A STUDY TO DESCRIBE GRIEVING WITHIN THE COGNITIVE AND SPIRITUAL DIMENSIONS IN MIDDLE ADULT MALES FOLLOWING HOSPITAL DISCHARGE WITH FIRST MYOCARDIAL INFARCTION

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A myocardial infarction (MI) is a potential source of losses due to the nature of the illness and the impact of the MI during the convalescent phase of illness. In this study, grieving within the cognitive and spiritual dimensions following the losses associated with a first MI was examined.

Fifteen men, ages 40 through 60, were interviewed in their homes four to six weeks following hospital discharge with an MI. Utilizing a semi-structured interview schedule, the frequency and duration of grieving themes within the cognitive and spiritual dimensions were investigated. Searching, examination of consequences of loss, and exploration of implications of loss are grieving themes within the cognitive dimension. Reappraisal of life structure and challenge to the personal belief system are grieving themes within the spiritual dimension. The implication of this study is that the Clinical Nurse Specialist can facilitate the resolution of the losses associated with a myocardial infarction.

Dedicated to the memory
of my mother and
Steven Vincent Spagnuolo

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CHAPTER 1

INTRODUCTION TO THE STUDY

Introduction

The widespread prevalence of coronary heart disease has made it the focus of investigation in recent years, particularly in regard to the psychological aspects of the disease. Most of the research on psychological factors in coronary heart disease thus far has focused upon (a) their role in the etiology of the illness and (b) their presence and their influence within the acute phase of illness, i.e., during hospitalization with a myocardial infarction.

Of particular concern is the high myocardial infarction rate among middle-aged men and women who are stricken at the height of their productive and creative capacities. Based upon the results of the National Heart, Lung, and Blood Institute prospective community study in Framingham, Massachusetts (1982), it is estimated that the chance of developing a first heart attack by age 60 is one in five for men. Each year, an estimated 314,000 persons under 65 years of age have their first myocardial infarction according to the National Center for Health Statistics (1980); approximately 60% of these individuals

return home following hospitalization. For middle-aged men, mortality from coronary heart disease has declined dramatically since 1970 (Kannel, Sorlie, and McNamara, 1979); therefore an increasing number of these individuals are surviving the myocardial infarction to resume involvement within the family, in careers, and in the community. Given the scope and significance of coronary heart disease, one important aspect in the study of this disease process lies in the examination of the process and problems of recovery and rehabilitation following myocardial infarction.

Studies have documented changes within the lives of people who have sustained a myocardial infarction (MI). These changes include:

1. alteration in cardiovascular functional capacity (Croog, 1977; Douglas and Wilkes, 1975; Wishnie, Hackett, and Cassem, 1971; Wynn, 1967)
2. changes in self-concept (Croog, 1977; Idelson, Croog and Levine, 1974),
3. changes in family roles and relationships (Croog, 1977; Druss and Kornfeld, 1967; Mayou, Williamson, and Foster, 1978; Stern, Pascale and McLoone, 1975)
4. changes in social roles and relationships (Croog, 1977; Mayou et al., 1978; Monteiro, 1979),
5. changes in financial situation (Croog, 1977; Hackett and Casssem, 1976).

In numerous research reports, the prevalence of anxiety and depression that begins during hospitalization for an MI (Almeida, 1982; Cay, 1972; Dellipianni, 1976; Gentry and Haney, 1975) and takes place following discharge from the hospital after an MI (Croog, 1977; Wishnie et al., 1971); Wynn, 1968) is discussed. However, there is relatively little research centered on the responses to changes that take place during convalescence from an MI or the source of anxiety and depression.

Within this chapter, the background of the study problem will be discussed, loss and grieving following a myocardial infarction will be introduced, the importance of the study and the study purpose will be described, the problem statement with conceptual and operational definitions will be specified, and assumptions and limitations of the study will be identified.

Background of the Problem

The events and changes that take place in the hospital are one part of a longterm process associated with coronary heart disease. After the patient leaves the hospital, the processes of recovery and rehabilitation continue during the convalescent phase following MI. The convalescent phase is a time of transition from the sick role whereby the person revises his self-definition from thinking of himself as sick to thinking of himself as well (Monteiro, 1974).

What is in prospect for the individual as he leaves the hospital to return home? The first month following hospitalization is a critical time for the person recovering from an MI. In a study of issues of concern to a group of men recovering from an MI (Bilodeau and Hackett, 1971), the successful adjustment achieved by most patients in the hospital seemed to be shaken when the person faced the stresses of life following discharge. Expectation of physical recovery and rapid return to pre-MI functioning are often contradicted by a reality marked by easy fatiguability, weakness, and limitations in diet, sexual activity, and recreation (Stern, 1983).

In a longitudinal study of males who suffered their first MI (Croog, 1977), the nature of the concerns expressed by the men as they returned home following hospitalization included a pressing uncertainty about the future, an awareness that the heart attack may recur, and a feeling of helplessness about factors beyond one's personal control including the elements of genetic predisposition.

In a study of emotional problems of convalescence following an MI, Wishnie, Hackett, and Cassem (1971) report that the depression that is resolved in the Coronary Care Unit often becomes manifest during the first weeks at home. In a response labeled "homecoming depression," the hope of a return to full health is shattered and replaced with despair due to the interpretation of weakness and fatigue as permanent alterations in cardiovascular function. The

individual feels unprotected and vulnerable after the close scrutiny provided in the hospital. In addition, he begins to comprehend the hardships of adhering to a cardiac regimen and the rigors of rehabilitation.

Stern (1983), in his discussion of psychological aspects of rehabilitation from an MI, suggests that the person recovering from an MI reflects upon the changes in his physical status and its effects--present and future, personally and on the family. Worries begin to intrude concerning the ability to return to gainful employment, the financial drain of the hospitalization and time away from work, sexual capabilities, and the difficulties entailed in making changes in the dietary regimen, smoking habits, and social/recreational activities. Idelson et al. (1974), in their study of the evolution of the selfconcept following an MI, conclude that the process of adjustment to coronary heart disease involves restructuring of the self and the beginning of a new type of life: the life of a person who must deal continually with chronic illness during the years to come.

Loss and Grieving Following a Myocardial Infarction

The responses of individuals who have experienced a myocardial infarction have been conceptualized from various perspectives. Some of the most widely used perspectives in analyzing an individual's responses to an MI include the Crisis model and the Stress-Adaptation framework. In addition, many studies have examined the emotional status,

work status, and physical status of individuals following MI and the relationship of status to variables such as age, socioeconomic level, severity of illness, and characteristics of the spouse. In a review of recent research of the social and psychological aspects of recovery from an MI, Croog (1983) stated that additional understanding of the post-hospital recovery and rehabilitation processes among cardiac patients requires new conceptual approaches and more creative research.

Many of the study results of individuals following an MI have demonstrated a resemblance to research findings of the experience of bereaved individuals and manifestations of grieving. This leads the researcher to ask whether loss and grieving theory helps to explain the experience of individuals following an MI.

Utilizing theories of loss and grieving, the illness of an MI can be viewed as a source of loss. Any change in an individual's situation that reduces the probability of achieving implicit or explicit goals may be perceived as a loss (Carlson, 1976). Many types of change events that may interfere with goal achievement are encountered as the individual experiences the impact of an MI during convalescence. Potential losses for the individual who has sustained an MI include loss of cardiovascular functional capacity, loss of valued family and social roles, loss of income, and loss of the pleasures of smoking, eating, and sexual activity.

Every significant loss leads to the process of grieving (Parkes, 1972; Schneider, 1984). Grieving represents the individual's attempt to cope with loss as a change event and to adapt to a world that no longer includes what has changed (Schneider, 1984). Grieving is the process of acknowledging, working through, growing through, and making peace with a significant loss (Reed, 1974). Grieving is an active, evolving process and not simply a steady state which diminishes over time (Parkes, 1975). A central element in the process of grieving is the gradual discovery of the extent of what has been lost and the subsequent discovery of what has not been lost (Schneider, 1984).

Five dimensions of the person's experience of grieving are identified by Schneider (1984): cognitive, spiritual, emotional, physical, and behavioral. Each of these dimensions is an aspect of one's experience at all times and throughout all phases of grieving. The interrelationship of all dimensions forms the holistic experience of grieving.

The grieving process has been studied by numerous researchers. The major focus has been upon investigation of the experience of bereaved individuals and a description of manifestations of grieving following bereavement. A general picture of grief during adulthood emerges from research following bereavement. In general, grieving is recognized as a basic human response which is universal and

inevitable following loss of a valued person. The most distinctive feature of grieving is the bereaved person's preoccupation with the deceased (Parkes, 1975).

There has been increasing attention and conceptualization of grieving following illness, but there has been essentially no research on grieving following illness (Werner-Beland, 1980). Every victim of a chronic disease must make a series of adaptations to the disease and its treatment and to the loss of function and sense of well-being the illness brings (Werner-Beland, 1980). The losses associated with illness, including the loss of health, is dealt with in the same manner as other experiences of loss, through grieving (Blacher, 1974; Parkes, 1975; Werner-Beland, 1980).

Grieving responses occur in all people who have altered body states as a result of illness or injury (Werner-Beland, 1980). Grieving takes place each time an illness becomes conspicuous or when it significantly interferes with goal achievement (Werner-Beland, 1980).

There is a need to investigate grieving responses of individuals with losses resulting from an MI. The lack of empirical data about responses to loss following illness underscores the need to investigate, from a loss and grieving perspective, the experiences of individuals who have sustained an MI.

Importance of the Study

Description of grieving following illness is a significant problem for nursing investigation. Direction within nursing practice will be provided if the experience of people with one type of illness, MI, can be described through use of a loss and grieving model. Framing the experience of a person recovering from an MI within a loss and grieving model allows the nurse to apply concepts of loss and grieving in work with these clients.

The nurse is in a unique position to assist the individual in the resolution of his losses. The nurse who is aware of the possible tasks facing the patient and who is able to intervene in a manner that is congruent with the patient's need will be better able to assist him in working through his experiences in the resolution of loss (Baker and Kelley, 1976). A loss and grieving model can be used to guide assessment, develop and implement a nursing plan of care, evaluate patient outcomes, as well as provide anticipatory guidance based upon the model.

The model of loss and grieving utilized within this research is a comprehensive model that views the experience of grieving as having growth potential. An individual can resolve his losses in such as way as to enhance growth. If research results support that grieving is indeed associated with the experience of an MI, the nurse can design and implement a nursing plan of care to facilitate and enhance the potential for growth within the person who has sustained losses as a result of an MI.

Purpose of the Study

Although there is much evidence to substantiate the physical and psychological distress that the person who sustains an MI experiences, there is minimal attention within the literature to description of the experiences as part of the grieving process following loss. The purposes of this research study are to systematically describe the experience of males who have had an MI from a grieving perspective and to determine to what extent grieving theory and observations of the grieving process fit with the experience of middle adult males following an MI. The specific purpose of this research if to collect descriptive data about grieving of middle adult males with a first myocardial infarction within selected dimensions, four to six weeks following discharge from the hospital.

Delimitation of the Problem Area

The process of grieving has been conceptualized and examined by numerous authors from a wide variety of disciplines. The major focus has been on describing the emotional, physical, behavioral, and cognitive manifestations of grieving and on the evaluation of outcomes of the grieving experience of bereaved individuals. The focus of this study will be grieving following an MI within the cognitive and spiritual dimensions. Rationale for the selection of the cognitive and spiritual dimensions will be identified.

There has been considerable investigation of the cognitive component of grieving (Bowlby, 1980; Parkes, 1970a, 1972, 1975). Themes that appear within the research literature include the urge to search for the lost object (Parkes, 1970a, 1970b, 1972, 1975) and preoccupation with thoughts of the loss (Engel, 1962, 1968; Marris, 1974). According to the grieving model proposed by Schneider (1984), in addition to the theme of searching for the lost object, the individual explores the consequences of loss and implications of loss as part of the cognitive dimension of grieving. Within research reports and case studies of individuals following a myocardial infarction, themes of searching, preoccupation with thoughts about the consequences of an MI upon one's life, and implications of the MI for the future appear and resemble themes of the cognitive dimension of grieving. Therefore, this research will focus upon investigation of searching, examination of consequences of loss and exploration of implications of loss as part of the cognitive dimension of grieving within individuals who have sustained an MI.

According to Schneider's grieving model (1984), a spiritual dimension of grieving includes disruption of the individual's goals and belief system and a search for meaning and purpose after loss. There has been very little empirical investigation of these issues as part of the process of grieving. Within research reports and case studies of individuals following an MI, themes of dis-

ruption of values, goals, beliefs about oneself, and reappraisal of purpose within life appear. Therefore, this research will focus upon investigation of themes of reappraisal of purpose within life and challenge to the personal belief system as part of the spiritual dimension of grieving within individuals who have sustained an MI.

Problem Statement

The problem under study is to:

1. Describe grieving within the cognitive dimension in middle adult males with first myocardial infarction four to six weeks after hospital discharge.
   a. What is the extent of searching?
   b. What is the extent of examination of consequences of loss?
   c. What is the extent of exploration of implications of loss?
2. Describe grieving within the spiritual dimension in middle adult males with first myocardial infarction four to six weeks after hospital discharge.
   a. What is the extent of reappraisal of purpose within life after loss?
   b. What is the extent of challenge to the personal belief system?

The research questions utilized to address the problem statement are:

1. What is the reported frequency of the defining characteristics within each grieving theme?

characteristics within each grieving theme?

2. During the subject's most recent recalled experience, what is the reported duration of the defining characteristics within each grieving theme?

Conceptual Definitions

Loss is any change in the individual's situation that reduces the probability of achieving implicit or explicit goals (Carlson, 1980). Losses vary in terms of how significant they are. The significance of a loss depends upon the salience of goals that have become less accessable or inaccessable, the extent of goal disruption, the number of related losses, and the extent of disruption of the daily routines or habits (Carlson, 1980; Schneider, 1984).

Grieving is a natural and normal reaction to loss. Grieving is a holistic process of responding to a significant loss and refers to the process of adjustment to loss (Marris, 1974). Grieving is the inner process of acknowledging, working through, growing through, and making peace with a major loss (Reed, 1974). The grieving process consists of movement through phases which include: shock, initial awareness of loss, retreat, acknowledgement of loss, and acceptance (Carlson, 1980). The grieving model proposed by Schneider (1984) includes the phase of transcending loss that follows acceptance and can lead to growth. Grieving is experienced by the individual within five dimensions: cognitive, spiritual, emotional, physical, and behavioral (Schneider, 1984). Each of the dimensions

out all phases of grieving. The interrelationship of all dimensions forms the holistic experience of grieving (Schneider, 1984).

Dimensions of grieving are realms of the human experience within grieving. A grieving theme is the focus of a person's attention within a dimension of grieving. Defining characterisitics of a grieving theme identify the nature of issues focused upon during grieving.

The **cognitive dimension of grieving** is defined for purposes of this study as the thought processes utilized to perceive and comprehend a loss throughout grieving. Grieving themes within the cognitive dimension of grieving following an MI include searching, examination of consequences of loss, and exploration of implications of loss.

Defining characteristics of **searching** include:

1. reviews events leading up to the MI
2. examines causal explanation for the MI
3. examines personal role in the etiology and onset of the MI
4. asks "Why did this happen to me?"

Defining characteristics of **examination of consequences of MI** include:

1. examines consequences of the MI upon heart's functioning
2. examines consequences of the MI upon roles within the family
3. examines consequences of the MI upon relationships with friends
4. examines consequences of the MI upon the financial situation

Defining characteristics of **exploration of implications of loss** include:

1. explores implications of the MI for modification of eating habits
2. explores implications of the MI for modification of activity and exercise habits
3. explores implications of the MI for modification of smoking habits
4. explores implications of the MI for modification of level of stress.

