me feel secure (PRQ #1) stated:

"I don't have anyone I'm secure with. I've always

had to depend on myself."

Moreover, in answering if sharing with others seems to help (LCS #4) subjects replied:

"I guess sharing with others seems to help."  
"We don't let friends come over."

The "anguishing-self", in summary, agonized in suffering and grieved one's losses. For some in this pattern of dying, the invitation to death was accepted, but future expectations were accompanied with fear. Pattison (1967) noted that the process of death is more feared than personal extinction. These subjects were in agreement and an unpleasant demise was foreseen.

For the "anguishing-self," either the fear of forthcoming death or the agony of daily living, precluded one's reaching a higher level of consciousness. One's situation of dying was viewed, not in terms of personal growth or meaning derivation, but in suffering. In fact, the reason for one's illness and suffering was questioned. Moreover, the feeling was expressed that one's suffering could not be understood and was uncomprehensible to another person. For most in this pattern of dying, the "integrating forces" were tipped to the negative side of the balance template. Their inner resources were exceeded by external demands, connecting others were missed, and higher levels of integration were dissolved or unreachd.

The responses of these dying persons noted that the

experience of death isolates me from others and no one can shoulder or share it with me (Hoffman, 1983, p. 55). Yet, importantly, although one's suffering could not be shouldered, the ability to express one's plight to another remained--unlike the next pattern of dying described.

The avoiding-self: a pattern of dying in which a dying person chooses not to respond to one's situation or one's person-environment influences. Therefore, little is known and few descriptions can be given regarding those persons in this pattern of dying. During the investigation, 13 subjects avoided self-disclosure, at the time of the study session. However, there was, often, one broad comment made. The following responses were given:

"I wish everyone wouldn't treat you like you were already dead." "I don't have any psychological problems." "I'm a stoic and go "ahead." "I'm one of those grin and bear it types." "I don't know why I've lived so long." "This is in strict confidentiality isn't it?"

Two subjects made comments during the social support tool. They were the following:

"I can count on my friends, but not my family."  
"My sister, she visits me a couple of times a week."

On the basis of the lack of responses, no categorical analysis was possible. Throughout the study, an additional five subjects, who had previously agree to participate, were unable to sign the consent form and refused to participate.

The relinquishing-self: a two-fold pattern of

dying in which: (1) the person is so physically limited that descriptions of meaning and understanding of problems are impeded and/or; (2) the person is so physically limited that a desire to abandon life is expressed. In this pattern of dying, seven persons with a low Karnofsky rating of 30 (hospitalization indicated) comprised this group. In addition, three of the seven individuals in this group required two study sessions to complete the instruments.

Of the three subjects, who were physically able to make an occasional response, they commented on these questions: (1) That life is still worth living (LCS #12); and (2) That you would like to go to sleep and not wake up (LCS #14). The subjects comments are as follows:

LCS #12-- "It's getting at a low ebb all the time."  
" I feel what's the use of going on."

LCS #14-- "That would be alright."  
"I've felt that quite a lot."

Mor (1986) reported that a Karnofsky rating of 29.8 or below impeded the completion of mood state items. In the National Hospice Study, the most important factors preventing measurement completion were performance status and cognitive functioning (Mor, 1986). Furthermore, during the course of the study, an additional ten subjects were assessed as either cognitively impaired or physically unable to complete the study tools. In addition, two more subjects had rapid physical declines, before a second

study session could be scheduled.

In summary, the "relinquishing-self" is physically unable to respond and few categorizations can be made. However, three subjects in this pattern expressed weariness of life and a desire for death.

The repressing-self: a pattern of dying in which a dying person attempts to protect the "self" from one's situation of dying. In this pattern of dying, the dying person is unable to integrate inner and outer realities and the knowledge of unpleasant or dangerous truths is repressed. In other words, there is a separation, or lack of unity between the person's inner world of cognition and the external world of fact.

Maslow (1968) speaks of the dialectical between progression and regression or between the higher and lower forms of consciousness. In Maslow's (1971) theory, persons have a choice between these two levels of conscious awareness. If a person chooses the lower path of regression, one moves toward safety, away from harm, and growth is impeded. Conversely, if a person chooses to progress upward to the higher forms of consciousness (integration), a choice toward growth, becoming, and transcendence is made.

Weisskopf (1959) developed this same theme earlier, when he defined two paths of human values that were based on conscious awareness--union upwards and union downwards.

According to Weisskopf (1959), in union upwards, the person is aware of one's situation and, therefore, can begin to grow toward higher values and transcend one's situation. Likewise in union downwards--the regressive tendency--there is an attempt to negate one's situation and the enemy is not faced.

In Maslow's (1971) theory, when expectations are redefined so that they resemble the actual and attainable, acceptance takes place. Hence, acceptance is an integral part of the growth process in dying and one must acquiesce to, or admit to one's condition, before moving to higher levels of cognition and consciousness.

When the uncontrollable aspects of illness are unacceptable to a dying person, one attempts to move toward safety and away from harm by defending the self through repression. In repression, the facts of illness and external information, that are perceived as harmful, are prevented from reaching conscious awareness. However, when painful and threatening influences are blocked from cognition, the "self", also, is obstructed and impeded. Therefore, unable to reach one's "self" and to direct one's cognitions toward the inner "Being", the "repressing-self" cognates toward the outer or external influences.

The dying person in repression is unable to understand or to accept one's problems and, thus, attempt

is made to master or solve them. A dying person, in this pattern, resorts to a different form of control, that is, primary. In primary control, powerful others are manipulated and events are predicted so as to succeed at them (Rothbaum, Weisz & Snyder, 1982, p. 12).

Consequently, persons attempt, in this pattern of dying, to try to change the environment, rather than themselves. The responses of four persons indicated a "repressing-self" and their replies were frequently clustered in the category of "weighing expectations."

In weighing expectations, the possibility of death and the notion of death was not within the future or acknowledged by the subjects. However, unlike the "reconciling self" who, also, avoided responding to a conscious awareness of death, their responses indicated a separation of fact and reality, and a lack of fusion between the inner and outer. They said:

"I'm thinking maybe not much is wrong with me."  
 "It's all positive, I'm going up." "I feel that I'm getting better." "I'm not that sick now."

In "adjusting expectations", losses were not mentioned. One subject who was bed-ridden indicated, "I'm trying to get better, so I can get around on my own." Another woman who was unable to ambulate and on large doses of opioids remarked, "My husband wants to take me on a trip."

The persons in this pattern of dying felt their

"self" was strong and potent enough to change the outcome and solve their problems. In other words, if enough pressure was exerted by the "self" everything would be solved and taken care of. Their comments from the category of "interpreting meaning" are as follows:

"I'll see me through." "I want to work it out myself--could never find time to do what I wanted." Not me, I'm going to fight it."

Likewise, persons in this pattern of dying, attempted to handle the Deity, as responded:

"The Big Guy upstairs, He has to do the impossible."  
"I pray a lot and say, You have to take care of me."

In response to the question: That you have grown through this experience (LCS #17), subjects responded negatively:

"It hasn't changed me." I'm the same."

Unlike the "agonizing-self", who also felt no personal growth the physical and mental suffering of the "repressing-self" was, for the most part, avoided. One subject responded, "Nothing gets me down." Yet, another spoke to feelings of helplessness, in saying, "I feel so helpless now." An additional subject responded to negative feelings and said, "I feel restless all the time."

Likewise, the activities required to maintain integration were, for the most part, not named. Although one woman spoke of turning off the negative (repressing). This same subject gave the following "sustaining act":



"I talk to my Piranha fishes to eat away my disease."

In connecting to others, the "repressing-self" was unpredictable. Two of the subjects spoke of connections to others. In response to these questions: (1) There is someone I feel close to who makes me feel secure (PRQ #1); (2) If I get sick there is someone to give me advice about caring for myself (PRQ #25), these following answers were given:

PRQ #1-- " My daughter." "I have R (attendant) and my husband. I don't know what I would do without them."

PRQ #25-- "The hospice nurse. It's so nice to have someone I like." "Well the hospice has done the best."

Conversely, one subject made these replies to the above question:

PRQ #1-- "It's my own will I have to depend on."  
PRQ #25-- "I've never had anyone in my life to look out for me."

The remaining subject did not respond to items on the social support scale. However, in response to this question: That your faith will see you through (LCS #27), he commented the following:

"I'll see me through."

In summary, the "repressing-self", moved toward safety by negating threatening aspects of one's illness. To the "repressing-self", the notion of one's death was unacceptable and the "self" remained in control of outer

influences to prevent this occurrence. In blocking the "self" from the reality of one's illness situation, one's progression to a higher level of consciousness was impeded, for the "repressing-self"

### Conclusion

Self-transactions in dying implied progressive steps in human consciousness, from lower to higher levels of death awareness, in which persons derived value and meaning. The hierarchical structure of the patterns was based on the dying persons' reactions and perceptions to the awareness of death: from an objectified cognition of death, to a noted probability of death, to their inability to respond to death, and to a total avoidance of death.

The patterns of dying arranged the observed interactions of the dying person's internal "self" in relationship with one's external environment. The responses of the dying provided a window to the emotions, cognitions, and meanings of the inner "self", and an outer glimpse of the person's situation as it unfolded in one's dying. The patterns intertwined these interactions to afford descriptions of the "self", as it transacted dying, thus, the "self" adapting in dying was accounted.

As described by the subjects' responses, the patterns of dying were changeable, as in other human life situations (Haan, 1969, 1977; Roy, 1976, 1984; Lazarus & Folkman, 1984). The responses of the dying confirmed a

dialectical approach to achieving and to maintaining psychological integration in dying (Pattison, 1967; Lifton & Olson, 1972; Qvarnstrom, 1979; Munley, 1981).

The majority of the dying persons in this study were open, flexible and able to reach out to others, and within themselves for resources to come to terms with difficulties (Haan, 1982, p. 265). Their processes of psychological integration implied the interrelationship of both the self and environment influences (Haan, 1969, 1977). Furthermore, the dying persons made a positive attempt to assimilate or integrate information that promoted adaptation to reality (Haan, 1969, 1977).

Of these studied dying, the majority of the individuals reintegrated their influences, accepted their situations, and shifted to inner forms of cognitions. In the higher patterns of adaptation (transcending, becoming, and reconciling), persons integrated their particular influences to attain psychological integration or union. While in these patterns, the dying persons resolved their bodily and social losses, dissolved their conflicts, converged with a personal Deity, maintained hope--both illusive and general--predicted their inner resources and strength, accepted future expectations, and connected with others. Still, as the reconciling-self focused on the present, an awareness of death was within consciousness, as outward actions belied.

For those in the becoming and the transcending patterns, a higher level of consciousness was reached that allowed for the transcendence of suffering and for the disappearance of negative influences. The becoming-self derived the most meaning possible, from one's situation, in reaching and in acquiring a sense of one's inner "self", or "Being", thus, verifying the human life process of becoming (Roy, 1988). The transcending-self reached an even higher level of conscious awareness in which death was objectified and the "self" was released to join in union with death.

However, not all the subjects found meaning, or derived values, resolved losses, or dissolved lower forms of cognitions. When the physical-self failed, and, if conscious awareness was intact, the "self" was released to encounter death and/or relinquished to death. In the event the "self" was unable to find meaning, one agonized in suffering (Frankl, 1965), one avoided, or one repressed the cognitions and emotions of impending death.

The becoming pattern had the highest mean age for the pattern groups, followed by the repressing-self, and few differences were noted among the other patterns. Table 6 lists the number of persons and the age mean for each of the hierarchical process patterns of self-transactions.

The responses of the dying persons in this study evidenced a total human response to illness, as reported

**Table 6. Number of Subjects and Age Means for the  
Hierarchical Self-Transactions**

Pattern	Number of Subjects	Age Mean for the Pattern
Transcending	2	67
Becoming	15	74.5
Reconciling	37	65
Anguishing	19	63.3
Avoiding	13	62
Relinquishing	7	61.4
Repressing	4	68.2

(Lipowski, 1970; Silver & Wortman, 1980) and included aspects of cognitions, emotions, and behaviors (Lipowski, 1969). However, cognitions and emotions fuse and are, also, bound together with a person's values, beliefs, and commitments in maintaining a sense of well-being (Lazarus, Kanner & Folkman, 1980). Hence, implied within a persons' self-transaction are cognitions, emotions, and values. Moreover, encounters with death can only be understood by determining their important meanings or commitments (Lazarus, 1976).