The **spiritual dimension of grieving** is defined for purposes of this study as the processes by which a person finds meaning and purpose in life after loss (Schneider,1984). Following a significant loss, there is often a questioning of existing meaning and purpose within life (Schneider, 1984). As part of grieving, goals and purposes within life and the belief system are disrupted and need to be reformulated (Marris, 1974; Parkes, 1971; Schneider, 1984). Grieving themes within the spiritual dimension of grieving include reappraisal of purpose within life after an MI and challenge to the personal belief system.

Defining characteristics of **reappraisal of purpose within life** after loss include:

1. reflects upon life's accomplishments
2. evaluates importance of goals pursued prior to the MI
3. alternate goals are explored
4. new methods to achieve goals are explored

Defining characteristics of **challenge to the personal belief system** include:

1. challenge to belief in personal control
2. challenge to belief in predictability of body
3. challenge to belief in personal worth
4. challenge to belief in immortality

Middle adulthood is defined in this study as the ages forty through sixty. This is the age period when the adult lifestyle, the occupational mode, and the family life pattern have been chosen, and the individual is involved in implementing his choices (Stevenson, 1977).

Operational Definition of Variables

Within this study, the following variables will be measured:

1. **Extent of searching** is defined as the frequency and duration of thoughts related to onset of the MI
2. **Extent of examination of consequences of the MI** is defined as the frequency and duration of examination of changes within the heart's functioning, roles within the family, relationships with friends, and the financial situation as a result of an MI
3. **Extent of exploration of implications of the MI** is defined as the frequency and duration of exploration of the need for modification of eating habits, smoking habits,
exercise habits, and level of stress because of the MI

4. **Extent of reappraisal of purpose within life after the MI** is defined as the frequency and duration of reappraisal of life choices following the MI
5. **Extent of challenge to the personal belief system** is defined as the frequency and duration of questioning beliefs and assumptions about one's life following the MI

Assumptions

In this study the investigator is making the following assumptions:

1. It is assumed that a myocardial infarction leads to significant losses for the individual.
2. It is assumed that all significant losses result in the process of grieving.
3. It is assumed that the individual who has sustained losses as a result of the MI will experience grieving within the cognitive and spiritual dimensions.
4. Within the interview, it is assumed that barriers to accessibility of requested data and respondent motivation to report requested data can be overcome by skilled, sensitive question formulation and interview technique.

Limitations

The following limitations are acknowledged in this study:

1. The subjects who agree to participate in this study may be different from those who refuse. Therefore, it is

possible that the research findings will not be representative of the total population of middle adult male MI patients.

2. Because the grieving process has not been studied in MI patients, it is possible that the time frames selected for the study may miss the selected aspects of grieving.
3. In this study, the investigator is not assessing the individual for stressors within the environment. In addition, the investigator is not controlling for extraneous losses.
4. A large percentage of persons within the sample are receiving medical care from a specialist in cardiology. In addition, many individuals are participating in structured cardiac rehabilitation programs. Therefore, the findings in this study may not be generalizable to the population of MI patients.
5. The limitations of utilizing an interview approach for gathering data include possibilities for interviewer bias. Within the interview situation, the interaction between interviewer and respondent can affect the subject's responses.
6. The sample is a voluntary rather than random sample.
7. Respondent reports of the length and duration of grieving themes may not be an accurate account of performance.

Overview of Chapters

This research study is presented in six chapters. In Chapter 1, the introduction of the study, background of the problem, importance and purpose of the study, delimitation of the problem area, the statement of the problem, conceptual definitions, definition of variables, study assumptions, and limitations of the study are presented. Within Chapter 2, the concepts of grieving, the cognitive and spiritual dimensions of grieving, and the grieving themes within the cognitive and spiritual dimensions are discussed. The relationships between the cognitive and spiritual dimensions of grieving and the middle adult male who has sustained losses associated with an MI are discussed. The relationship of Orem's theory to the person who is grieving the losses associated with an MI are described. Within Chapter 3, the pertinent literature and research in the problem area are presented. Within Chapter 4, research methodology and procedures for data collection are described. In addition, development of the interview schedule and operationalizaton of variables are discussed. Within Chapter 5, data is presented and analysis of the results of the study are provided and discussed. Within Chapter 6, the research findings are summarized, conclusions are identified, and nursing implications are discussed.

CHAPTER II

CONCEPTUAL FRAMEWORK

Introduction

Within this chapter, a framework integrating the concepts of grieving, male middle adulthood, and the impact of a myocardial infarction--including potential losses associated with an MI--will be described. The framework presentation includes a brief overview of selected theories of the grieving process, discussion of grieving within the cognitive and spiritual dimensions, discussion of the concept of male middle adulthood, and application of the cognitive and spiritual dimensions of grieving to the middle adult male who has sustained a myocardial infarction. Though nursing intervention is not a part of this study, the relationship of grieving concepts to nursing theory, and explanation of the manner in which nurses could intervene with individuals who are grieving following an MI are described.

The conceptual framework provides the basis for examining the problems addressed by the researcher in this study:

1. To describe grieving within the cognitive dimension in middle adult males with first myocardial infarction four to six weeks following hospital discharge.
   a. To describe the extent of searching.
   b. To describe the extent of examination of consequences of loss.
   c. To describe the extent of exploration of implications of loss.
2. To describe grieving within the spiritual dimension in middle adult males with first myocardial infarction four to six weeks following hospital discharge.
   a. To describe the extent of reappraisal of purpose within life after loss.
   b. To describe the extent of challenge to the personal belief system.

Grieving

Grieving is often described as the psychological sequence or process required to adjust and adapt to loss. The grieving process provides a method whereby an individual suffering a loss can be detached from the lost object, adjust to his world without the lost object, and become open to other objects of replacement (Engel, 1962). Carlson (1978) defines grieving as the response that follows reduced accessibility of significant goals. The grieving process provides a method through which a person tries to re-establish a satisfying life situation after

events have seriously disrupted the achievement of important goals (Carlson, 1978).

Grieving Process

This research will focus upon grieving at one point in time following a myocardial infarction. However, in order to fully understand the experience of the individual at this time, one must view the experience in the context of the entire process of grieving.

Many observers have postulated a stage or phasic model of the grieving process. Engel (1964) described the psychological processes involved in object loss. He has described a sequence of adaptation to loss which includes: shock and disbelief, developing awareness of loss, restitution--the work of grieving, resolving the loss, and idealization. C. M. Parkes (1965, 1970a, 1972) has carried out a number of longitudinal studies with the primary research thrust of distinguishing between typical uncomplicated grieving following bereavement and its variants of chronic grief and delayed grief. Parkes (1972) has identified components of uncomplicated grieving as: alarm, searching, mitigation, anger and guilt, and gaining new identity. Schneider (1984) proposed a grieving model that attempts to incorporate the growth potential within the process of grieving. Responses to loss within Schneider's (1984) model are organized within four phases: attempts to limit awareness of loss, awareness of loss, gaining perspective, and transcending loss.

The tasks that must be accomplished for the process of grieving to be completed and for successful resolution of loss include: (Worden, 1982) (a) to accept the reality of loss, (b) to experience the pain of grieving, (c) to adjust to the environment in which the loss is present, and (d) to withdraw emotional energy and reinvest it in another relationship.

Carlson (1978), in her book Behavioral Concepts and Nursing Intervention, has developed a framework of phases of the grieving process. Carlson's organizing framework is provided by this researcher as a guide to facilitate understanding of the grieving process and to facilitate the description of nursing needs of grieving individuals. Carlson (1978) has identified the phases of grieving as: shock, initial awareness of loss, retreat, acknowledgement of loss, and acceptance and adaptation. A brief description of the phases is presented:

1. Shock--The first response upon learning of unexpected loss is shock and disbelief. The grief-producing loss is too overwhelming to perceive accurately and integrate fully. That which has occurred is incongruent with the reality known to the individual.

2. Initial awareness of loss--The reality of the loss and it's meaning as a loss begins to be realized.

3. Retreat--The realization of the significance of a major loss is overwhelming and is, therefore, avoided. The individual uses coping strategies to defend against full impact of the loss.

4. Acknowledgement of loss--The full impact of the loss is perceived and the daily realities of the loss are confronted.

5. Acceptance and adaptation--The individual goes on to reorganize his life taking into account new realities.

Within theoretical approaches to the grieving process, it is generally agreed that individuals progress and work through phases of the grieving process in the resolution of loss. The realities of the loss must be acknowledged, and the full impact of the loss must be actively confronted prior to successful adaptation to loss.

Dimensions of Grieving

Dimensions of grieving are aspects of an individual's total experience at one time (Schneider, 1984). In conceptualizing a person's grieving responses to loss, Schneider (1984) identifies five dimensions of the person's experience: cognitive, spiritual, physical, emotional, and behavioral. Each of these dimensions is an aspect of one's experience at all times and throughout all phases of grieving (Figure 1). Although the interrelationship of all dimensions forms the holistic response within grieving, in order to understand grieving, each dimension is identified separately (Schneider, 1984). The cognitive and spiritual dimensions of grieving will be discussed in-depth as they are the focus of this study. The emotional, physical, and behavioral dimensions will be described briefly.

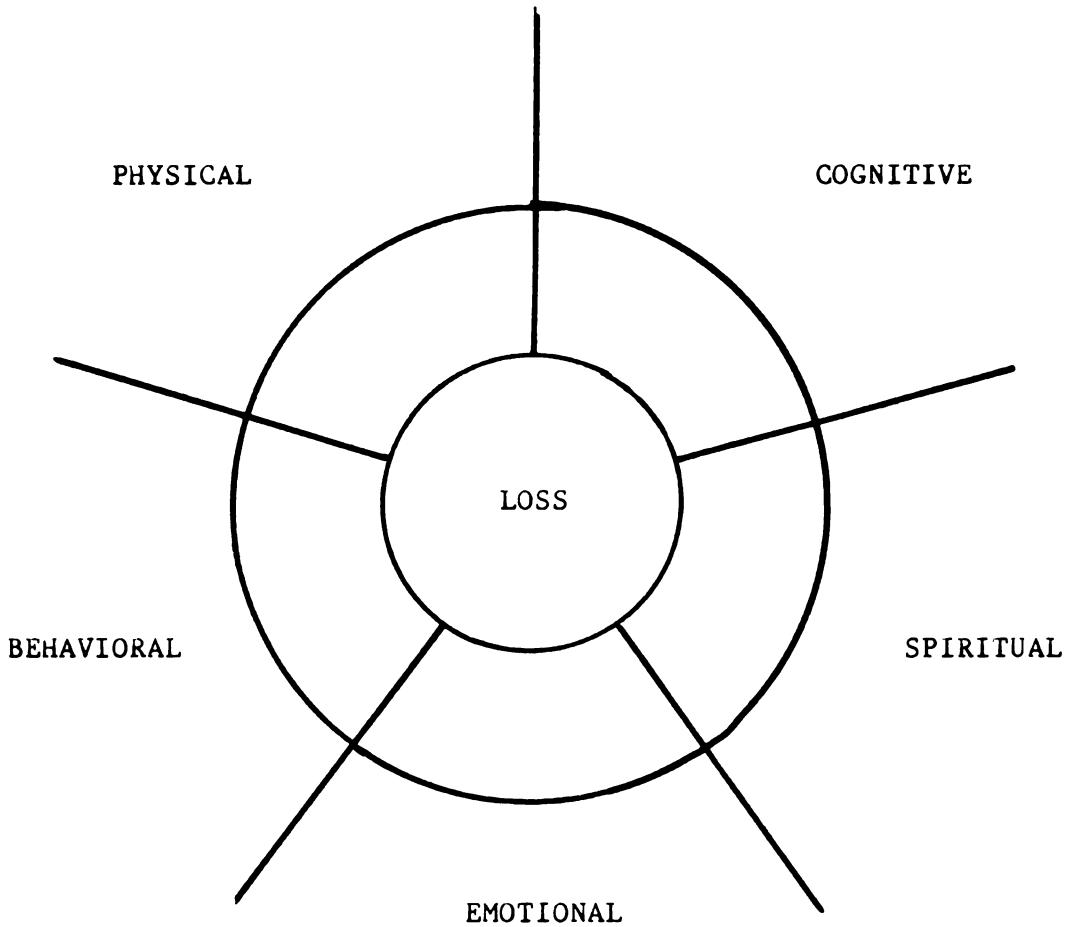

Figure 1. Dimensions of grieving.

(Adapted from Stress, Loss, and Grief: A Guide to Facilitation, by J. Schneider, University Park Press, Boston, 1984)

Cognitive Dimension of Grieving

The cognitive dimension of grieving is defined as the thought processes utilized to perceive and comprehend a loss throughout grieving (Schneider, 1984). The cognitive processes within grieving have as their purpose the discovery of all possible consequences and implications of the loss for the person's life (Schneider, 1984). Grieving themes, areas where the individual's attention is focused within the cognitive dimension, include searching, examination of consequences of loss, and exploration of implications of loss.

The cognitive processes during grieving include **searching** through past and present experiences for evidence of what has been lost and the current significance of the loss (Schneider, 1984). Engel (1964) states that during the main work of grieving, a person's thoughts are almost exclusively occupied with thoughts related to the loss. The person finds it necessary to bring up the loss, think over, and talk about the loss event.

An important question during realization of the loss seems to be "What is it that has been lost?" (Parkes, 1972). There is a conscious need to get the answer to this question and to "get it right" (Parkes, 1972). According to Parkes (1972), getting it right is not just a matter of recalling the traumatic event correctly. It includes the need to make sense of what has happened, to explain it, to classify it along with other comparable events, and to make

it fit one's expectations of the world. This is accomplished through searching for clues to explain "Why did this happen to me?" and repeatedly remembering the sequence of events leading up to the loss (Parkes, 1972). Engel (1962) points out that the process of reworking the loss goes on slowly and painfully.

During comprehension of the loss, there is often an obsessional review of events leading up to the loss (Carlson, 1978; Parkes, 1972). The review of events, conducted either alone or with others, seems to be necessary for the person to be able to integrate the loss events both emotionally and cognitively (Carlson, 1978). This response is the person's way of protecting himself until a certain amount of readiness has occurred and is part of the process of integrating the events in small and palatable doses (Headington, 1980).

Widows and parents, following the death of their family member, search for the causal explanation for the death of their loved one (Glick et al., 1974; Sanders, 1980). They explore their personal role in the events of illness and subsequent death (Glick et al., 1974; Sanders, 1980).

A central issue during grieving is the **examination of the consequences of loss** (Werner-Beland, 1980). A long term illness is a source of loss which affects one's life situation. The consequences of loss are unique for each person based upon his interpretation of the loss, the

extent of goal disruption, and the significance of goals that have become less accessable (Carlson, 1978; Werner-Beland, 1980).

In describing grieving responses to loss associated with illness and disability, Werner-Beland (1980) contends that after people experience illness, they are struck by what is no longer in their lives. Each time the illness becomes conspicuous either through symptoms of illness or when the illness significantly interferes with goal achievement, the individual becomes aware of the consequences of loss and grieves for his loss of functioning (Werner-Beland 1980). The individual who sustains a long term illness is repeatedly confronted with consequences of his loss in all aspects of life and must deal with these consequences over time as part of his grief work (Werner-Beland, 1980).

Acknowledgement of loss includes assessing the life changes that have been incurred as a result of illness (Purtillo, 1976). D'Affliti and Wietz (1977) describe how the person who has sustained a disabling event tries to understand what that loss means in terms of his many roles. The person tries to understand how his meaningful relationships are affected by his changed capacity to sustain his previously designated roles within the family system (D'Affliti and Wietz, 1977).

The purpose of the cognitive process during grieving also is to **discover the implications of loss** upon one's

life (Schneider, 1984). In attempting to deal with loss, the individual begins to address the lifestyle change which will occur after loss (Werner-Beland, 1980). During resolution of loss, the individual realizes that certain aspects of a lifestyle that contributed to the illness (or are thought to contribute to illness development) must be modified (Carruth and Pugh, 1982).