The previous definitions of adaptation obscure the higher forms of cognitions, values, and emotions which were evident in the dying person. The meaning of adaptation in dying goes beyond mere compromise or resignation (White, 1974), or acquiescence (Cantril, 1966), and/or satisfaction (Campbell, Campbell & Rodgers, 1976). Also, the meaning of adaptation for the dying person goes beyond the mastery of problems (White, 1976), and events (Taylor, 1983) to include meaning derivation.

Yet, for the dying, who struggle with the multidimensional factors of their physical, social, psychological circumstances they are, often, prevented from movement to a higher level of consciousness. Hence, there is no value placed, or no worth created, between the higher and lower orders of the patterns of self-transactions. As previously noted, Weisskopf (1959)

placed a higher value on upward progression and, likewise, Maslow (1971) confirmed that individuals have a choice between higher and lower forms of consciousness. Often, due to circumstances beyond their control, the dying are prevented from making these choices and from progressing upward. For those dying persons in the lower patterns, their particular patterns of responses were frequently due to changed physical postures, uncontrollable social losses, and/or psychological states. Therefore, all of one's perceptions and reactions to the dying process are of great value and of immense import to each dying person.

In addition, the patterns of self-transactions implied change, movement and process, from one pattern to another. Since the subjects in this study were not seen over time, their movement among the patterns cannot be validated. Yet, the dying persons spoke of their pattern shifts and of their psychological adaptability in integrating the particulars of their unique dying process.

The majority of individuals in this study reached higher levels of consciousness, processed meaning, and changed the self (Cobb, 1976), as needed to psychologically adapt to their circumstances. Thus, psychological adaptability in dying implied the person's struggle to maintain one's self and to derive the most meaning possible from one's situation, in spite of the, often, rapidly occurring changes in the person and

environment influences. In agreement, Lazarus and Folkman (1984) noted that humans are meaning-oriented and that persons are guided by cognitive structures that orient the person toward psychological well-being (pp. 276-277).

One can argue that in dying, as with other human situations, the need to find meaning is an innate human attribute and, perhaps, may be even greater in the death plight. Frankl (1962) posited that the need to find meaning in dying is one of life's greatest forces. Munley (1981) noted the need of dying persons to allocate meaning to the totality of the experience. In this study, subjects were remarkable in their ability to evolve meaning and to transcend human suffering.

As within illness, the dying identified the import of reducing their psychological distress, by maintaining their "self", mobilizing hope, retaining relationships with others, and finding meaning (Visotsky, Hamburg, Goss & Lebovits, 1961; Bulman & Wortman, 1975; Taylor, 1983). As determined by Viney and Westbrook (1986-87), the expression of good feelings was evident. Persons who derive more satisfaction from life, also, have been reported to have less difficulty in death (Hinton, 1975).

Affirming the principles of humanism (Roy, 1988), these dying persons strived diligently to maintain integrity and human relationships, found a purposefulness in human existence, and are viewed in the context of value



and meaning (p. 32). To substantiate, these dying persons faced impending death by deriving meaning from values that maintained a sense of their personal "self", such as a relationship with God and family members. Other values mentioned were strength, courage, dignity, growth, others, love, and serenity. Therefore, these dying persons affirmed the belief that in dying individuals, not only, have a human need to derive meaning but, also, to find and maintain values, in confirmation of the human life process of valuing (Roy, 1988).

While still living, the dying press toward the human need to find the ultimate values of courage, serenity, goodness, and love (Maslow, 1968, p. 126). Moreover, these same values appear to gain both in significance and in importance during the dying process. In an early study of the dying, Hinton (1963) noted that the majority of the dying showed impressive courage. Zinker and Fink (1966) described that the dying person is not given credit for a capacity to come to grips with or reinforce cherished beliefs and values and to take a step forward to reach a more meaningful picture of one's life and one's understanding of the world (p. 186).

In maintaining relationships, the subjects in this study spoke of the importance of both their family members and their hospice professionals in providing a feeling of support, security, and sustenance. Evidence is emerging

that the hospice movement with its advancements in the world of dying and its acceptance of the dying person in a caring, trusting, and open atmosphere, is an influence that assists in personal growth during the course of dying. Gates (1988) found a caring atmosphere in a hospice inpatient setting that was conducive to growth, during the dying experience, for both patients and staff.

Along with the evidence of deriving meaning, finding values, and maintaining relationships in dying, this study emerged other themes of spirituality, hope, acceptance, personal control, time, boredom, coldness, and asthenia which affected situations of dying.

Glaser and Strauss (1968) described critical junctions in dying which were based upon temporal considerations. In their study, they found activities called "work" which were organized around the junctions of the dying trajectory. Are there too, for the dying, critical junctions of time in which they, too, must organize their own cognitive "work" of dying? Is a certain type of dying trajectory needed to allow the dying person sufficient time to integrate one's death?

In studying the process by which adolescents in different stages of cancer treatment achieved hopefulness, this process was found to vary over time, and could take from minutes to weeks (Hinds & Martin, 1988). Hence, what is the impact of time upon the patterns of dying described

in this study? In reality, the time factors required to restructure and to reintegrate cognitive processes, both in illness and in dying, remain vague and unknown.

Also, three subjects spoke of earlier time-frames at which time they were at lower levels of psychological well-being. The time of diagnosis (Weisman & Worden, 1967-77) and recurrence (Silberfarb, Herbert-Maurer & Crouthamel, 1980) have both been identified as periods of intense emotional distress. Are these periods, perhaps, more psychologically distressing than the terminal phase, or is the time of dying the most stressful?

Time was, also, frequently described as going too fast and fleeing too rapidly for the dying. In studying time, individuals with terminal illness and cancer have reported more time pressures (Neuringer & Harris, 1974; Fitzpatrick, Donovan & Johnston, 1980). Thereof, the importance of time, both its present meaning and its impact, over the duration of dying, needs further study.

The dying subjects in this study responded of comfort, security, and sustenance within their religious belief. Acts of religiosity, such as prayer and meditation, were described by these participants. Correspondingly, other studies point to the importance of spiritual variables in the dying process. A previous study found attitudes of faith (Heim, Moser & Adler, 1978) of import in terminal patients. For patients dying in

institutions, religious beliefs and family relationships, were the major source of emotional support (Castles & Murray, 1979). Qvarnstrom (1979) noted that the deeply religious person found spiritual consolation in dying, and the strength of religious commitment reduced the fear of death (Leming, 1979). Personal religiousness was significantly greater in ambulatory terminal patients than in healthy adults (Reed (1986). Also, Reed (1987) found spiritually related to psychological well-being in a group of hospitalized terminally ill. Thus, the exploration of spiritual meanings and beliefs in dying is of interest.