The individual who has sustained a loss through long-term illness attempts to gain information over time and thereby evaluate his total life situation as a result of loss (Werner-Beland, 1980). Questions that the person considers include: (a) What significant modifications does he and his significant other need to make? and (b) What general methods can be employed to make these modifications. The learning of new skills and suitable self-satisfying activities are all part of resolution of loss (Werner-Beland, 1980).

In summary, the distinguishing feature of grieving within the cognitive dimension is loss-centered thinking. Grieving themes within the cognitive dimension include searching, examination of consequences of loss, and exploration of implications of loss. The individual searches through past experiences to determine what has been lost. He examines the consequences of loss for his current life situation and explores the implications of loss for modification of his lifestyle in the future.

Spiritual Dimension of Grieving

The spiritual dimension of grieving involves the process by which a person finds meaning and purpose in life after loss (Schneider, 1980). Following a significant loss, a person's goals, his value system, and his belief system are shaken and disrupted (Schneider, 1984). The person must redefine and internalize a sense of life purpose that no longer depends upon what has been lost (Marris, 1972). Grieving themes within the spiritual dimension include reappraisal of purpose within life after loss and challenge to the personal belief system.

Reappraisal of purpose within life follows a significant loss (Marris, 1972; Schneider, 1984). During grieving, there is often questioning of existing purposes within life (Marris, 1972; Schneider, 1984). Losing something of great value often causes a person to re-examine his value system and may lead to discovery of new sources of meaning and purpose within life (Purtillo, 1979; Schneider, 1984). The process of grieving involves a reformulation of the purposes that remain in life after loss (Schneider, 1984). During adaptation to loss, new meaningful goals may be sought and energy may be directed toward finding new methods to achieve goals that were important prior to loss (Carlson, 1978).

A significant loss **challenges an individual's belief system** (Marris, 1972; Parkes, 1971; Cheiken, 1981; Schneider, 1984). A network of beliefs and assumptions is

developed and evolves throughout childhood which allow people to attach, trust, risk, and at the same time feel the security to do so (Cheiken, 1981). This belief system is based on the stability of the interpretations of our experience (Marris, 1975). We assimilate new experiences by placing them in the context of the familiar, reliable construction of reality which is based upon the belief system (Marris, 1972). This allows continuity of meaning in our experiences (Marris, 1972),

Parkes (1971) describes the ways of looking at one's self and the assumptions that an individual makes about his world as his "assumptive world." Parkes (1971) contends that loss events such as bereavement, illness, or surgery lead to major changes in an individual's assumptive world. In the book Loss and Change, Marris (1975) states that when a loss occurs, the thread of continuity in the interpretation of events becomes lost. He states, "The loss may fundamentally threaten the integrity of the structure of meanings on which this continuity rests and cannot be acknowledged without distress." (Marris, 1975, p. 21)

Following a significant loss, continuity must be restored (Marris, 1972; Parkes, 1971). "Whenever a major change in state takes place, the need arises for the individual to restructure his ways of looking at the world and his plans for living in it." (Parkes, 1971, p. 102) A loss leads to painful reviewing of assumptions about one's self and a restructuring of the assumptive world to include a new and different view of the self.

In summary, the distinguishing feature of grieving within the spiritual dimension is appraisal of the self that has evolved through one's life experiences. The individual questions and reappraises his life purpose and questions the assumptions and beliefs he has about himself. Grieving themes within the spiritual dimension include reappraisal of purpose within life after loss and challenge to the belief system.

Physical Dimension of Grieving

The physical dimension of grieving consists of the bodily experience during grieving (Schneider, 1984). Grieving in its early phases is characterized by a lack of energy (Parkes, 1971; Schneider, 1984). Sleep becomes a focal activity with either difficulty going to sleep or staying asleep, sleeping too much, or dreams disturbing sleep (Parkes, 1972). Frequently reported physical sensations during grieving include bodily pain, weakness, fatigue, exhaustion, and feelings of physical emptiness (Parkes, 1972; Lindemann, 1944; Clayton et al, 1972). As resolution of loss takes place, the body recovers, and energy stores that have been depleted are renewed (Schneider, 1984).

Emotional Dimension of Grieving

The most frequently described characteristics of grieving are the emotions experienced following loss which comprise the emotional dimension of grieving. A variety of

emotions have been described by researchers who have observed the grieving process. Anger, irritation, sadness, sorrow, guilt, and feelings of hopelessness are frequently reported emotional responses to loss (Bowlby, 1980).

Behavioral Dimension of Grieving

The behavioral dimension of grieving involves all responses related to the patterns of conduct of the individual, including observable behaviors, interaction with others, and involvement in activities (Schneider, 1984). Loss of normal patterns of conduct, changes in interactions with family and friends, and decreased social participation are features observed during grieving (Lindemann, 1944; Parkes, 1972; Marris, 1972).

Summary of Dimensions of Grieving

Dimensions of grieving are components of the individual's total experience throughout all phases of grieving. The cognitive dimension of grieving involves the way a person thinks about a loss and is characterized by loss-centered thinking. The spiritual dimension involves the processes by which a person finds meaning and purpose within life after major loss and is characterized by appraisal of life purpose and the self that has evolved through life experiences. Grieving within the physical dimension involves the bodily response during grieving and is characterized by lack of energy and alterations in sleep patterns. The experience of many different feelings following loss comprises the emotional dimension of

grieving. The behavioral dimension of grieving is characterized by change in normal patterns of conduct. The interrelationship of the cognitive, spiritual, physical, emotional, and behavioral dimensions of grieving forms the holistic grieving response to loss.

Adult Lifespan Developmental Theory: Middle Adulthood

Adult developmental theory related to middle adulthood is germane to understanding grieving following losses associated with a myocardial infarction in the middle adult male. The researcher must incorporate a developmental frame of reference in the analysis of an illness experience (Stevenson, 1983). The illness experience of individuals during middle adulthood will be affected by issues specific to their adult developmental stage (Stevenson, 1977).

Middle adulthood, the developmental period that follows early adulthood, is defined within this study as the ages of forty through sixty. Levinson, Darrow, Klein, Levinson, and McKee (1978) contend that middle adulthood begins around age forty with the mid-life transition and is the "season of a man's life" when his crucial life choices are given meaning and commitment as he builds a life structure around his life choices.

Developmental Issues of Middle Adulthood

Introspection. Introspection has been demonstrated through empirical studies to be a characteristic of individuals during middle adulthood (Gould, 1975; Levinson

et al., 1978; Neugarten, 1968; Vaillant, 1977). Neugarten (1968) states that introspection is of heightened importance in the mental life of middleaged persons. She described introspection as consisting of increased reflection, stock-taking, the structuring and restructuring of experience, and the processing of new information in light of experience. Introspection is a characteristic that differentiates the developmental period of middle adulthood from other adult developmental phases (Gould, 1975; Neugarten, 1968).

Introspection and personal reassessment during middle adulthood often results in revision of goals and values (Diekelman, 1968; Levinson et al., 1978; Lowenthal, Thurnher, and Chiroboga, 1975; Stevenson, 1977). Events of the middle years give rise to stock-taking; a measuring of achievements against one's goals (Medinger and Varghese, 1980; Neugarten, 1968). Self-evaluation and stock-taking are part of the developmental process of middle adulthood accompanying reorientation of goals and values (Thurhner, 1977).

Introspection occupies a relatively small part of one's time and energy during early adulthood but grows to larger proportions during the forties (Gould, 1975; Levinson et al., 1978; Neugarten, 1968). The major tasks of middle adulthood are making crucial choices on which a new life structure can be built, giving these choices meaning and commitment, and building a life structure

around his choices (Levinson et al., 1978). In order to carry out the tasks of middle adulthood, the individual explores the options the world has for him, explores his own resources, then makes and evaluates his preliminary choices (Levinson et al., 1978).

Developmental tasks. Within each age period, certain issues and tasks are the primary focus of normative development. The developmental tasks that arise during middle adulthood, and potential stressors within this developmental period as they relate to introspection will be discussed.

An individual, as he moves through middle adulthood, reviews his life and sees the past as meaningful for the present. He recognizes that life is not over, and there is still time to develop a lifestyle congruent with his values (Stevenson, 1977). It is a time for consolidating and gaining perspective (Schneider, 1984). The person is refining and integrating the emotional growth that he underwent during the previous phases of adulthood (Levinson et al., 1978; Schneider, 1984). He is beginning to have an acceptance of his limitations, while at the same time gaining in self-trust (Stevenson, 1977). It can be a time to affirm and enjoy life without the burdens of having to prove one's worth (Stevenson, 1977).

A developmental task during middle adulthood is reevaluating and enhancing the relationship with one's spouse (Stevenson, 1977). By this time of life, children

have left home or are preparing to leave soon. The couple's relationship must be re-evaluated, and issues of intimacy and sexuality must be reexplored (Stevenson, 1977).

Another of the tasks during middle adulthood is the development of mutually supportive and interdependent relationships with offspring and other members of the younger generation (Stevenson, 1977). Parents are redefining their relationships with their grown or neargrown children as old roles no longer fit, and new parental roles must be developed. Roles within relationships must evolve during the transition from the parent-child constellation to adult-adult relationships. Schneider (1984) states that middle adulthood can be a time for mentor-type relationships, where experience and its lessons can be shared with those younger who are just beginning careers as parents, professionals, or in their trade.

Adapting oneself and one's behavior to signals of the aging process is another developmental task during middle adulthood. The effects of lifelong dietary habits, exercise, work, and play habits begin to show themselves (Schneider, 1984). The task involves recognition of physical changes that do occur in the aging process and adjustment to the aging process (Stevenson, 1977).

During the latter part of middle adulthood, one has attained most of what one will ever attain within the work world. In preparing for retirement, each person must spend

time defining what retirement will mean in his life and beginning to prepare for it (Stevenson, 1977).

During middle adulthood the individual may also be facing multiple stressful events which are related to biological, psychological, and sociological growth and aging (Pruett, 1980). Events that may occur during middle adulthood include: the departure of the last child from home; career and work changes,- including job promotion with its consequent change in role and responsibilities; illness or death of a parent; and changes in marital status including divorce or separation. The amount of stress the individual experiences in dealing with these events will depend upon his interpretation of them (Pruett, 1980).

Illness as a psychosocial transition during middle adulthood. Neugarten (1970) suggests that normal, expectable life events, such as departure of children and retirement, are not necessarily traumatic events but rather normal turning points and are expected "on-time events". It is the unanticipated "off-time events," such as major illness that are likely to represent a traumatic event and to precipitate upheaval in one's life (Neugarten, 1970). Neugarten's (1970) contention about off-time events is consistent with Parkes (1971) concept of psychosocial transitions. Parkes (1971) contends that the life space, which consists of those parts of the environment with which the self interacts and in relation to which behavior is organized, is constantly changing. Some of these changes

fulfill expectations and require little change in the assumptive world. Parkes (1971) contends that the transitions of maturation are often barely recognized as changes, whereas the unexpected event, such as illness, is likely to be recognized as a major life transition.

Parkes (1971) labels major changes in life space which take place over a relatively short time, which are lasting in their effects, and which affect large areas of the assumptive world, as psychosocial transitions. Within a psychosocial transition, the individual is faced with the issues of whether to retain his set of assumptions about self and world or whether to revise them in light of changes he perceives in his life space. During a psychosocial transition, parts of the assumptive world become the object of introspection, assumptions about the self and his world are painfully reviewed, and one's set of assumptions are restructured.

In this context, an unexpected illness such as a myocardial infarction, is a psychosocial transition and leads to the need for the individual to review his existing set of assumptions about self and world and revise these assumptions. The impact of illness depends upon its place of occurrence within the sequence of developmental periods (Levinson et al., 1978). It is this researcher's contention that because a characteristic of the middle adult is introspection, a myocardial infarction will be experienced as a psychosocial transition. The process of

introspection will intensify the experience of the psychosocial transition for the middle adult male following a myocardial infarction.

Grieving the Losses Associated With a Myocardial Infarction

Loss is defined by Carlson (1978) as any change in the individual's situation that reduces the possibility of achieving implicit or explicit goals. Severity of loss is related to the salience of goals that have become less accessible and the extent of goal disruption, displacement, or distinction (Carlson, 1978).

Loss is simultaneously a real event and a perception by which the individual endows the event with personal or symbolic meaning (Peretz, 1970). The nature of the loss experience depends upon the individual's response to the change event, not necessarily what was lost. The perception of a change event depends upon the personal or symbolic meaning of the situation (Carlson, 1978).

Within the research literature, many studies have documented changes within the lives of people who have had a myocardial infarction. These changes are potential sources of loss because the changes may lead to reduction in the probability of achieving valued goals.

The potential losses for the individual who has sustained a myocardial infarction are depicted in Figure 2. These losses include:

1. Loss of cardiovascular functional capacity. A large percentage of individuals sustain a significant loss

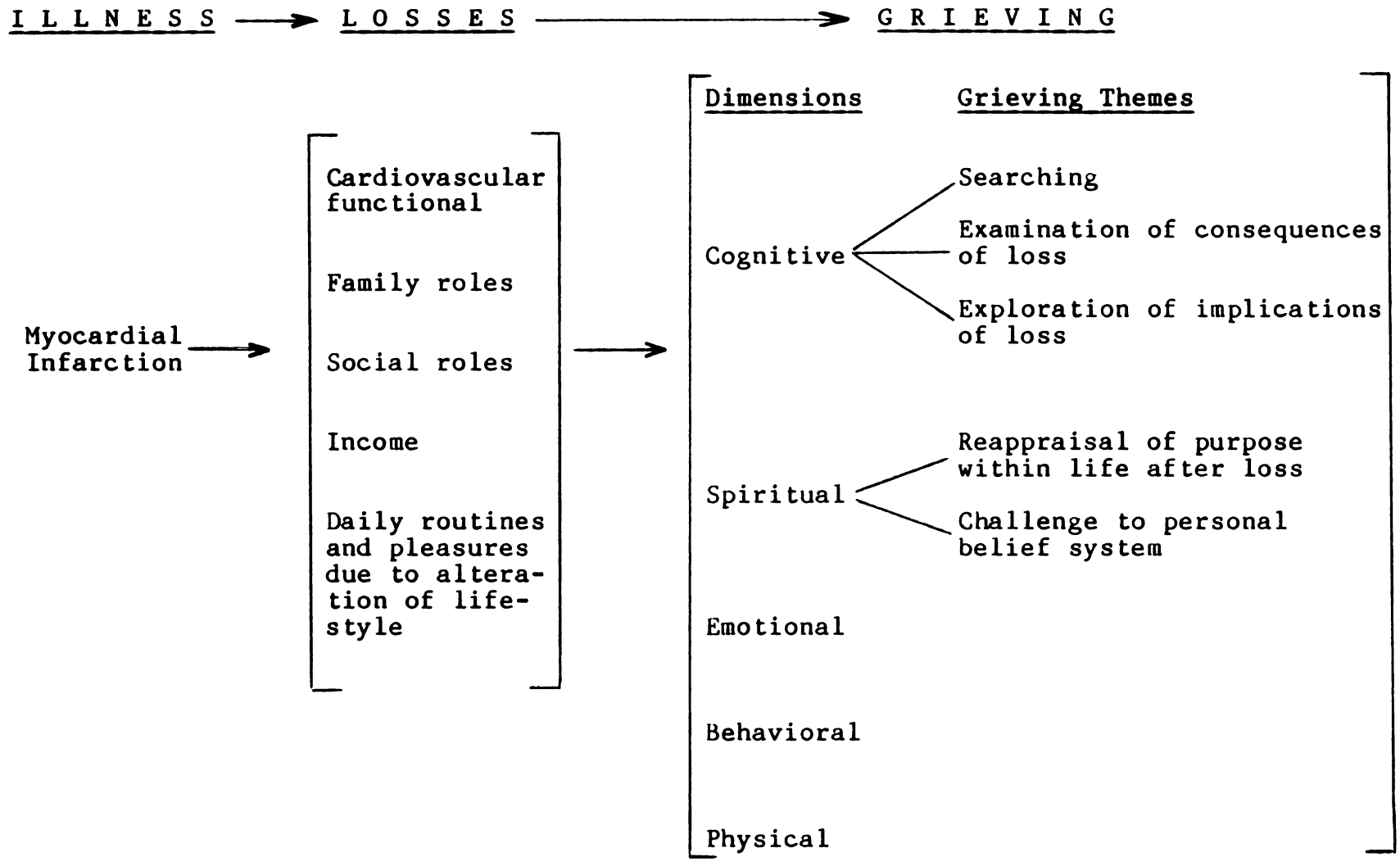

Figure 2. Grieving themes within dimensions of grieving that result from losses associated with myocardial infarction.

of cardiac function following an MI as assessed by physician clinical evaluation (Croog, 1977) and by the individual himself (Speegle, 1977; Wynn, 1967).