Other themes to emerge from this study were that of coldness and asthenia. The dying subjects remarked of their coldness and fatigue and of their need to seek outer sources of energy to sustain themselves. Yet, there is an absence of these reports in the literature. Many of the subjects were in the advanced stages of cancer, spoke of 30 to 40 pound weight losses, and were experiencing progressive cachexia and asthenia. Heber et al. (1986) noted that the fat content of muscles in advanced cancer patients is 50% lower than that of control subjects. This loss of adipose tissue and muscle fat content predisposed the subjects to a sensation of coldness and fatigue. Subjects spoke of seeking the sun as a source of energy to sustain themselves from their coldness, yet, that too had a tiring effect. Nursing interventions that restore and

conserve energy, such as placing the bed of the dying person by a window and the maintenance of non-harmful external sources of heat, need to be incorporated into the care of the dying person.

In addition, the theme of boredom, of weariness of the sameness occurred frequently. The importance of inner cognitions in dying persons have been repeatedly emphasized throughout this study. For dying individuals, who have lost outer activity and productivity, the inner activities that sustain the person, that abet in deriving meaning, and that define the "self" are most crucial. Hence, for the dying, forms of activity that stimulate the inner self are of significance and need to be incorporated into the care of the dying person. Activities such as the following are beneficial: maintaining diaries; using tape recorders to record inner thoughts; reviewing one's life with another; and using art and music therapies.

This study's finding that dying persons attempted to predict themselves, as opposed to the environment, was a finding of interest and few comparisons can be made. Lewis (1982) found evidence of the correlation of experienced personal control over life, rather than control over health, with psychological well-being. Likewise, persons are said to process negative information differently to preserve a sense of personal control (Taylor, Collins, Skokan & Aspinwall, 1989). As the dying

appeared to relinquish other controls, types of secondary control emerged, such as the maintenance of positive illusions and association with chance. In the care of the dying, the interventions that emphasize and that enhance the types of control remaining for dying persons are needed. Clearly, the components of personal control and their meaning in dying warrant further explanation.

For example, the repressing-self was analyzed in terms of the inability of the dying person to release primary control over the "self", as opposed to using a defense mechanism of denial. When Haan's (1969, 1977) theory is applied, a defensive person is viewed as one who is "closed", and distorts cognitive realities. Therefore, the "repressing-self" is a dying person who has closed off the "self" in defense from harm.

In this study, the dying persons spoke of other forms of repression, such as turning off negative thoughts and not thinking about harmful events. Paige (1980) identified rationalization as the most effective coping mechanism used by the dying persons and this action served to separate the symptoms of illness from disease progression. In her stage theory of dying, Kubler-Ross (1969) identified emotional affects (depression, anger), coping strategies (acceptance, bargaining, isolation), and a defense of denial as adaptive behaviors. Along with acceptance, Verwoerdt (1966) identified sublimation as the

ideal resolution to dying. Kubler-Ross (1969) described the final stage of acceptance as almost void of feelings (p. 100). Yet, with the exception of the avoiding and relinquishing patterns, the subjects in this study were expressive of emotion, as concluded by Viney and Westbrook (1986-87). From these descriptions, the task of accounting and illustrating the course of dying for unique individualities is, indeed, a difficult one.

Likewise, the notion of categorizations in dying, such as pattern description, is questioned by others. Theorists view each person's dying as a unique experience, and one that is based upon the particular experiences and distinctiveness of each person's life (Pattison, 1967; Kastenbaum, 1977). Schneidman (1977) wrote that persons die, as they have lived, and that individuals respond to their dying, as they have reacted to other life crisis.

On the basis of the myriad of personality, social, psychological influences that exist among humans, a feeling prevails that categorizations of dying, such as the stage theory of dying (Kubler-Ross, 1969), dismiss human differences and lack verification (Schultz & Aderman, 1974; Kastenbaum, 1977). In agreement, Paige (1980), from studying five dying persons over time, reported that dying has no pattern--only living--and that each person dies, as they have lived.

Nonetheless, although the individualities of persons' lives are undisputable, a "death consciousness" which defines categories of psychological adaptation in dying persons is advanced. Other investigators have found partial evidence for this conclusion. Munley (1981) set forth evidence that suggested the movement of persons toward synthesis or resolution of the dialectic (p. 430). Zinker and Fink (1966), in a study of one dying person over time, found some evidence of psychological growth, even in the last days of life.

An unexpected concept of personal competence emerged from studying adolescents with cancer (Hinds & Martin, 1988). Within personal competence, the strategies of personal accomplishment, transcendence over serious illness, on-going health threats, and an acknowledge of inner resourcefulness came forth (Hinds & Martin, 1988, p. 339). The belief that persons experience personal growth in their dying has long been noted by Kubler-Ross (1975).

In concluding, the process patterns of "self-transactions" categorized the reactions and perceptions to dying, and accounted the integration, movement, and processes of the "self" and environment. The hierarchical structure of the patterns was determined, from the descriptions of emotions, cognitions, and meanings of the participants, as the conscious awareness of their dying.

Since these dying persons integrated their internal



"self" and their external environments to ascribe their own personal values and particular meanings to their situations, a placement of value on the patterns, by another, is considered irreverent. It is acknowledged that each dying person's particular meanings, struggles to maintain one's "self", and one's own cherished values are most significant.

Each dying person encountered was, indeed, a unique and varied individual. This investigator found that the patterns of dying are woven with the threads from each person life, and that the warp of the fabric is woven with the dimensions of the collective human spirit. During the course of this study, there were, almost, a hundred different fabrics of life encountered. Although there were many different person-environment variables confronted within a particular pattern, the encountered individualities arranged themselves into groupings of seven patterns. For example, those persons in the pattern of the "reconciling-self," were actively seeking out, attaching to, and aligning themselves with others. Thus, in pattern description, the similarities, among the individuals, rather than the differences emerged.

As the patterns described the similarities among the dying persons, the hierarchical steps, or progressions, noted the differences among the patterns. Albeit, the positioning of the patterns in the higher and lower orders

was determined by the individuals reactions and perceptions to their dying. To place the patterns on a linear plane, or horizontal structure, which denoted the sameness for each of the patterns of dying, would negate the potential for human growth, the meaning orientation, and the purposefulness of human existence accounted by the dying persons in this study. That is, the possibility, the potentiality, and the actuality of each dying person to reach higher levels of consciousness, to change the self, and to process meaning would be impeded and denied.

As professionals, an awareness of these described patterns of dying will, perhaps, assist in conjuring images of the "anguishing-self" and in attuning to the plight of those who suffer in dying. Possibly, an interpretation of patterns will assist us, in helping the "relinquishing-self" to release one's weary hold on life. Conceivably, a reflection on patterns may assist us in helping the "repressing-self" to move towards inner growth. Perchance, from these patterns, we will hear the words of the "transcending-self" and be unafraid to speak of the descent of death. Most importantly, may the patterns of dying attune us to the indomitable, dignity and the incomprehensible, courage of the human spirit in its passage from life to death.

## CHAPTER 6

### Summary and Conclusions

This study combined both a predictive design that was based on an adaptation paradigm, and a qualitative analysis that was grounded in patients' reactions and responses to the dying process. The combination of a causal model and the enhancement of its predictive validity, with grounded theory, substantiated the scientific design of this study's framework. Although this study is unique in its approach, the notion of combining and integrating both methodologies in discovering nursings' scientific theory has been recognized (Myers & Haase, 1989). An integrated scientific approach, as utilized in this study, increased the strength of the explanatory value and demonstrated the interrelationships of the variables.

For this study, the two investigative methodologies were complementary and supplemented each other in providing more totality of the definitions and more understanding of the variables of interest. The causal model provided a predictive model for explaining psychological adaptation in dying which defined the following: dying persons with perceived social support, lessened pain, and increased age will have greater

psychological adaptation in their dying.

The qualitative methodology clarified the meaning of psychological adaptation, substantiated the relationships, and emerged patterns that validated the associations of the influences. In the qualitative component, the subjects responded to the negative impact of pain and commented on the effects of pain on psychological well-being. The category of "connecting other", supported the influence of social supportive during dying. Likewise, the mean age of those persons in the pattern of becoming was higher, and indicated greater psychological adaptation for those with increased age. Thus, the predictive validity of social support, pain, and age was enhanced with the addition of a qualitative methodological approach.

The subjects' own responses assisted in defining a multidimensional construct of psychological adaptation in dying. In an area where explication and clarification was lacking, the subjects' descriptions of their own meanings, understandings of their own realities, and accountings of their own relationships give explanatory value to this study. For the dying persons, psychological adaptability was accounted as the following: maintaining positive feelings; deriving satisfactions; finding meanings; integrating external realities; maintaining cherished values; and sustaining the personal self. These

accountings helped to clarify the definition of a construct that was theoretically abstract and that was difficult to conceptualize.

As described, this study was a predictive correlational study with the purpose of predicting a model of psychological adaptation in dying. There was, also, an aim in this study to emerge the reactions and perceptions of dying persons to the dying process. The quantitative methodology supported the purpose of this study and the qualitative methodology emerged the aim of this research.

#### Strengths of the Study

The existence of a relationship between the predictor variables of age, sex, length of illness, social support, pain, and psychological adaptation was clarified and supported. The selected statistical analysis and grounded theory method provided additional support for the relationships. The results, from other investigations, supported the theoretical explanations and provided credibility.

As indicated in the qualitative study, the majority of the studied subjects indicated their willingness to participate and their responses and reactions greatly contributed to the qualitative portion of the study. The subjects studied were cognitively able to interpret the instruments and those individuals assessed with cognitive difficulties were deleted from the study.

Ethical concerns for the subjects were of the utmost importance. All possible means were taken to protect the compromised and vulnerable subjects in this study. Study sessions were terminated if subject fatigue was evident and rescheduled if fatigue, pain, or symptom control was a problem. The sample selected was representative of the hospice population, and the subjects were clearly identified as a population of the terminally ill.

Given the validity of the subjects' responses and the interpretative ability of the investigator, this study has internal validity. However, the generalization of the support linkages of pain, social support, and age to other populations, that is, the accuracy of the inferences to other dying subjects (Krathwohl, 1985) is dependent upon the limitations found within this investigation.

#### Limitations of the Study

Limitations for the study have been derived from the concepts of internal and external validity (Krathwohl, 1985, pp. 79-112, 113-130) and focus on problems with internal validity, mainly, problems with rival explanations. In that the study was a convenience sample, the sample population may have consisted of hospice subjects with higher levels of cognitive, physical, and psychological function and an overall population of hospice subjects may not have been represented. In addition, those persons who agreed to participate may have

been more communicative in their interactions, and may have had stronger influences of social support. Due to the compromised state of hospice subjects upon admission to hospice care services, the timing for data collection was a problem. Subjects frequently requested that the data collection session be held in the time-periods of the day during which they experienced less physical fatigue. Moreover, two subjects, due to mortality were lost to the study sample. Thus, problems in generalizing and translating to other hospice populations are a possibility.

Internal multiple causation is a consideration in this study, due to the complex effects of terminal illness. For instance, the effects of pain medications on cognitive function and behavioral responses, as well as, the measurement of pain intensity is a consideration. Furthermore, the subjects in hospice care are, often, on multiple medications for symptom control that could effect psychological outcomes.

The instruments selected may have altered the responses and reactions of the subjects. As the studied outcome was psychological adaptation, rather than psychological distress, the answers may have been skewed toward the outcome variable. Although the instruments employed were tools that are typically used to measure the selected outcomes, their use with the dying population may

be limited. With the homogeneous population of the dying, problems with the precision of the instruments to measure the selected variables may have been encountered.

#### Implications for Nursing Research

This study resulted in numerous findings that are of interest and which lend themselves to nursing inquiry. Being predictive in design, this investigation pointed to the variables of import which underlie the dying process. Primarily, social support with its powerful influence emerged as an area of investigative exigency.

In reality, little is known of social support needs in the dying population. The supportive effects of hospice and other relationships, as described in the qualitative study, gave evidence of the importance of the emotional component of social support for personal growth, throughout the course of dying. Even with an impending reality and a conscious awareness of death, both persons in the "transcending" pattern spoke of the importance of their significant others. Along with the emotional component of social support, the other components of social support: the material and the cognitive/informative (Jacobson, 1986) need determination and description in the dying process, for both patients and their families.