2. Loss within family roles. Following an MI, there is an alteration in communication patterns between husband and wife (Croog, 1977). There is a decrease in the quality and quantity of sexual activity following an MI (Griffith, 1973; Hellerstein, 1970; Green, 1975). In addition, there is a change in the normative patterns of communication between father and children (Rahe, 1975) and a change in perception by children of the capabilities and needs of the MI patient (Monteiro, 1978).

3. Loss of social roles. Following an MI, normative patterns of interaction with friends are altered during the first year post-MI (Croog, 1977; Monteiro, 1978). A significant number of people believe that their social life is not satisfactory at one year post-MI (Monteiro, 1978). A large number of individuals following MI believe that their friends hold assumptions about their inability to return to normal activities (Croog, 1977; Monteiro, 1978).

4. Loss of income. Financial resources are diminished in several ways as a result of MI: direct loss of income (Croog, 1977), changes in patterns of spending (Croog, 1977), and perception of potential limitations on future earning capacity (Hackett and Cassem, 1971; Croog, 1977).

5. Alteration of lifestyle as loss. A medical regimen, including prescriptions for regular exercise,

cessation of smoking, change in diet and weight, medications, and modification of responses to stressful situations is recommended for the person who has sustained a myocardial infarction. Implementation of these recommendations requires alterations in one's lifestyle and daily routines and can lead to loss of pleasures such as eating and smoking (Hackett and Cassem, 1971). Because of the hardships of adhering to restrictive regimens, there are low rates of success in modifying multiple habits and adhering to an exercise program (Hackett and Cassem, 1971).

Specific losses sustained by the individual following a myocardial infarction will depend upon changes that occur within the life situation and the individual's perceptions of the change events. The discussion will now focus upon grieving within the cognitive and spiritual dimension following losses associated with a myocardial infarction. A description how grieving concepts can be applied to the experience of the middle adult male will be provided.

Cognitive Dimension of Grieving Following A Myocardial Infarction

The distinguishing feature of grieving within the cognitive dimension is loss-centered thinking (Schneider, 1984). Following loss, the individual thinks about, examines, and explores the losses concomitant with his heart attack and the ways in which his life is affected by his losses (Delaney-Naumoff, 1980).

It is the contention of this researcher that there are three grieving themes within the cognitive dimension of grieving following myocardial infarction. Grieving themes within the cognitive dimension include: searching, examination of consequences of loss, and exploration of implications of loss. (Figure 2) In Table 1, defining characteristics of grieving themes within the cognitive dimension following myocardial infarction are summarized.

Searching. As the individual begins to look at the events surrounding his MI, he reviews the events leading up to the heart attack over and over (Delaney-Naumoff, 1980). As the person begins to comprehend the losses associated with his heart attack, he tries to determine why the heart attack occurred and asks "Why did it happen to me?" (Delaney-Naumoff, 1980).

Within the research literature, there are several reports of MI patients engaging in a search for the cause their illness following an MI. In a study of cardiac patients' perceptions of their heart attacks (Cowie, 1976), patients engaged in a cause-seeking process whereby a series of definitions and redefinitions of the heart attack were identified. Rudy (1980) also describes convalescent patients' explanation of causes of an MI. In Rudy's (1980) study of heart attack patients during the hospitalization period and at one to two months following hospital discharge with an MI, the patients reported exploring and evaluating a succession of causal explanations for the heart attack in an attempt to understand the heart attack.

Table 1. Defining characteristics of grieving themes within the cognitive dimension.

GRIEVING THEME	DEFINING CHARACTERISTICS OF GRIEVING THEME
Searching	a. reviews the events surrounding the MI
	b. asks "Why did this happen to me?"
	c. examines causal explanation for the MI
	d. explores personal role in etiology and onset of the MI
Examination of consequences of loss	a. examines consequences of the MI upon heart's functioning
	b. examines consequences of the MI upon roles within the family
	c. examines consequences of the MI upon relationships with friends
	d. examines consequences of the MI upon the financial situation
Exploration of implications of loss	a. explores implications of the MI for modification of eating habits
	b. explores implications of the MI for modification of activity and exercise habits
	c. explores implications of the MI for modification of smoking habits
	d. explores implications of the MI for modification of level of stress

A primary focus of men who were interviewed for a study about evolution of the self-concept following an MI was upon exploration of the personal role in the etiology and onset of their illness (Idelson, Croog, and Levine, 1974). As the individuals thought aloud, they concluded that previous ways of conducting themselves had somehow contributed to the heart attack (Idelson et al., 1974).

Based upon research findings about the nature of grieving and study results of the impact of a myocardial infarction, it is this researcher's contention that searching following an MI consists of reviewing events leading up to the MI, examination of the causal explanation for the MI, exploration of personal role in the etiology of the MI and asking "Why did this happen to me?"

Examination of consequences of the myocardial infarction. The potential consequences of a myocardial infarction one to two months following hospital discharge includes decreased cardiovascular functioning with symptoms of chest pain, dyspnea or palpitations, changes in husband-wife and parent-child relationships, changes in relationships with friends, and a negative impact upon the financial situation. The consequences of an MI are unique for each person based upon his interpretation of the loss event, the extent of goal disruption, and significance of the goals that have become less accessible (Carlson, 1978).

A central issue during grieving is the examination of consequences of loss upon all areas of life (Werner-Beland,

1980). The individual who has sustained a myocardial infarction examines how his life has been affected by his heart attack. As the individual confronts the changes in his body's functioning, and as family and social roles are redefined over time, the person reflects upon the importance that his physical capacity and roles held prior to the onset of illness (Werner-Beland, 1980). Each aspect of the redefinition process takes on different degrees of importance at various stages of illness and rehabilitation. According to Delaney-Naumoff (1980), it takes an extensive period of time for the person to assess newly imposed limitations and for the full impact of the heart attack to be realized.

It is this researcher's contention, based upon research findings about the nature of grieving and the types of life changes following an MI, that the individual examines the consequences the of MI upon his heart's functioning, roles within the family, social roles, and his financial situation.

Exploration of implications of the myocardial infarction. An individual anticipates making major modifications within his life as a way to recover successfully following an MI and to avoid recurrence of an MI (Idelson et al, 1974). The heart attack is perceived as having permanent implications for behavior by men within Idelson's (1974) study. The illness is described as requiring changes in one's self and his way of life. The

individuals acknowledge the need to make modifications and envision altering their way of life in accordance with the perceived need for change (Idelson et al., 1974).

The individual, as he grieves the loss of his health following an MI, begins to look at his lifestyle and at the modifications that must occur as he restructures his life for the future (Smith, 1972). As part of the grieving process, the person who has had a heart attack explores and tries to understand a post-hospital rehabilitation program and desired goals for reaching optimal weight, modification of smoking habits, regular exercise, and a change in the way he performs his job as a way to modify his level of stress (Delaney-Naumoff, 1980). However, people seldom foresee the problems involved in modifying lifestyle habits. Adhering to a cardiac regimen involves modifying habits of a lifetime and produces distress due to deprivation (Wishnie et al, 1971).

Differences between grieving themes within the cognitive dimension. A major difference between examination of consequences of loss and exploration of implications of loss is related to degree of choice. The consequences of loss have occurred following the heart attack without conscious choice by the individual. The MI patient is recognizing and examining the changes that have taken place within his life as a result of the heart attack. Exploration of implications of loss involves consideration of alternatives for altering and modifying

his way of life. After exploration, an individual can choose the nature and degree of modifications he will implement within his life.

A second difference between the categories is the time orientation. During searching, the goal is to make sense of the events surrounding the heart attack. The focus of the individual is upon past events. The focus of examination of consequences of loss is upon the present. The individual is thinking about and examining the impact of the heart attack upon his current day-to-day life. The focus of exploration of implications of loss is upon the future. The person is identifying implications of his heart attack and is considering choices for implementing change in his way of life for the future. If he has already modified his way of life, he has done so with a focus upon the quality of his future life. A limitations of defining implications as the author has done within this study, is that implications of loss for an individual may not be in the form of modifications in one's way of life.

Spiritual Dimension of Grieving

The distinguishing feature of the spiritual dimension of grieving is that the individual is dealing with issues involving the nature of the self --"self" centered appraisal. He is questioning and appraising the core of the self that has evolved through a lifetime of experiences and his existing life structure.

It is the contention of this researcher that two grieving themes can be identified within the spiritual dimension for middle adult males following an MI. They include: reappraisal of purpose within life after an MI and challenge to the personal belief system. In Figure 1, the grieving themes within the spiritual dimension are identified. In Table 2 the defining characteristics of grieving themes within the spiritual dimension are summarized.

Reappraisal of purpose within life after a myocardial infarction. When Idelson et al. (1974) discusses change within the self concept after an MI, they describe re-appraisal of purpose within life as central to the development of a revised self-concept. During the redefinition process, the person struggles with the meaning and purpose of his life; past goals within his life are reviewed in terms of importance and significance for him now, values are questioned, and new goals are formulated (Idelson et al., 1974). The middle adult often makes major life changes based upon the reappraisal process (Meyer, 1983).

Following an MI, there are underlying concerns that often become the focus of attention including examination of the purpose within life, reevaluating the realistic nature of goals, and contemplating the job future (Delaney-Naumoff, 1980). Following examination of aspirations in light of illness, goals are reformulated (Miller, 1983).

Table 2. Defining characteristics of grieving themes in the spiritual dimension.

GRIEVING THEME	DEFINING CHARACTERISTICS OF GRIEVING THEME
Reappraisal of purpose within life after loss	a. reflection on life's accomplishments
	b. evaluation of importance of goals pursued prior to the MI
	c. exploration of alternate life goals
	d. exploration of new methods to achieve goals
Challenge to personal belief system	a. challenge to belief in personal control
	b. challenge to belief in predictability of body
	c. challenge to belief in personal worth
	d. challenge to belief in immortality

Challenge to the personal belief system. There is a challenge to the belief system within individuals who have sustained a myocardial infarction. Four beliefs about the nature of the self which are challenged as a result of an MI will be identified and discussed: belief in personal control, belief in predictability of the body, belief in personal worth, and belief in immortality.

A challenge to the belief in personal control is a concomitant of grieving (Werner-Beland, 1980). Lack of control seems to pervade all aspects of chronic illness from etiology of the illness itself to the presence of symptoms (Miller, 1983). A chronic illness challenges the individual's belief that he is master of his own body (Miller, 1983).

In a study of emotional problems during convalescence after MI (Wishnie and Hackett, 1971), "homecoming depression" was present in 75% of the sample. The authors concluded that the loss of autonomy and control due to illness was the major factor in development of this depression. Cox-Gedmark (1980) contends that a sense of grief and loss resulting from physical illness can, in and of itself, produce feelings of helplessness and loss of control.

Symptoms of illness often cause doubts about the body's predictability. A familiar, reliable construction of reality rests not only in the continuity of meaning of events, but also on the regularity of the events themselves

(Marris, 1974). With the onset of unexpected illness and unpredictable symptoms of illness, the individual's belief in internal predictability is threatened. With recurrent symptoms, one is reminded of the physical loss of functional capacity (Werner-Beland, 1980). The threat to predictability deprives a person of the capacity to have confidence in his body (Werner-Beland, 1980).

The ambiguous and unpredictable nature of coronary artery disease seemed all-pervasive to many post-MI patients and required constant awareness of self in Idelson's (1984) study on the self-concept following an MI. Unlike a broken bone, the heart is something no one can see. It is perceived as a permanent risk for development of symptoms that are unpredictable and unanticipated (Smith, 1972).

A loss threatens the concept of one's self as having a sense of personal adequacy and worth to others. The person who is in the early phase of a long term illness is questioning his own worth (Werner-Beland, 1980). Under the stress of a suddenly acquired illness, the person loses sight of himself as a trustworthy attachment object (Werner-Beland, 1980).

The threat to resuming valued family, social, and work roles is a challenge to the individual's sense of personal worth. Individuals who have sustained an MI anticipate the loss of their ability to work and to be supportive and functional members of their families and social groups

(Werner-Beland, 1980). In Croog's study (1977), return to work posed the threat of the potential inability to function in a physically and/or emotionally demanding job in the face of perceived limitations of functional capacity. At one month after hospital discharge, men who had experienced an MI expressesd uncertainty about their capabilities. They wondered if they would recover their former capacities (Croog, 1977).

Having a chronic illness leads to a confrontation with the inevitability of one's own death. There is a gradual realization of the temporary nature of earthly existence (Miller, 1983). During awareness of a significant loss, an individual becomes aware of the fragility of life, and there is realization that death will happen for us (Schneider, 1984).

The first confrontation with mortality often occurs with the onset of acquired heart disease (Delaney-Naumoff, 1980). The heart, a symbol of life and longevity forces an individual's confrontation with death (Delaney-Naumoff, 1980). Severe illness can be a catalyst to awareness of mortality. In a study by Noyes (1973), 25% of people who had near death experiences through sudden illness had a new and powerful sense of death's omnipresence and nearness. In Idelson's (1974) study, men, at one month after hospital discharge, felt that a recurrence of another MI was a distinct possibility. Within a group setting, many men stated that prior to their heart attack, they had thought

of themselves as masculine, strong, and invulnerable to illness (Rahe, 1973). The heart attack revealed to them that they were, indeed, vulnerable to illness and the possibility of death.

Differences between grieving themes within the spiritual dimension. The differences between the categories of reappraisal of purpose within life after loss and challenge to the personal belief system is the nature of the issues addressed within each category. The focus of the former category is upon redefining one's purpose within life through reconsidering one's values and goals and the methods of fulfilling them. The focus of the latter category is upon beliefs about the nature of the self. Some of the beliefs that a person has about himself are disrupted and questioned as a result of sustaining a heart attack.

There are limitations in differentiating between reappraisal of purpose within life after loss and challenge to the personal belief system. A man's beliefs about himself and his reappraisal of purpose are intertwined. One's beliefs about one's self affect and are affected by the redefinition of purpose within life. In addition, many other components that have not been isolated comprise one's experience within the spiritual dimension of grieving.

Summary of Grieving the Losses Associated With MI

In summary, changes within the lives of men following a myocardial infarction are potential sources of loss. The

specific losses experienced by the individual depends upon which life goals are disrupted following an MI. Losses that are experienced following an MI lead to grieving within all dimensions. In response to loss, grieving experienced within the cognitive dimension include searching, examination of consequences of loss, and exploration of implications of loss. Grieving experienced within the spiritual dimension includes reappraisal of purpose within life after loss and challenge to the personal belief system.