The concepts that emerged, from the qualitative data, also, need further explanation in dying. These mentioned concepts were spirituality, hope, acceptance, personal



control, time, boredom, coldness, and asthenia. The significance of the different meanings of hope encountered; the notion of secondary control, as opposed to primary control; the need to replenish energy, as physical energy is lost; the stimulation of inner cognitions, as outer activity decreases; the meaning of time, its passage, and its impact on psychological adaptation, all these concepts lend themselves to theoretical searching and investigative inquiry.

Moreover, the identified linkages in the predictive model are influences of importance in the dying process and necessitate further research. The influence of terminal pain on psychological outcomes, the effects of pain on age, and the influence of lessened physical ability, too, lend themselves to further study.

#### Implications for Nursing Theory

The importance of patterns in structuring nursing knowledge, depicting interactions of nursings' concern, and bringing nursings' reality into notion has long been expounded ((Dickoff, James, & Weidenbach, 1968; Donaldson & Crowley, 1978; Carper, 1978). Since nursing derives its theoretical knowledge from the study of human phenomena, the patterns of human processes that emerged, from within the situations of dying, added to the significance of this study in imparting nursings' theoretical knowledge base.

The explicated Roy (1988) adaptation model of

nursing, provided a theoretical framework by which pattern descriptions were congruent with previous descriptions of adaptation in illness. To substantiate, a persons' psychological reactions to illness is a total human response (Lipowski, 1969, 1970), and includes all the responses made by individuals (Silver & Wortman, 1980). In agreement, a persons' functional life patterns emanate from all the human life processes (Roy, 1988). Thus, the described patterns of dying arranged, ordered, and reflected the human life processes within the totality of the person-environment influences. The described human life processes wove in and out of the cognitions, the feelings, and the meanings of these dying persons to depict the patterns encountered.

Moreover, as a theoretical framework, Roy's (1988) expanded model approach afforded a means of broadening previous descriptions of adaptation in illness and dying. The meaning of adaptation goes beyond coping, defending, and the use of intrapsychic processes (Verwoerd 1972; Kiely, 1972; Lazarus, 1974); to include the human processes of valuing and becoming. This present study noted the need of dying persons to find meaning, to preserve their inner self, and to maintain their values.

From Roy's (1988) expansion of the adaptation model of nursing, one can argue that adaptation in dying is an innate human need and, perhaps, a developmental process.

At the outset of this study (see page 15), philosophical assumptions which underlie the adaptation model of nursing that were based on principles of humanism (subjective dimensions of human experience central to knowing and to valuing) and veritativity (a common purposefulness in human existence) (Roy, 1988, pp. 29-30) were included in the theoretical framework of this study.

The subjective responses of these dying persons validate the principles of humanism and veritativity within the adaptation model. The dying individuals, who participated in this study, shared in creative power, behaved purposefully, possessed intrinsic holism, and were viewed in the context of activity and creativity for the common good (Roy, 1988, p. 32). Moreover, the responses of these dying persons indicated the purposefulness of their human existence. They strived to discover the truth in the highest form of knowing --integration with the unity of truth, that is, union with one's Creator (Roy, 1988, p. 30).

In the pattern of becoming, several individuals described a convergence with their Creator in which psychological union, or integration, was achieved. In addition, persons in this pattern reached a form of inner consciousness which was based on inner cognitions. The process of becoming was so distinct and so prominent that, in this instance, the process and pattern appeared to

converged into one and the same. Likewise, the dying, in the other patterns, confirmed the principles as described by Roy (1988). The participants validated their innate need for other persons, their human need to push toward positive emotional states and to secure a sense of belonging with others, and their need for a sense of personal control of one's own "self."

The described patterns of dying add to nursings' theoretical concerns in understanding life transitions. A life transition is a multiple concept and embraces the elements of process, time span, and perception (Chick & Meleis, 1986). Moreover, a life transition is an ongoing, but bounded phenomenon (Chick & Meleis, 1986). Hence, the patterns of dying observed all of the components which are present within a life transition.

In dying, the life transition is bounded and is circumscribed by an irreversible disease state and the failure of curative efforts. Thus, the patterns of dying described the persons' attempts to change and to arrange their life processes, within the boundaries of their limited time perspective. In addition, the movement of persons, within dying, was bounded by physical failure and was impacted by symptom control.

Accordingly, descriptions of other groups of individuals, other life transitions, and other arrangements of human life processes are of concern in

developing nursings' theoretical foundation. It is recognized that this study described only one population of individuals, who represent nursings' interests and concerns. Likewise, from this study, the pattern descriptions are, only, one step in imaging, arranging, and ordering the totality of the human life processes in the transition of dying. Thus, it is recognized that the patterns of dying described in this study are developmental, evolutionary, and remain at the abstract level of theoretical development.

The integration of two research methodologies, within this research study, enhanced the development of nursing theory. The researcher's attempt to describe and to name the hierarchical process patterns of dying, through qualitative analysis, was at the first level theory of development--the factor-isolating level (Dickoff & James, 1968). The predictive model, or the quantitative portion, explained interrelationships and, thus, was at a higher level of theory building--the situation-relating level (Dickoff & James, 1968). While the qualitative method elicited data about a phenomenon of interest that had few theoretical underpinnings, the quantitative method utilized empirical support to substantiate the known linkages and predicted the influences in dying.

In theoretical conclusions, this study contributed to the development of a nursing practice model. Myers and

Haase (1989) suggested a shift from the quantitative, systems approach of the Roy adaptation nursing model (1976, 1984) to a qualitative process that was more congruent with ascertaining nursings' interests. As this study described, a qualitative design is, indeed, robust with the explicated Roy adaptation model (1988).

The use of the human life processes (Roy, 1988) exemplified the development of hierarchical process patterns, and the integration of the assumptions afforded a means of discerning the dimensions of the human spirit and nature in dying. Moreover, the predictor variables were arranged into residual, contextual, and focal influences within the causal model which were congruent with the Roy adaptation model approach (1976, 1984).

#### Implications for Nursing Practice

Both the predictive model and the patterns of dying provided theoretical knowledge that has implications for nursing practice. The influences of the predictive variables, within the causal model, provide professionals with an explanation of the influences of social support, the impact of pain, and the effect of age on psychological adaptation in dying.