Relationship Between Grieving Concepts and Nursing Theory

Orem's (1980) theory of self-care will be described as a basis for discussion of the relationship between study concepts and the nursing process. The purpose of describing the relationship between grieving within the cognitive and spiritual dimensions following MI and nursing theory is that implications of the study for nursing practice will be delineated within the context of Orem's (1980) self-care theory. The concepts of self-care, self-care requisite, and the supportive-educative nursing system will be described and applied to the middle adult male who is grieving the losses associated with a myocardial infarction.

Self-care

Orem (1980) states that self-care is the "practice of activities that individuals initiate and perform on their

own behalf in maintaining life, health, and well-being (pg. 35)". Self-care is an adult's continuous contribution to his own continued existence and contributes in specific ways to structural integrity, human functioning, and human development. Self-care is a form of deliberate action to meet known needs for care and is a self-initiated and self-directed process. It is a goal-seeking activity with one of the goals being the maintenance of integrated functioning. The ability for engaging in self-care is termed self-care agency (Orem, 1980).

Self-care Requisites

Self-care consists of three types of actions which Orem (1980) terms self-care requisites: universal, developmental, and health deviation. Universal self-care requisites are associated with maintenance of life processes and are common to all persons throughout the life cycle. Developmental self-care requisites are associated with developmental processes over the life cycle and events that can adversely affect development. Health deviation self-care requisites arise from structural and functional deficits and their effects upon the individual, and medical diagnosis and treatment of health problems.

Developmental self-care requisites of the individual who has sustained a myocardial infarction exist due to developmental progress toward higher levels of human organization and toward maturation during middle adulthood.

Health-deviation self-care requisites of individuals who are grieving the losses associated with an MI exist as a result of two factors: (1) deficits in structure and function secondary to the MI and the grieving process, and (2) changes in habits of daily living secondary to adherence to the therapeutic regimen and the grieving process. Categories of developmental self-care requisites and health-deviation self-care requisites identified by Orem (1980) and their relevance to grieving themes within the cognitive and spiritual dimension are portrayed in Table 3.

Developmental and Health-deviation Self-care Requisites Following an MI

Developmental self-care requisites exist for the individual who has sustained a myocardial infarction during middle adulthood. Health-deviation self-care requisites exist as a result of the illness of myocardial infarction and grieving. The relationship between developmental self-care requisites and grieving of the middle adult following a myocardial infarction will be identified. Integration of the concepts of health-deviation self-care requisites with the concepts of grieving within the cognitive and spiritual dimension following a myocardial infarction will be described.

Developmental self-care requisites are self-care requisites that have been particularized for developmental processes as a result of an event or condition (Orem, 1980). Introspection has been described within the

Table 3. Integration of developmental and health-deviation self-care requisites and grieving following an MI.

DEVELOPMENTAL SELF-CARE REQUISITE	GRIEVING FOLLOWING AN MI
The bringing about and maintenance of living conditions that support life processes and promote the processes of development during middle adulthood	Introspection as a characteristic of middle adulthood intensifies grieving following loss for the middle adult
HEALTH-DEVIATION SELF-CARE REQUISITES	**GRIEVING THEMES FOLLOWING AN MI**
Being aware of and attending to the effects of pathological conditions and states	Examination of consequences of loss Exploration of implications of loss
Effectively carrying out medically prescribed therapeutic and rehabilitative measures directed to the pathology itself and the regulation of human integrated functioning	Exploration of implications of loss
Modifying the self-concept in accepting oneself as being in a particular state of health and in need of specific forms of health care	Challenge to the personal belief system
Learning to live with the effects of pathological conditions and the effect of treatment measures in a lifestyle that promotes continued personal develoment	Reappraisal of purpose within life after loss

conceptual framework as a characteristic of middle adulthood (Gould, 1975; Levinson et al., 1978; Neugarten, 1968; Vaillant; 1977). Introspection during middle adulthood, which includes increased reflection and self-evaluation, provides the basis for making crucial choices upon which a new life structure can be built and can lead to higher levels of human organization. Accomplishment of the developmental tasks of middle adulthood, of which introspection plays a central role, enables the individual to mature and progress toward higher levels of functioning. during middle adulthood.

Being aware of and attending to the effects and results of pathological conditions and states is one category of health-deviation self-care requisites (Orem, 1980). As part of grieving, the middle adult examines what has been lost as a result of MI. He examines how his body and his health are being affected, how his roles and relationships with family and friends are being affected, and how his lifestyle will be altered by the change in his health.

Carrying out medically prescribed therapeutic and rehabilitative measures directed toward the pathology and prevention of further pathology, another health-deviation self-care requisite identified by Orem (1980) is also the focus of the MI patient's attention. The individual explores making modifications within his life in order to comply with the medically prescribed therapeutic regimen

designed to enhance myocardial healing and promote cardiovascular health. The recommended therapeutic and rehabilitative measures which are designed to slow further development of the coronary artery disease process include development of daily exercise habits, modification of eating habits with weight reduction to normal ranges, cessation of smoking, and stress reduction. As part of his grieving response, the individual examines the need for and explores his ability to modify his life in accordance with the recommendations for rehabilitation.

Modifying the self-concept to incorporate the image of oneself as being in a particular state of health and in need of specific forms of health care is a health-deviation self-care requisite (Orem, 1980). The man who has had an MI must develop a new identity as a person with the chronic illness of coronary artery disease. As part of the grieving process, the beliefs he holds about himself and his body are challenged and may result in new perceptions about the control he has, the predictability of his body, and his mortality. The revised beliefs within his personal belief system become part of his revised self-concept.

Learning to live with the effects of his condition and the effects of medical diagnosis and treatment in a life-style that promotes personal development is a health-deviation self-care requisite (Orem, 1980). In order for a person to grow and develop after the losses associated with an MI, he must evaluate where he is in his personal

development. The middle adult male does this as part of grieving by determining whether he is currently pursuing realistic goals and whether these goals will lead to continued personal and professional development. He then explores alternative life goals or alternative methods to achieve goals which remain important.

Nursing systems

The essential core of a nursing system is what nurses and patients do to meet the needs for self-care (Orem, 1980). The nurse chooses a nursing system to guide her actions in assisting individuals to effectively engage in self-care and meet existing self-care requisites. The nurse implements the nursing system by designing interventions which will have optimum effectiveness in achieving desired health results.

Orem (1980) describes three nursing systems from which nursing interventions are designed: a wholly compensatory system for situations in which a person is unable to care for himself; a partly compensatory system for situations in which a person needs some help in accomplishing or removing obstacles to accomplishing self-care; and a supportive-educative system when the person is able to perform measures of therapeutic self-care with support and guidance, education, or a developmental environment.

Within the supportive-educative nursing system, the patient is able to accomplish self-care but requires nursing assistance to regulate or put into operation

courses of action related to decision-making, behavior control, and acquiring knowledge and skills. Therefore, the role of the nurse within the supportive-educative nursing system is to facilitate the exercise and development of self-care agency. Assisting techniques utilized by the nurse in the supportive-educative nursing system include support, guidance, education, and provision of a developmental environment.

During rehabilitation and the grieving process following a myocardial infarction, the nurse assists the person through the supportive-educative nursing system. Within the supportive-educative nursing system, the patient is able to accomplish self-care but requires nursing assistance to regulate or put into operation courses of action related to decision-makikng, behavior control, and acquiring kn nowledge and skills (Orem, 1980). The middle adult male who is grieving the losses associated with MI is able to perform self-care but requires guidance and support, additional knowledge and skills, and assistance related to decision-making and behavior control. The nurse functions as a regulator of the exercise and development of self-care agency through developing nursing interventions designed to promote and increase the individual's self-care capabilities. (Figure 3) Therefore, the role of the nurse within the supportive-educative nursing system is to facilitate the exercise and development of self-care agency. Assisting techniques utilized by the nurse in the supportive-educative nursing system include support,

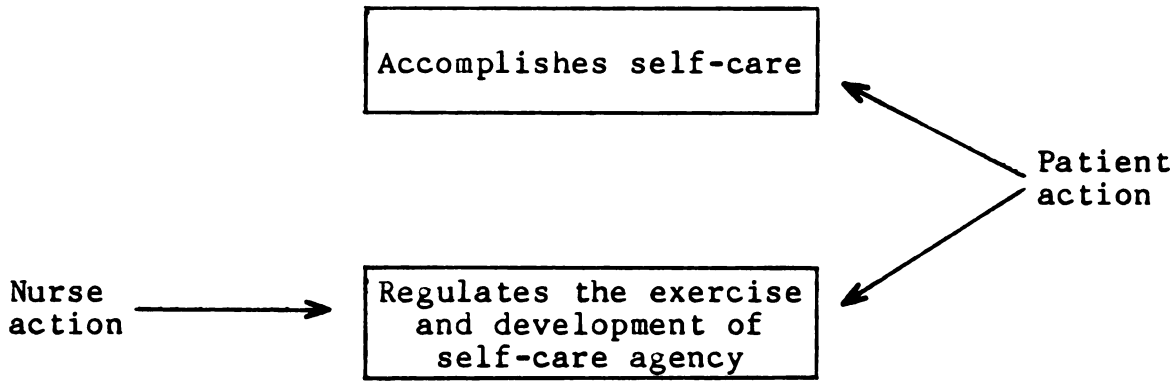

Figure 3. Orem's model of the supportive-educative nursing system.

(From Nursing: Concepts of Practice, by D. Orem, McGraw-Hill Book Company, 1980, pg. 98)

guidance, education, and provision of a developmental environment. Through application of scientific knowledge about the rehabilitation of MI patients and the grieving process, and through the design and implementation of the supportive-educative nursing system, the nurse assists the individual in the resolution of losses associated with a myocardial infarction.

Limitations of Conceptual Framework

There are limitations in utilizing the identified framework for a study of grieving. The stated purpose in proposing a model of grieving utilizing dimensions is to facilitate the understanding and examination of the grieving process (Schneider, 1985). However, man perceives himself as a whole--an on-going unity. Orem (1980) describes man as an integrated whole. To isolate components of a human being's experience is to reduce and artificially separate aspects of his experience. In addition, there are areas of overlap between the dimensions of grieving.

There are areas of overlap between the cognitive and spiritual dimensions. As this author has applied the spiritual dimension of grieving to the experience of the middle adult male following MI, a cognitive component does exist. During reappraisal of purpose within life after loss and challenge to the belief system, one engages in thinking processes as he considers, reflects, questions, and explores. As this author has applied the cognitive

dimension of grieving following MI, a spiritual component exists. As one examines and explores issues related to consequences and implications of loss, specific beliefs within the personal belief system (such as belief in personal control) are intertwined with the impact of MI upon the individual and implications for his life.

In Chapter III, literature and research relevant to grieving following loss, impact of myocardial infarction, and introspection during middle adulthood will be reviewed.

CHAPTER III

REVIEW OF THE LITERATURE

Introduction

The literature review includes research studies and scholarly papers relevant to the major study concepts: grieving within the cognitive and spiritual dimensions, psychological impact of a myocardial infarction, and introspection during middle adulthood. The investigator will describe major research findings and opinions of specialists relative to these concepts as well as point out the limitations of the studies examined. The literature review will be presented in three sections: grieving following loss, psychological impact of a myocardial infarction, and introspection during middle adulthood.

Grieving Following Loss

Overview

Grieving has long been recognized as a characteristic human response to loss. The research history of grieving, however, is very, short and the main focus of investigation has been the impact of bereavement and manifestations of

grieving following the loss of a spouse and the loss of a child. Empirical data regarding how individuals respond to losses of different kinds is limited as empirical investigation has not focused upon grieving following various losses. A search of the Index Medicus, Cumulative Index to Nursing and Allied Health Literature, and a computer search of the Psychology research within the last ten years produced no references that addressed grieving following illness. In addition, most of the research on grieving is in the beginning stages of knowledge gathering and is descriptive in nature.

The literature review on grieving following loss will include grieving following loss of a spouse, loss of a body part, and personal loss through terminal illness in order to draw upon the data available regarding grieving following various losses. This literature review will focus on aspects of grieving relevant to the study variables within the cognitive and spiritual dimensions of grieving. These relevant aspects include: searching, identification of consequences and implications of loss, and reappraisal of life situation and self following loss. The time frame for the review of empirical studies will include three months following loss.

Cognitive Aspects of Grieving Following Loss

Empirical studies of grieving following loss of a spouse, limb, and potential loss of self through terminal illness will be reviewed with attention directed to the

cognitive aspects. Searching has been identified as a grieving response to loss (Bowlby, 1960, 1961, 1980; Glick, Weiss, and Parkes, 1974; Parkes, 1970a, 1970b, 1972, 1975; and Sanders, 1979-80). Thought patterns that have been observed during empirical investigation of grieving include: preoccupation with thoughts of the loss (Glick et al., 1975; Kubler-Ross, 1969; Lindemann, 1944; Marris, 1974; Parkes, 1970a, 1972, 1975); identification of consequences of loss (Glick et al., 1974; Kubler-Ross, 1969; Marris, 1974; Parkes, 1970a, 1972, 1975; Sanders, 1979-80); and identification of implications of loss for the future (Glick et al., 1974; Parkes, 1970a, 1972).

Searching. Empirical studies of grieving following loss related to searching will be reviewed. Within most of the research literature where searching has been observed, searching has not been conceptually or operationally defined. Research evidence supports the proposition, however, that searching is a principal component of grieving following loss.

The origin of much of the recent research on grieving is grounded in theories and observations by Freud (1917), Bowlby (1960, 1961, 1980), and Lindemann (1944). In addition, the psychodynamics of grieving proposed by these theorists provide the basis for understanding observations of searching within studies of grieving. It is, therefore, important to briefly describe the theories and observations of Freud (1917), Bowlby (1960, 1980), and Lindemann (1944).

Freud is often credited as one of the first to develop a systematic explanation for the psychodynamics of grieving. In "Mourning and Melancholia" (1917, Freud suggests that mourning is the process by which energy is progressively withdrawn from a loved object following bereavement. The energy was conceived by Freud as being bound to the memories and ideas that arose from interaction with the dead person. To become free of his tie to the person following bereavement, the mourner must bring up each one of the memories that bound him to the deceased and then painfully relinquish it. By focusing his mind on the lost person and bringing to consciousness each relevant memory, the mourner gradually sets free the bound up energy.

Bowlby (1960) views grief as an adaptational response to the loss of an attachment object. Bowlby uses the term mourning to refer to the entire series of behavioral and psychological consequences that stem from the loss of a love object. In Bowlby's terminology, grief denotes the sequence of subjective experiences that occurs as a concomitant of mourning. Although Bowlby studied children's reactions to temporary and permanent separation from the mother, his work has relevance to adults who have sustained losses.

Bowlby (1960) asserts, based upon his studies of the ways in which young children respond to the loss of a mother-figure, that the child's tie to his mother is

mediated by a number of instinctive response systems which are part of the inherited repertoire of man. In his studies of young children following the loss of their mother, Bowlby found that separation from this primary attachment figure evoked behavior patterns that attempted to restore proximity and were aimed at recovery of the lost person. Two components of the effort to recover the lost person following loss of the primary attachment figure were identified by Bowlby: yearning and protest. Yearning was characterized by pangs of intense searching for the lost mother; and protest was characterized by angry crying, restless irritability, and bitterness toward self and others. Bowlby contends that searching and protesting, behaviors designed to restore proximity of the attachment figure, are gradually extinguished, and withdrawal of emotional investment in the lost person takes place as the child gradually realizes that the longed for reunion with his mother will not occur. Bowlby drew attention to the striking similarities between the responses of young children to the loss of their mothers and the responses of adults following the loss of their spouses and postulated that the underlying process of response to loss was similar in children and adults.

Lindemann (1944) reported observations from his investigation of psychological and somatic symptomatology of grief reactions in response to the death of a loved one. The investigation consisted of psychiatric interviews with

a total of 101 relatives of victims who died in the Coconut Grove Fire in Boston, psychiatric patients who lost a relative during the course of their treatment, and relatives of members of the armed forces who died during their enlistment. No description of the sample was provided other than that the loss resulted from unexpected death. From the interview data, Lindemann defined five characteristics he considered pathognomic of acute grief: (a) somatic distress, (b) preoccupation with the image of the deceased, (c) guilt, (d) hostile reactions, and (e)loss of customary patterns of conduct including inability to complete tasks, moving about in an aimless fashion, and constantly searching for something to do. Minimal information about the frequency and extent of described reactions was provided, and no time perspective was specified as to the timing of the interviews following bereavement. Based upon his studies of the bereaved, Lindemann (1944) states that mastery of responses to loss is achieved through grief work which has three significant components: (a) acceptance of the painful emotions of grieving, (b) active and systematic review of a variety of experiences and events shared with the lost person, and (c) gradual rehearsal and testing of new patterns of interaction and role relationshps that can replace some of the functions the deceased fulfilled in the survivors life.

C. M. Parkes (1970a) postulated that conjugal bereavement leads to a complex and time-consuming process characterized by a progression of phases in which one group

of psychological experiences predominates over others.

Parkes has played a central role in the study of adult grieving by applying statistical analysis to the data obtained through a longitudinal study of individuals following loss of a spouse.

In a longitudinal study of psychological reaction to bereavement (Parkes, 1970a), London widows under the age of 65 were interviewed with the purpose of describing the nature of normal grieving following the loss of a spouse. Standardized semi-structured interviews were conducted with a sample of 22 widows in their homes at one, three, six, nine, and thirteen months after bereavement.

During early realization of loss, which began a few hours to a few days following loss, Parkes (1970a) reports that the bereaved person alternated between two states of mind: (a) disbelief that the loss had occurred accompanied by hopes that all would be well and (b) an urge to recover the lost person. Parkes (1970a) contends that the urge to recover the lost person results in searching, which he defines as movement toward possible locations of the lost person physically and through one's thought patterns. Specification of the urge to recover the lost person and searching following bereavement is consistent with Bowlby's (1960) proposition that the urge to recover the lost person expressed through children's behavior following loss of the mother is also experienced by adults following bereavement.

Components of searching identified by Parkes (1970a) at one month following bereavement included: (a) preoccupation with thoughts of the lost person (reported by 19 out of 22 subjects), (b) direction of attention toward places and objects in the environment associated with the lost person and painful recollection and reexamination of the loss experience (interpreted to be present in all subjects), (c) development of a perceptual set for the deceased person with the predisposition to perceive and pay attention to stimuli which suggests the presence of the deceased person (interpreted to be present in all subjects), and (d) crying and calling out for the lost person (reported by 16 out of 22 subjects).

Parkes' (1970a) identification of searching following bereavement confirms Lindemann's (1944) reports from his bereavement study of preoccupation with the image of the deceased and loss of customary patterns of conduct. Parkes (1971) maintains, however, that the searching present following bereavement is not aimless as Lindemann suggests. Searching has the specific aim of finding the one who is gone (Bowlby, 1960, 1980; Parkes, 1971). In Parkes' study (1971), the searching phase reached peak intensity two to four weeks following loss of the spouse and then began to decline. No clear end point was observed, however. Bowlby (1980) suggests that when mourning runs a healthy course, the urge to recover the lost person and the searching, which are intense during the early months following loss, gradually diminish over time.

Other common features of grieving within Parkes (1970a) study at one month following bereavement include anger in 7 out of the 22 subjects, which Parkes suggests is aroused by frustration of the search and by those held responsible for the loss; guilt and self-reproach expressed by 13 out of 22 subjects, restlessness and tension exhibited by 18 out of 22 subjects; insomnia reported by 17 subjects; and the attitude that the world had become an insecure and potentially dangerous place which was expressed by 13 out of the 22 subjects. Indicators of further progression of the grieving process at three months following bereavement include apathy and despair associated with aimlessness which continues to be present in two-thirds of the widows at the end of one year following bereavement. Disorganization of behavior patterns, loss of interest in sources of gratification, as well as disinclination to look at the future were also characteristics of the sample at three months following bereavement.

The Harvard Bereavement Study (Glick et al., 1974) built upon Parkes' bereavement study results and methods. The principal aim of the Harvard Bereavement Study (Glick et al., 1974) was to identify factors that determine the course of grieving over the first year following bereavement and to identify what facilitated or impeded recovery from bereavement. In a sample of 58 American widows and 27 widowers under the age of 40, four interviews were held with each respondent; the first held three weeks

after the death of the spouse, the second held eight weeks following the death, and the third held approximately thirteen months after the spouse's death. A follow-up interview was held shortly after the second, third, or fourth anniversary of the death of the spouse. The investigators analyzed and reported the data for the widows and widowers separately due to the differences in responses to loss and the smaller sample of widowers.

Following the ceremonies of leave-taking, including visitation, the funeral, and burial, the widows were first confronted with the daily routines of their loss. Glick et al. (1974) report that during this period, which lasted from several weeks to several months, the widows engaged in an obsessional review of the course of their husbands' illness or the antecedent events of their deaths. They engaged in this review both in their own thoughts and in conversations with others. The authors contend that the purpose of the obsessional review was to make sense of their husbands' death and that the review was useful in that it helped the widows to integrate the reality of their husbands' death (Glick et al., 1974).

All of the widows reported exploring their own role in the events of illness and consequent death. They identified acts of omission or commission that might have contributed to the death. Forty-seven percent of this sample gave some indication of self-reproach when interviewed eight weeks after bereavement. The other half,

in exploring their own roles, recounted the ways in which they had done all they could to care for their husbands. The authors contend that this response was a defensive reaction to the same deep uncertainty about their roles in their husbands' deaths as those expressing self-reproach.

All the widows found themselves searching for an explanation of the cause of their husbands' deaths. The question "Why did this happen to him?" was posed by 58% of the widows. The women considered many different causes and explanations for the death, and each eventually chose a reason or reasons as the basis for acceptance of the death. The authors conclude that searching includes the preoccupation with events leading up to the loss and the seemingly endless examination of how and why the loss occurred. They suggest that there must be a repeated confrontation with every element of their loss until the intensity of the distress is diminished to the point where it becomes tolerable, and the pleasure of recollection begins to outweigh the pain. For most women, this stage was reached by two months following bereavement. Since the bereavement studies of Parkes (1970a) and Glick et al. (1974), there have been no investigations of loss of a spouse that include searching as a focus for observation.

In a study to compare bereavement reactions to death of a spouse, child, and parent (Sanders, 1979-80), the Grief Experience Inventory (GEI) was administered to 92 individuals within the three groups, and an interview was

carried out at an average of 2.2 months following bereavement. The GEI is a self-report inventory of 135 true-false items and is designed to assess experiences, feelings, symptoms, and behaviors of individuals during the grieving process. The responses to items are scored into nine clinical scales and six research scales. Conceptual definitions were not provided within Sanders' study. Psychometric properties have been reported, and norms were established for a general reference group and a newly bereaved group. The validity of the GEI was tested using the MMPI and four groups (disturbed, depressed, denial, and normal) were identified showing distinct patterns in their scores on both instruments.

An assumption made by the author (Sanders, 1979-80) is that the higher the score on the instrument, the greater the intensity of grief experienced. Based upon scores on the GEI, the author concluded that the death of a child produced the highest intensity of grief. None of the scales are immediately relevant to the variables under study, therefore, results from individual scales are not presented. A limitation of this study is that although grieving is the focus of this investigation, a theoretical framework of grieving, conceptual and operational definitions of components of grieving, and construction of the Grief Experience Inventory utilized to measure grief are not described. Therefore, construct validity of the instrument is questionable, and interpretation of study results is difficult.

In summary, within the empirical literature grieving response to loss includes searching following loss of a spouse (Glick et al., 1974; Lindemann, 1944; Parkes, 1970a). There is no nursing literature that explores searching. Empirical investigation, with precise conceptual and operational definitions, is required to determine if searching is a component of grieving following loss.

Identification of consequences and implications of loss. The recognition and identification of consequences of loss upon one's life and implications for the future are sources of distress following loss of a spouse (Bowlby, 1980; Glick et al., 1974; Lopata, 1974; Marris, 1974; Parkes, 1970; Sanders, 1979-80), loss of a limb (Parkes, 1972), and personal loss through terminal illness (Kubler-Ross, 1969). Empirical data about recognition and identification of issues of concern to individuals grieving the loss of a spouse, loss of a limb, and potential loss of self through terminal illness will be presented.

Kubler-Ross (1969) utilized interviews with over 200 hospitalized patients who were terminally ill to develop a stage theory of grieving. Sample characteristics were not described. Interviews were open-ended and unstructured. Kubler-Ross contends, based upon interview responses, that when confronted with personal loss through terminal illness, individuals experience five reactive stages in the grieving process: denial and isolation, anger, bargaining,

depression, and acceptance. She postulates that depression results through recognition of consequences of illness and awareness of the implications of the illness.

Kubler-Ross (1969) concludes that denial takes place at initial presentation of a terminal diagnosis and is characterized by shock and disbelief. The author suggests that denial functions as a buffer after unexpected news and allows the person to mobilize other defenses.

The second stage of grieving, anger, is brought about due to the negative consequences of illness including decreased function resulting from illness. Anger is displaced in all directions and is projected onto the environment. As part of this stage, the individual asks "Why me?" The third stage, bargaining, involves entering into an agreement which may postpone the inevitable from happening.

During the fourth stage, the person's anger and bargaining is replaced by a sense of great loss. One type of depression is a response to the consequences of illness. Kubler-Ross (1969) states that as a person begins to identify what has been lost he begins to talk about missing or longing for what has been lost. The individual becomes preoccupied with losses which have occurred as a result of illness. Another type of depression is a response to implications of his illness--the impending loss of objects of love due to his own death. During this time, the individual reviews the meaning of his life and often identifies his failures and lost opportunities during his life.

If the individual has had enough time and has been given some help in working through the previously described stages, Kubler-Ross contends that the person will reach a stage during which he is neither depressed or angry about his fate. He will have been able to express his feelings, his envy for the living and the healthy, and his anger at those who do not have to face their end so soon. He will have grieved for the impending loss of so many meaningful people and places, and he will contemplate his coming end with a certain degree of quiet expectation.

It is important to note that Kubler-Ross's (1969) stage theory is based upon subjective personal impressions. No attempt was made to control or systematize the interview process or check the reliability of the observations. In addition, no time perspective was provided regarding the onset or duration of stages.

The major consequences of loss of a spouse identified by widows is traumatic disruption of their lives (Glick et al., 1974; Parkes, 1970a; Sanders 1979-80). Within studies of loss of a spouse, the initial reaction of shock and disbelief gives way to awareness of loss as there is recurrent recognition of the husbands' absence from the usual surroundings and events (Glick et al., 1974; Parkes, 1970a). With the ceremonies of leave-taking behind them, widows were forced to recognize the need to establish a new routine and plan for their future life (Glick et al., 1974).

In Parkes' study (1970a) of the first year following bereavement, the widows began to examine the new situation in which they found themselves in and consider new ways of meeting it by one month following loss of their spouse. This examination entailed a painful yet crucial task of redefinition of their life situation. Parkes (1970a) states that a new set of expectations and roles face them and the widows must learn a new repertoire of problem solutions before they can feel safe and at ease. Bowlby (1980) states that until redefinition of self and situation is achieved, no plans for the future can be made. Once the process of realization of loss is completed, the bereaved women recognize that an attempt must be made to fill unaccustomed roles and acquire new skills (Bowlby, 1980; Glick et al., 1974; Parkes, 1970a).

The period of time in which widows are first confronted with the daily realities of their loss lasted from several weeks to several months following bereavement (Glick et al., 1974; Parkes, 1970a). At two months following bereavement, they were becoming accustomed to changes in daily routine, establishment and organization of a different daily routine, and were beginning to learn to direct their energies to life without their husbands. Glick et al. (1974) reports that during the first two months following bereavement, the women were almost constantly aware of their loss as a background to their thoughts, if not the focus of their thoughts. The widows

recognized that few people were available to share their experiences with, and they felt inhibited about talking about their loss with others, which was a significant source of distress (Glick et al., 1974; Marris, 1974; Parkes, 1970a; Sanders, 1979-80). Marris (1974) observed that during the time that widows were beginning to realize their loss, they could not accept the consequences of loss and tended to withdraw from social relationships. According to Marris (1974), the bereaved women in his study tended to devalue all relationships except the one which had been lost, so that instead of turning to family and friends to reduce their loneliness, the widows became almost indifferent to them.

One of the implications of loss for bereaved women is that their way of life for the future had to be modified as they had become solely responsible for raising the children and insuring the family income (Glick et al., 1974; Marris, 1974; Parkes, 1970a). In the study by Glick et al. (1974), at eight weeks following bereavement, all the women expressed concerns regarding the children's present and future well-being and expressed the need to compensate for the father's absence. Multiple worries and sources of concern were identified as they began to assume the role of sole parent to their children (Glick et al, 1974). They began to consider the need for modification of their childrearing practices, including an increase in time spent with the children on a day-to-day basis, changes in child

care to facilitate return to work and social activities, and changes in disciplinary practices. Almost all widows were concerned about family income and began considering the need to pursue employment, if not already employed ,or changing the family's pattern of expenditures.

A longitudinal study of amputees was conducted by Parkes (1972) with the purpose of describing the grieving response to loss of a limb. Nine women and 36 men under the age of 65 were interviewed one month after amputation of an arm or leg and again one year later. The interviews were semi-structured and standardized with the purpose of obtaining data for comparison with interview response of newly bereaved women. Parkes (1972) concludes that the loss of a limb leads to grieving for the limb and the loss of function associated with the limb. Preoccupation with thoughts of the loss of the limb was reported by 75% of the amputees at one to two months post amputation. Eighty-five percent described pining for those aspects of the world which were lost as a consequence of losing their limb and which were no longer accessible, including their job and all activities which required or were thought to require the presence of an intact limb for their participation. Parkes (1972) suggests that pining was for the life space from which they were separated because of the loss of their limb. Pining was not conceptually or operationally defined.

Empirical data supports the contention that consequences and implications of loss are a source of distress during grieving following personal loss through terminal illness (Kubler-Ross, 1969), loss of a spouse (Glick et al., 1974; Marris, 1974; Parkes, 1970a; Sanders, 1979-80), and loss of a limb (Parkes, 1972). Research results suggest that the consequences and implications of loss are different for various losses. Within the studies cited, consequences of loss upon one's life and implications of loss for the future were recognized by the individual following losses of various kinds.

Spiritual Aspects of Grieving Following Loss

Reappraisal of purpose within life and challenge to the personal belief system have been identified within the conceptual framework as grieving responses to loss. Results of empirical studies of grieving following loss of a spouse or limb will be reviewed with attention directed toward the spiritual aspects as discussed within the conceptual framework.

Reappraisal of life situation and self. The subject of reappraisal of purpose within life and challenge to the personal belief system as part of the process of grieving has received minimal empirical investigation. The results of several research studies suggest the propositions that, as past of grieving following loss, individuals reappraise their purpose within life which leads to restructuring of life plans, and they challenge assumptions about themselves

which leads to leads to revision of beliefs about themselves as part of grieving following loss (Marris, 1974; Parkes, 1970b, 1972). Studies will be reviewed which explore and describe aspects of reappraisal of purpose within life and challenge to and revision of assumptions and beliefs about the self during grieving.

As a result of investigations of loss of a spouse (Parkes, 1970a) and loss of a limb (Parkes, 1972), Parkes (1971) postulated that major life transitions such as bereavement and personal illness require the individual to restructure his way of looking at the world and his plans for living in it. He proposed that life transitions evoke the review and reinterpretation of past attainments, the restructuring of goals and reorientation of values, and brings about significant alterations in the individual's life space and assumptions made about the world (Parkes, 1971). In addition, life transitions lead to challenge of the existing assumptions about one's self and development of a new set of assumptions about one's self to enable the individual to cope with the new, altered life space (Parkes, 1971).