Importantly, the identified contextual variables of pain and social support are significantly influenced by professionals who care for the dying. Since pain has been identified as associated with psychological adaptation,

pain must, first, be regulated by a nurse caring for a dying person, before psychological outcomes can be addressed. When the influences of pain are controlled, the nurse may proceed to the next level of assessment in which the person's pattern of dying is determined.

A knowledge of the patterns of dying will assist those, who care for the dying, to discern the dialectical balance inherent within dying, to recognize movement from one pattern to another, and to intervene with measures that shift to the positive side of the opposing forces. That is, the professional will assess, formulate goals, and intervene in assisting the dying person to interpret and find meanings, to strengthen connections, to adjust and weigh expectations, and to identify sustaining acts.

For example, in the practice of patterned nursing care, the nurses focuses on the inner "Being" of the person, as outer activity is lessened, and encourages secondary control, as primary control is relinquished. In formulating practice interventions, the inner cognitions of the dying person are enhanced; the meanings of hope are contemplated; the temporal meanings are addressed; along with other interventions that are focused on meanings of acceptance, cherished values, and spirituality. Nursing practice that is structured on pattern derivation, attends to the energy losses of the dying person and abets in the conserving and securing of energy resources.

Thus, as the dying person balances the opposing forces of the positive and negative influences of one's situation, the nurse, too, maintains an equilibrium in managing the physical, social, psychological, and spiritual distresses of dying, while at the same time, striving to maintain meaning derivation, to discern values, and to assist the person to adjust and to weigh expectations. In striving to maintain the balance toward the positive side of the template, the professional uses one's own "self" to reach the inner "self" of the dying person, by which the values, the meanings, and the understandings within dying are grasped and attained.

#### Implications for Nursing Education

In every program of generalist nursing education, a separate component, within the curricula, and a considerable block of time are relegated to teaching the process of birth. Thus, the beginning of human life derives value within professional nursing education. In contrast, the time and allotment given to the ending of life, within nursing education, is often, not comparable.

In a survey of 396 baccalaureate nursing programs, only 15 percent had a complete curriculum course on death and dying (Dickinson, Sumner & Durand, 1987). When concepts of death education were first formulated, educators were asked to revise their curricula to incorporate death and dying issues (Quint, 1967). Yet,



recently this same pioneer, crusader, and champion, of death and dying education noted that a health care system which is based on a curative, life-saving model, is not conducive to the teaching of palliative care (Benoliel, 1988). Although strides have been made in the teaching of death education, death and dying should be a separate and universal component of professional nursing education. As with the beginning of life, the ending of life derives value, worth, and concern within nursing education.

Nursing education should hasten the opportunity to promote the values that are inherent within the care of the dying. Physicians perceive palliative care primarily as a nursing function with interventions of comfort and compassion, rather than treatment and restoration (Bulkin & Lukashok, 1988). Thus, nursing should welcome the opportunity to prepare practitioners in an area that has been defined as predominantly nursings' concern and function, and to whom ownership has been given.

### Conclusion

From this discourse, the predictions of the person and environment variables have been supported. Likewise, the patterns have been emerged, from the subjects' reactions and perceptions. For the majority of those who participated in this study, the patterns exemplified their finding meanings, their dimensions of the human spirit, and their cognitive awareness of the impending reality.

Early death and dying research noted the ambiguities of an open awareness of dying in which the dying person must present some kind of "self" to the world (Glaser & Strauss, 1965, p. 89). In this early study, the interactions with the dying often took place in an emotional climate that was closed, suspected, or in which mutual pretense occurred. In contrast, the reactions of these dying indicated an open emotional interaction, or exchange, in which they felt free in presenting their own "self" to the world, even to an unknown investigator. Thus, within the time-frame of a little more than two decades, the interactional climate in which the dying "self" is projected to the world has changed, from a closed to a more open atmosphere.

Prior to the work of Kubler-Ross (1969), there were no guide posts or markers to chart the course of dying, for professionals, for the dying, and for their families. The "self" the dying person projected to the world was often, feared, unknown, and rejected in dying situations. Importantly, the Kubler-Ross (1969) stages of dying, with its linear progression of the dying through denial and isolation, anger, bargaining, depression, and acceptance, provided a description of the dying "self" to others. This theory of dying created an image surrounding the event, abetted some of the fear, and raised the death event into the conscious awareness of the populace.

With a heightened awareness of death and dying, the hospice movement within this country was born (Craven & Wald, 1975). As a result of the applied principles of hospice service; emphasis on psychosocial aspects of care, continuous care, spiritual care, both the patient and family as the unit of care, and social supports that include volunteer services (National Hospice Standards, 1978), along with the commitment and the dedication of hospice workers, an open exchange with the dying has been realized. The subjects repeatedly acknowledged the caring, concern, and commitment of their hospice personnel and, although not measured as a separate variable, the social support from hospice impacted upon this study.

Although the patterns of dying are based on a conscious awareness of one's dying, the acceptance of one's death implied differing meanings for particular participants. As noted in the patterns, the human spirit in dying derived and lost meaning; the dying person transcended and repressed; the individual ended life in suffering and avoidance; the person finally wearied of the struggle; and, only, a very few released the "self" to total union with and acceptance of one's death.

Thus, several pathways traversed throughout the course of dying. For these dying, these pathways are mostly uncharted, unmarked, and difficult to follow. One day a path had sign posts and markers along the way; the

next day the path was dark and littered with obstacles that were difficult for the dying to prevail, and, thus, a search for another meaningful pathway ensued. One dying person, in fact, described a rough road ahead, yet, this same individual was self-confident and predicted his own ability to travel onward. This person was one, of the many, who verified the wondrous dimensions of the human spirit and the immense dignity of humankind, as described by these subjects, in the inevitable event of dying.

By nature of our human mortality, death is an event through which we, too, must all pass, and one that is repeatedly encountered by professionals in most health care settings. Therefore, a heightened awareness of the events of dying will benefit both our human comprehension and our professional enhancement. To increase our human understanding, this study was an effort to shed some light on the dark pathways of death, to disclose the enigmas of dying, and to lay aside some of the distress of dying, by focusing on a different approach--psychological adaptation.

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## **APPENDICES**

## Appendix A

## University of San Diego

Consent to Participate in a Research Project

I understand this project has to do with understanding my adjustment to physical impairment. I have been asked to take part in this project to determine if a specific questionnaire measures how I feel about my circumstances and how I express that feeling. The purpose of this study is to test a measurement scale for future use with other individuals, who find themselves in similar situations. Although this instrument will not directly benefit those persons taking part in this project, the scale will benefit other individuals in the future.

If I agree to participate in this project, the following will happen to me:

1. The investigator will visit me in my home.
2. I will be asked to fill out three forms. These forms are a series of questions that I answer on paper. If I need help in answering the questions, someone in family may help me.
3. The questions will ask how I feel about my illness, how I feel about life in general, and about my general physical condition.
4. It will take approximately 45 minutes for me to complete the study session.

I understand that participation in this study may involve some added risks which include:

1. I will be asked to think about my feelings of being ill.

This could be a bother to me, but I will always be able to stop the study session if I feel uncomfortable and so desire.

2. I might become tired and fatigued, but I will always be able to stop the study session if this occurs.

There may or may not be any benefit in this study to me. The results of the project will assist the investigator in learning more about the feelings of people, like myself, and how they adjust to physical impairment. These results will be used in the future to help health care professionals in greater understanding of the emotions of physical distress and in providing assistance that promotes psychological well-being.

## Appendix A (continued)

I have been told what to expect if I participate in this project: the possible risks involved, the questionnaires I need to answer; my right to discontinue the project at any time, if I feel discomfort; and the expected benefits from the project. I was given the above information and my questions have been answered. If I have any other questions or project-related problems, I may reach Marjorie Dobratz at:

I understand that participation in this project is completely voluntary. I may refuse to participate or withdraw from the project at any time without jeopardy to my receiving hospice care. My physician is aware of the study and has given permission. I understand that my records will be confidential, coded so my name is not recognized, and will be kept in a locked and secure place as required by law.

I have received a copy of this consent form to keep. I am fully aware of the nature of the project, the risks involved, the possible benefits, and my rights to withdraw. I hereby agree to participate, with full knowledge and awareness of all the above, in this project.

Signature of Subject:-----Date: -----

Signature of Witness:----- Date:-----

Signature of Investigator:----- Date:-----

Location of Study:-----

**PARTICIPANT INFORMATION SHEET**

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As a participant in this research project some information about you, as a person, is most helpful. your are requested to answer all of the following questions: Circle the answer that applies to you.

**1. Sex**

Male.....1

Female.....2

**2. Date of Birth**

-----

**3. Marital Status**

Now Married.....1

Widowed.....2

Divorced/Separated....3

Never Married.....4

**4. Religion**

Protestant.....1

Catholic.....2

Jewish.....3

Other.....4

**5. Length of Illness**

In months-----

**6. Education (Highest Year)**

Primary years (0-8)-----

High School-----12

Trade School-----13

Associate Degree-----14

Bachelors Degree-----16

Masters Degree-----18

Doctoral Degree-----20

Other-----

**7. Race**

Caucasian-----1

Mexican/American-----2

Afro/American-----3

Asian-----4

Other-----5

**8. Home Situation**

Reside with spouse....1

Reside with family  
member (son, sister)...2

Reside with friend....3

Reside with  
attendant help.....4



The LCS

Instructions: Below is a list of ways that ill people sometimes feel and act. If you are able, read each question and select the number that best describes how you feel today. If you don't feel well enough to make your own choices, a friend or family member may help you. Circle a number, from (1) not at all to (5) most of the time, which best tells you are feeling today. Do not skip any of the items. Read the example before starting and ask the hospice nurse to help you if you have any questions.

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HOW FREQUENTLY DO YOU FEEL OR ACT THIS WAY?	NOT AT ALL	A LITTLE	SOME OF THE TIME	QUITE A LOT	MOST OF THE TIME
---------------------------------------------------	---------------	----------	------------------------	----------------	------------------------

	1	2	3	4	5
--	---	---	---	---	---

EXAMPLE:

That others are worse off than you.	1	2	3	4	5
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HOW OFTEN DO YOU FEEL OR ACT THIS WAY?	NOT AT ALL	A LITTLE	SOME OF THE TIME	QUITE A LOT	MOST OF THE TIME
----------------------------------------------	---------------	-------------	------------------------	----------------	------------------------

1. That everything happens for a reason or purpose.	1	2	3	4	5
2. Like you are overwhelmed by everything.	1	2	3	4	5
3. That your life has been worthwhile.	1	2	3	4	5
4. That sharing with others seems to help.	1	2	3	4	5
5. That you aren't important anymore.	1	2	3	4	5
6. Like you want another chance to do things over.	1	2	3	4	5

-----

HOW OFTEN DO YOU FEEL OR ACT THIS WAY?	The LCS				
	NOT AT ALL	A LITTLE	SOME OF THE TIME	QUITE A LOT	MOST OF THE TIME
7. That you are peaceful and serene.	1	2	3	4	5
8. That you can always find something cheerful to think about.	1	2	3	4	5
9. That you experience time passing without you.	1	2	3	4	5
10. That you have happy memories to help you.	1	2	3	4	5
11. Like there are questions which need to be answered.	1	2	3	4	5
12. That life is still worth living.	1	2	3	4	5
13. Like you are losing control of your emotions.	1	2	3	4	5
14. That you would like to go to sleep and not wake up.	1	2	3	4	5
15. That you should be doing more than you are.	1	2	3	4	5
16. That you have no course of action left to follow.	1	2	3	4	5
17. That you have grown through this experience.	1	2	3	4	5
18. Like you say and do things for which you are sorry.	1	2	3	4	5

HOW OFTEN DO YOU FEEL OR ACT THIS WAY?	The LCS				
	NOT AT ALL	A LITTLE	SOME OF THE TIME	QUITE A LOT	MOST OF THE TIME
19. That you are afraid of being alone.	1	2	3	4	5
20. That nothing has worked out right for you.	1	2	3	4	5
21. Like you can express the way you feel.	1	2	3	4	5
22. That you need help to deal with your illness.	1	2	3	4	5
23. Like you are frozen and unable to move.	1	2	3	4	5
24. That you are alone even when others are near.	1	2	3	4	5
25. Like you can give in to whatever happens.	1	2	3	4	5
26. Like you can still find humor in things.	1	2	3	4	5
27. That your faith will see you through.	1	2	3	4	5

**PLEASE NOTE:**

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