Marris (1974), in his book Loss and Change, conceptualizes grieving following bereavement as a process of change that can lead the bereaved into a new sense of purpose about life. He asserts that our purposes and attachments are the basis of the meaning of life. Purposes within life are learned and consolidated through one's life

experiences and become embodied in the relationships which sustain them.

Life becomes meaningful when placed in the context of attachments, purpose, and principals of conduct (Marris, 1974). When bereavement occurs, a significant attachment is severed. The bereaved person feels as if the central, most important aspect of himself is gone, and all that is left is meaningless and irrelevant; he is bereft of purpose. In addition, familiar patterns of conduct no longer make sense due to their loss of purpose. Despair and disorganization are experienced.

Continuity of purpose can only be restored by detaching familiar meanings of life from the relationship in which they were embodied and reestablishing meaning within life independently of the severed relationship (Marris, 1974). It is through the struggle between one's past identity and conceptualizations about life and the present conflicts engendered by the loss of a spouse during grieving that new viable interpretations about life and its purpose are painstakingly reformulated (Marris, 1974).

Parkes (1970a) asserts, based upon data from his studies of London widows, that one of the distinct tasks of grieving is that the individual's internal model of the self must be restructured to incorporate the reality of loss. Whenever a major change in state of the individual takes place, the need arises for the person to revise his beliefs and assumptions about the nature of the self and

his relationship to the world (Bowlby, 1981; Parkes, 1970a, 1971, 1972). Any change within one's life which is interpreted as a loss presents the individual with the need to challenge beliefs and assumptions about himself; beliefs and assumptions are questioned, reviewed, and painfully examined as part of grieving, leading to restructuring of his assumptive world (Bowlby, 1981; Marris, 1974; Parkes, 1970a, 1971, 1972). Drawing upon the work of Parkes (1970a), Bowlby (1980) states that redefinition of self and one's life situation following loss is a process of realization, of reshaping internal representational models so as to align them with the changes that have occurred in the life situation. To make a satisfactory adjustment to loss, the individual must give up one view of himself and his assumptive world and acquire another more realistic one (Parkes, 1971).

Parkes (1972) suggests, based upon his longitudinal study of amputees, that amputees are faced with the need to reassess and modify their assumptive world. He concluded that the data reflect a process of realization of loss which involves reassessment of one's self as he relates to the world. As the individual is faced with the need to modify his existing model of the world, he is also faced with the need to modify his beliefs and assumptions about himself (Parkes, 1975). This is a slow and painful process which requires the individual to carry out a succession of matching operations which repeatedly brings

to the person's awareness the disjunction between this internal model of the self and the world as it is.

Findings within Parkes' (1972) study of loss of a limb suggest that amputees experience a challenge to their sense of control. Although percentages are not reported, Parkes states that at the interview one to two months following limb amputation, the amputees expressed a sense of internal loss, mutilation, vulnerability, and helplessness. The author describes how, as time passes, the individual discovers how well or how badly he can cope with the new world that surrounds him. Parkes (1972) suggests that the individual's final view of himself depends upon his life situation and the extent to which his abilities and experience provide him with an expectation of satisfactory accomplishment.

The findings of Lopata's (1974) study of grieving following loss of a spouse suggest that the widow's sense of personal worth is challenged. In Lopata's study (1974) of 301 Chicago area widows aged 50 and over, a broad range of effects of bereavement upon their views of themselves were reported as a direct result of the deaths of their husbands. During the first month after the death and burial of their husbands, the widows report that many encounters with the world produced strain, withdrawal, self-doubt, and a feeling of being rejected. They expressed incompetence and self-rejection as they attempted to complete their grieving in accordance with the expectations of others.

In summary, the subjects of reappraisal of purpose within life and challenge to beliefs and assumptions about the self has received limited empirical attention. Outcomes of reappraisal of aspects of life situation during grieving following loss have been documented within descriptive studies. The concepts of reappraisal of life situation or life purpose and outcomes of the reappraisal process have not been precisely conceptually or operationally defined.

Parkes (1971) proposes that following a significant loss, an individual revises assumptions about himself as part of the grieving process. The results of studies cited support the contention that during grieving, the individual's sense of worth, sense of control, sense of predictability, and sense of mortality are challenged as a result of loss.

Impact of a Myocardial Infarction

Within the literature review on the impact of a myocardial infarction, empirical studies of psychological and emotional responses during recovery and rehabilitation following hospital discharge of the myocardial infarction patient will be discussed. The relevant aspects to be included are: integration of the experience of myocardial infarction, responses relating to consequences of an MI upon life and implications of an MI for the future, and reappraisal of life situation and self following an MI.

Integration of Experience of a Myocardial Infarction

Several studies have been conducted that focus upon the individual's interpretation and integration of the experience of a myocardial infarction during the recovery period (Cowie, 1976; Idelson, Croog, and Levine, 1974; Rudy, 1983). Empirical results support that during the early phase of recovery following an MI the individual reviews the events surrounding the MI and examines the causal explanation for the MI (Bilodeau and Hackett, 1971; Cowie, 1976; Idelson et al., 1974).

In an investigation of the development and modification of the cardiac patient's perception of his heart attack, Cowie (1976) reported on the accounts of illness in a group of 27 men and women under age 60 who sustained their first MI. Based upon semi-structured interviews prior to and following hospital discharge, Cowie described how each individual engaged in a process of retrospective reconstruction of the events leading up to the heart attack enabling the person to make sense of the onset of the MI.

Through reexamination and reevaluation of events and experiences associated with his MI, each person developed his own perspective about his MI. Cowie (1976) illustrated attempts by individuals to utilize information about their heart attacks to examine and evaluate possible causal factors in the development of the MI. The subjects engaged in the process of reconstruction of their own past experiences in such a way that their heart attacks were perceived

as the obvious outcome of their previous lifestyle. They searched for "underlying themes" in their experiences which were then used as evidence of the inevitable nature of the MI.

A limitation of Cowie's (1976) study is that the author reports his interpretation of the accounts of the individuals without providing data from which his conclusions are drawn. In addition, the specific time period in which the interviews took place is not specified.

A study by Rudy (1980) supports the finding that a person examines causal explanations in an attempt to understand his heart attack. Rudy conducted a study in which the major purpose was to elicit the explanation of causes of the heart attack by MI patients and their spouses. The patient sample consisted of 40 men and 10 women with their first MI who ranged in age from 43 to 85. The first interview took place within 48 hours of transfer from the Coronary Care Unit to the convalescent unit. Another interview took place thirty to sixty days following hospital discharge. The interviews consisted of open-ended questions related to the subjects' perceptions of the precipitating events and cause of the heart attack. A questionnaire was administered to determine the relative importance of factors perceived as contributing to the MI. At both illness phases, patient and spouse expressed multiple causal explanations. The most frequent causal explanation of the MI at both phases was tension in life

related to work or home situations. In discussion of the interview data, the author states that subjects "engaged in a perceptual interpretive process whereby a succession of causal explanations were explored and evaluated in an attempt to understand the heart attack" (Rudy, 1980, p. 355).

Observations by Bilodeau and Hackett (1971) in a study of issues raised in a group setting by convalescent MI patients support that review and reassessment of events surrounding the MI is part of the process of understanding the cause of the myocardial infarction. A random sample of ten male patients under 55 years of age who were admitted to a large eastern Coronary Care Unit with first MI were selected to be invited to participate in a series of group meetings following hospital discharge. Of the ten selected, five participated in twelve weekly group meetings led by a psychiatric nurse during their convalescence. Each meeting was analyzed to determine (a) the number of times an issue was raised, (b) the amount of time spent discussing each issue, and (c) the number of different issues introduced by group members. Thirty-four issues were identified from transcripts of the taped sessions from which seven general categories were formed. A spearman rank order correlation coefficient was applied to the total number of times each issue was discussed in the twelve meetings. The category of issues concerned with group process, such as support provided to others or comments reflecting a bond of unity, was ranked first. Second was

the category of issues concerned with current and future states of health. Ranking third was the category of issues concerned with the effects of illness upon one's life.

During the first three of twelve group meetings, the nature of the illness was a primary issue of concern. The authors describe how competition was high as group members graphically described the severity, course, and symptoms of their heart attack. There was a constant struggle to understand and accept the MI as group members alternately voiced doubt and asserted belief in the diagnosis. In addition, the authors report that there was a continued reassessment of the illness experience during the first three meetings that ranged from considering the MI to have been mild to considering it to have been potentially lethal. Additional study results will be discussed later within the literature review.

Reviewing the etiology of the MI is part of the process of making sense of the illness experience during the early phase of recovery (Idelson et al., 1974). As part of a longitudinal study of the recovery process in males who suffered their first MI, Idelson et al. (1974) interviewed a small (11) sample of men aged 41 to 59 five times over the course of a year--during hospitalization, and at one, four, eight, and twelve months after hospital discharge following the myocardial infarction. The goal of the study was to observe patterns of change in the self-concept of men who suddenly acquire the new role of heart patient, utilizing an adult socialization approach.

At the time of the first interview two and one-half weeks after hospitalization, a primary focus of the subjects was upon examination of their personal role in the etiology and onset of their myocardial infarction. The authors (Idelson et al., 1974) report that as the respondents thought aloud, they concluded that previous ways of conducting themselves had somehow contributed to their heart attacks. Additional study results and a critique of this study will be included later within this literature review.

In summary, the studies reviewed indicate that components of integration of the experience of the MI include review of the events surrounding the MI, examination of the causal explanation for the MI, and review of the etiology of the MI. While the focus of empirical investigation was not upon the process of integration, observation within Rudy's (1980) study of causal explanation for the MI and Bilodeau and Hackett's (1971) study of issues of concern to convalescent MI patients support the findings of Cowie (1976). Additional research needs to be conducted to identify components of the process of integration of the experience of the MI.

Consequences of the MI Upon Life and Implications for the Future

The successful adjustment achieved by most MI patients in the hospital seems to be shaken when the individual faces the stresses of life following hospital discharge (Bilodeau and Hackett, 1971; Wishnie, Hackett, and Cassem, 1971).

Patients seldom foresee the problems that convalescence will present, and whatever reservations they have about leaving the protective environment of the hospital are dwarfed by the anticipated joy of homecoming (Wishnie et al., 1971).

In his review of the literature of psychosocial aspects of recovery from coronary heart disease, Doehrman (1977) states that studies examining the psychological reactions of myocardial infarction patients during the post-hospital period provide evidence of considerable distress, such as anxiety and depression, which persists for months and sometimes years. Very few studies have examined why anxiety and depression exist following hospital discharge or the nature of the problems as they are experienced by the post-MI patient during convalescence (Doehrman, 1977). Research studies will be reviewed which examine the impact of a myocardial infarction upon the individual following hospital discharge and the underlying sources of distress within the first three months following hospital discharge.

Anxiety and depression. Wynn (1967) was among the first to study the sources of emotional distress following a myocardial infarction. His sample included 400 males under 65 years of age who had been followed for a minimum of two years through an Australian work assessment center. Interviews took place at the individual's home where the person's responses to heart disease, his understanding, and his fears about heart disease were explored. In addition

to assessing the current status of the patient, a judgement was made as to whether the nature of the patient's suffering was warranted by the illness and disability or the unavoidable social and economic factors.

The study (Wynn, 1967) emphasized the pervasiveness of anxiety following long-term recovery from a heart attack. Forty-one percent of the men were categorized as mildly anxious, that is, their anxiety level was not beyond that expected because of the nature of the illness. In 55% of the individuals, anxiety was assessed as moderate to severe, and much of this anxiety was considered by the investigators to be excessive, avoidable, and contributing significantly to disability. The major manifestations of anxiety were exhibited as unrecognized depression and the adoption of an unduly careful pattern of life, including premature retirement in the false belief that any work would be harmful. The sources of distress included misconceptions and fears induced by ambiguous instruction and lack of explanation, fear of a gloomy prognosis based upon interpretation of statements by care-givers, loss of self-esteem and insecurity, financial hardship due to lack of return to employment, fear of work due to the belief that physical activity would lead to further heart damage, inadequate assistance in planning for convalescence and rehabilitation, and failure to receive emotional support from the spouse and family due to their anxiety and fear.

The high level of distress experienced during convalescence from an MI was substantiated in a study of psychosocial adaptation at two months following an MI (Mayou, Williamson, and Foster, 1978). The impact of an MI was studied through measurement of outcomes of men suffering first myocardial infarction. Ninety-four men less than 70 years of age were interviewed in the hospital and at home two months after the MI. Mental distress was assessed through a semi-structured interview schedule and ratings of the taped interview. Inter-rater agreement of mental status was .88. At two months after the MI, 30% were rated as having moderate or severe distress, 23% were rated as having mild mental distress, and 47% were rated as having little or no distress. One-quarter of the spouses described the patients as being more distressed and 4% less distressed than the patient's own account. Patients were asked about their subjective view of outcome so far. Twenty-eight percent were dissatisfied and frustrated, 47% were satisfied with their progress so far, 21% were in some ways better than before their MI, and 4% reported they never felt better in their life. Distressed mental state was positively associated with subjective view of outcome and not associated with severity of the infarct, severity of present symptoms, or time of return to work. The authors postulate that possible reasons for the substantial number of patients who were distressed include low understanding of medical advice and cautious expectations

of the patients and their families. They suggest further research to specify the basis for mental distress. A limitation of this study is that mental distress is not conceptually or operationally defined.

In a study of psychosocial adaptation following an MI (Stern, Pascale, and McLoone, 1975), 63 men and women who sustained an MI were interviewed during their hospitalization and at six weeks, three months, six months and one year following a myocardial infarction. The interview and rating scales were designed to identify the presence of anxiety and depression, to describe the level of adaptation along numerous variables, to develop a profile for those designated good and poor responders, and to determine psychosocial outcome based upon return to work and sexual functioning.

Within the study by Stern et al. (1975), at six weeks post-MI (approximately four weeks after hospital discharge), 30% of the sample was anxious and 15.4% were depressed. In successive follow-up periods, the number of patients with depression fluctuated between 10% and 13%. The percentage with anxiety declined at three months to 17.6% and subsequently varied between 17% and 22%. Social class was the sole socioeconomic factor to correlate with anxiety and depression.

The patients who were depressed at the six week follow-up visit (13%) were classified as the poor responders. Those individuals who denied being tense or apprehensive at

any time during the hospital period and measured at the high end of the Zung Depression scale (25%) were classifed as the "denier" group. Those who were classified as poor responders were distinguished from the "denier" group by the persistence of their psychological distress throughout the year of study and by their lower rate of vocational and sexual functioning.

Empirical research has documented that anxiety and depression are exhibited by certain subgroups of the population of MI patients during early convalescence. Empirical studies of the sources of psychological distress and isues of concern during the first three months following an MI will be reviewed.

Sources of distress. The sources of psychological distress following a myocardial infarction have been attributed through empirical investigation to the impact of an MI upon cardiovascular functioning (Bilodeau and Hackett, 1971; Mayou et al., 1978; McCorkle and Quint-Benoliel, 1983; Idelson, Croog, and Levine, 1974; Wishnie, Hackett, and Cassem, 1971), the impact of an MI upon roles within the family (Bilodeau and Hackett, 1981; Croog, 1977; Idelson et al., 1974; Speedling, 1982; Wishnie et al., 1971), the impact of an MI upon social interaction (Ott et al., 1983), impact of an MI upon the financial situation (Bilodeau and Hackett, 1971; Croog, 1977; McCorkle and Quint-Benoliel, 1983); and modification of lifestyle habits (Bilodeau and Hackett, 1971; Croog, 1977; Mayou et al., 1977).

Impact of an MI upon heart function as a source of distress. A major source of distress to the individual during early convalescence following a myocardial infarction is the alteration in cardiovascular functioning and the impact of the MI upon one's physical health (Bilodeau and Hackett, 1971; McCorkle and Quint-Benoliel, 1983; Mayou et al., 1977; Idelson et al., 1974; Wishnie et al., 1971).

In an effort to identify sources of emotional distress during convalescence following an MI, Wishnie, Hackett, and Cassem (1971) studied 24 men and women after their first myocardial infarction. Eighteen males with a median age of 54.9 and 6 females with a median age of 58.4 were interviewed three to nine months after hospital discharge. In this retrospective study, 21 out of 24 subjects rated themselves as anxious, depressed, or both during their first month at home after hospitalization.

Although each of the 24 patients were eager to go home, eleven felt totally unprepared for the physical limitations experienced during the first month after returning home. Weakness, reported by twenty individuals, was the single most distressing symptom. Ten interpreted weakness as an indication of cardiac decline. Unaware of muscle atrophy and the systemic effects of immobilization, post-coronary patients ascribed physical weakness to a damaged heart and worried about their capabilities to return to normal levels of activity.

Thoughts related to heart function contributed to sleep disturbance. Of the fifteen patients who had disturbed sleep during the first months after hospital discharge, eleven stated that they thought about their hearts before going to sleep and seven admitted they feared the possibility of death during sleep. Nocturnal preoccupation with heart function accompanied by some degree of insomnia persisted for several months (number not specified) after the MI in eleven individuals.

The presence of cardiac symptoms was related to mental distress in a study of outcomes two months following a myocardial infarction (Mayou et al., 1976). Sixty-five percent of the sample reported cardiac symptoms occurring occasionally or to a moderate degree. The degree to which physical symptoms were experienced correlated closely with mental distress and the current level of physical activity.

A study was conducted by McCorkle and Quint-Benoliel (1983) with the purpose of describing the level of symptom distress, current concerns, and mood disturbance in life-threatening diseases including a heart attack. Utilizing McCorkle and Young's Symptom Distress Scale at one and two months following a heart attack, fatigue was identified as the most distressing symptom. Other troublesome symptoms identified by heart attack patients included change in sleeping pattern, pain, and change in concentration. The alpha reliability of the Symptom Distress Scale was .82 for 53 patients with chronic illness. Validity for use with

cancer patients was established through use with patients receiving chemotherapy and radiation therapy. Validity has not been established for heart attack patients.

The issue of physical health as a source of concern following an MI was identified within the study of issues that convalescant male MI patients raise in a group setting (Bilodeau and Hackett, 1971). Current state of physical health was ranked eighth out of 34 issues with 5% of the group's time spent discussing this issue. All group members expressed increased awareness of their body and their heart. Group members repeatedly commented on the presence or absence of symptoms and immediately associated symptoms present with a recurrent heart attack. This study took place during three months of convalescence, but it is unclear how much time had elapsed since hospital discharge and at what point in their convalescence specific issues were addressed.

In the study of the changes in self-concept following an MI (Idelson et al., 1974), study subjects report that, due to the ambiguous and unpredictable nature of coronary artery disease, the heart was perceived as a permanent risk. At four months following hospital discharge, many men stated that constant awareness of self was required due to the lack of evidence of cardiac healing. One way they coped with the lack of visual evidence of healing was by trying to make their heart function more concrete and visible. They achieved increased visibility of cardiac

function by relying upon cardiac symptoms and identifying warning signals as guides to behavior. The authors contend that the invisibility of the healing heart raised obstacles in adjustment as a recovering patient.

Alteration of roles within the family as a source of distress. The introduction of serious illness into a family has pervasive effects upon the roles of family members. The withdrawal through illness from normal role behavior necessitates a shift on the part of other role players in the family to accommodate the change in function (Speedling, 1982). Realignment and readjustments in roles may be accompanied by interpersonal conflict as new arrangements are negotiated by family members (Croog, 1977; Idelson et al., 1974; Speedling, 1982). Research findings support that role changes within the family are a source of concern to the individual following an MI (Croog, 1977; Bilodeau and Hackett, 1974; Idelson et al., 1974). Research findings will be discussed regarding responses by men who have had an MI to changes in their marital and parenting role.

One of the tasks during recovery following an MI is adjustment of one's usual roles to fit the changed self (Croog, 1977; Idelson et al., 1977; Wishnie et al., 1971). Within the case study of changes in the self-concept (Idelson et al., 1974), during the first interview while hospitalized, the men envisioned altering their relationships and responsibilities in accordance with their

perceived need for lifestyle changes while recognizing that this may be problematic. At one month following hospital discharge, the recovering patient image was constantly reinforced by the family members through behavior toward and expectations for the men. Most men complained to their families about their protective behavior but most saw themselves as resigned to complying with what they perceived as explicitly prescribed behavior. At four months following the MI, the men report that anticipated problems about roles were now real and were difficult to deal with. Having to handle conflicting role expectations by family members contributed to their problems in moving out of the sick role and illness-centered behavior toward the role of a healthy person and health-centered behavior. In their analysis of the process of socialization as a heart patient, Idelson et al. (1974) contend that men experience difficulty in responding to change in role expectations within the family while trying to comply with an ill-defined role of a heart patient. They conclude that one of the tasks that must be accomplished during the first months following a myocardial infarction is resolution of conflicting role requirements through adjusting one's usual roles to fit the changed self.

The impact of an MI upon relationships with others is a priority concern of individuals following an MI (McCorkle and Quint-Benoliel, 1983). In the study of symptom distress and current concerns of MI and cancer patients,

dependency was the primary concern of MI patients at one and two months following the MI as measured by the Inventory of Current Concerns. The inventory is a 72 item self-administered scale that measures potential sources of distress which are sometimes sources of concern for people with serious illness. Data on the reliability have not been reported. The mean percentage of possible dependency concerns at one month following diagnosis of an MI was 30. At two months following diagnosis, the mean of possible dependency concerns for MI patients was 23.

The alteration of family roles as a source of distress is supported by the results of studies of MI patients during convalescence (Bilodeau and Hackett, 1971; Croog, 1977; Wishnie et al., 1971; Wynn, 1967). In a study of emotional distress during convalescence following an MI (Wishnie et al., 1977), a steady eroding conflict over illness issues was noted in all families. Families demonstrated significant anxiety about the patient's recuperation and their roles in promoting or retarding the process. Arguments arose between patients and their families regarding discrepancies in understanding the illness regimen. The families attempted to shield the patient from all unpleasant information and physical exertion. The wives tended to overprotect their husbands in an aggressive manner, and it appeared to the authors to have a deleterious effect on the marriage. The patients expressed resentment and humiliation about these attitudes.

A limitation in the study is that the authors do not report data to support their findings regarding change in family roles.

In a longitudinal study of middle-aged men who sustained their first myocardial infarction (Croog, 1977), the study purpose was to describe the impact of an MI upon the lives of previously healthy men and examine variables associated with differing patterns of outcome at one year post MI. The study sample was obtained from 26 Eastern hospitals over a two year period and consisted of Caucasian males between the ages of 30 and 60 with their first MI. Semi-structured interviews were held before hospital discharge, at 1 1/2 months post MI, and at one year following the MI.

Croog (1977) found that, at 1 1/2 months following the MI, husbands and wives were interacting in changed marital roles compared to role function prior to the MI. At 1 1/2 months following an MI, 90% of the men indicated that their wives were assuming a new guidance role to keep them from doing damage to themselves through overexertion and strain, and there is a decrease in the performance of household maintenance tasks by many men (data not reported). At one year following the MI, 73% of the married men reported a decrease in the performance of household maintenance tasks. Correspondingly, there is an increase in the wife's responsibility for family maintenance and household activities for 27.4% of the sample at one month and 19.3% of the

sample at one year. Croog suggests that the initial fact of the illness sets in motion role reformulation which continues thoughout the year following hospitalization for an MI regardless of the patient health level. The data do not directly indicate patient response to role changes.

In the study of issues raised in a group setting by men following an MI (Bilodeau and Hackett, 1971), issues relating to family and friends ranked ninth out of 34 and consumed 4.3% of group discussion time. The authors state that group members vividly expressed being closely supervised by their families and reported aggravation, frustration, humiliation, and anger in reaction to this surveillance.

In a study of adaptation to an MI from a developmental perspective (Meyer, 1983), during middle adulthood, couples were willing to shift roles and responsibilities following the MI, and the MI often acted to justify shifts that had begun to emerge prior to the illness. This study, utilizing Levinson's (1979) adult developmental theory, was designed to explore the interactional effect between adult developmental stage and emotional reactions following a myocardial infarction. Meyer's (1983) research study utilized a qualitative design to explore themes, experiences, and reactions common to the study participants. Thirty patients between the ages of 27 and 85, 50% of whom were between the age of 43 and 55, were selected for study participation. One-third were inter-

viewed during hospitalization, one-third were interviewed during the first three months following hospitalization, and one-third were interviewed between three months and two years post-hospitalization. Responses from those in middle adulthood were contrasted with those in early and late adulthood. For the individuals who had sustained an MI during early adulthood, there was a great strain on young marriages resulting from role reversal. A regressive experience was undergone by the family as a whole because the MI victims and their spouses felt increased dependence on their parents. Individuals who sustained an MI during late adulthood suffered concern about becoming dependent on their adult children, but the illness placed negligible strain on the marital dyad.

A serious limitation of the study by Meyer (1983) is that conceptual and operational definitions of the concepts under study were not addressed. The small sample size limits the ability to generalize the study results, and interviewing the study respondents during three separate time periods limits the generalizability even further. Without identification of procedures for interpretation of interview responses, it is difficult to have confidence in the author's study conclusions.

Empirical studies document a decrease in the quality and quantity of sexual activity during the period of six months to one year following an MI (Block, 1975; Friedman and Hellerstein, 1970; Green, 1975; Griffith, 1973;

Kavanagh, 1977). Responses to the reduction in quality or quantity of sexual activity were not examined. There were no studies found that examined responses to reduction of sexual activity of patients with a myocardial infarction within three months following hospital discharge.

Very few researchers have examined the effect of an MI upon parental roles following this illness. Within Croog's (1977) study, 18% of the sample with children noted that their children had been affected by the MI primarily through increased performance of household task and increased protectiveness and concern. Two-thirds of the sample with children indicated that their children had not been affected by the illness.

Observations within a group therapy setting (Rahe, Tuffli, Suchor, and Arthur, 1973) suggest that the illness of an MI is a stressor upon the father-child relationship. To assess the utility of group therapy as an adjunct to medical out-patient management of patients following an MI, half of the male subjects under 60 years of age were randomly assigned to attend a series of six every other week, 1 1/2 hour, group therapy sessions during the first six months following hospital discharge. The remaining half, which received no intervention other than a six-week follow-up medical visit, comprised the control group. The long-range goal was to evaluate comparisons between group therapy and control subjects in terms of job rehabilitation, prevalence of angina, rehospitalization, and

mortality rates. An initial report of the content of group therapy sessions was provided. Though the content of the group meetings was not the subject of empirical investigation, the report contained one of the few reports of the impact of an MI upon father-children relationships. Convalescence provided most of the male patients with their first experience of living at home all day and involved them, often unwillingly, with their wives and children in the management of the home. Children's disciplinary problems, in many cases ignored by the patient prior to his MI, now rose to the patients' attention. The authors report that disciplining the children posed a problem for most group members. Most of the conflicts with children were resolved by four weeks following hospital discharge.

Alteration in relationships with friends as a source of distress. The results of a study using the Sickness Impact Profile (Ott et al, 1983) suggest that negative consequences of illness upon interaction with family and friends can be reduced through a teaching-counseling program aimed at risk factor modification, a structured gradual activity progression program, and individualized counseling. The purpose of the study was to determine the effect of a teaching and counseling program upon individuals during the early phase of cardiac rehabilitation. The Sickness Impact Profile, a questionnaire that measures the impact of illness upon the performance of daily activities, was administered to 258 individuals who had sustained an MI. The study subjects, with a mean age

of 56, were randomly assigned to one of three groups: a control group; a group provided with a structured, monitored activity progression program; and a group provided with a teaching-counseling program in addition to the activity progression program.

The Sickness Impact Profile was administered prior to hospital discharge, with instructions to answer questions pertaining to the week before admission, at three months following hospital discharge and at a six-month follow-up visit. Change scores were calculated for the entire questionnaire, for each of the categories, and on two dimensions--physical and psychosocial. Change scores were analyzed to assess improvement in health status. Actual sickness impact scores were not reported or analyzed, therefore, it is difficult to describe impact of illness upon performance of daily activities.

Within the group receiving exercise, teaching, and counseling, 57% exhibited improvement at three months following hospitalization in categories within the psychosocial dimension, compared to 38% of a group participating in exercise alone, and 40% of the control group. Scores within the category of social interaction, which reflects impact of illness upon interaction with family and friends, improved at three months for 41% of the exercise and teaching/counseling group, compared with improvement within 32% of the exercise group, and 23% of the control group. At six months following the MI, the

differences increased to 47%, 33%, and 23% respectively. The authors conclude that the improvement in sickness impact scores in the psychosocial dimension can be attributed to the teaching and counseling received throughout hospitalization and during the post-hospital period. They conclude that the improvement in the social interaction score, which continues at six months post illness, reflects the value of teaching and counseling, with exercise, in reducing negative social interaction that accompanies recovery from a myocardial infarction. Ott et al. (1983) conclude that a teaching/counseling program combined with a structured exercise program results in benefits that reduced the negative impact of illness during early cardiac rehabilitation. In addition, they conclude that the Sickness Impact Profile is a useful tool for evaluation of impact of rehabilitative measures.

The limitations of the study include the time course of the questionnaire administration. An in-hospital baseline score may reflect impairment of function immediately prior to or during hospitalization rather than the actual level of function prior to illness. In addition, administration of the measurement tool during the first week home after hospitalization would provide more data about the highest level of impairment, resulting in additional data about the impact of illness so that finer comparative distinctions can be made about patient improvement.

Negative impact upon financial situation as a source of distress One of the principal areas upon which an MI has negative effects is the economic circumstances of a patient and his family. Empirical data support that the issue of one's financial situation is a major source of concern following an MI (Bilodeau and Hackett, 1971; Croog, 1977; McCorkle and Quint-Benoliel, 1983).

Within Croog's (1977) longitudinal study of social and psychological factors involved in the long-term recovery process following an MI, the question "Thinking back over the past year, what has been your biggest problem?" was posed at one year after the MI to ascertain the relative importance of the consequences of illness. The most frequently mentioned item was financial problems (23%) followed by work problems (22%). Due to the nature of work problems identified, Croog suggests that these two items overlap, and they should both be regarded as economic problems. Within Croog's (1977) study, the effects of illness upon the financial situation varied among subgoups reflecting social status, income, and resources. There was an inverse association between occupational level and citation of financial difficulties. In addition, the financial effects of illness varied over time.

At one month following hospital discharge (Croog, 1977), an assessment was made of the concerns that the men had about the impact of the MI. Concerns that their illness would have some effects on the nature of work

performed, leading to reduction in salary and earnings were expressed by 46.3%. Twenty-three percent were worried about illness effects on promotion or long term advancement, leading to lack of income growth. A slightly higher percentage of unskilled and semi-skilled workers were concerned than professionals and executives.

The issue of finances as a source of concern following an MI is supported by the results of Bilodeau and Hackett's (1971) study of issues raised in a group setting. Finances was ranked seventh out of 34 specific issues with 4.2% of group discussion time spent on financial issues. The nature of the concerns related to finances was not discussed within the report of the study.

In contrast to Croog (1977) and Bilodeau and Hackett's (1971) findings of finances to be a source of concern, Mayou et al (1978) reported that the impact of an MI upon financial situation at two months post-MI was judged by the study subjects to be slight, largely because 40% of the patients expected no change in their jobs while 39% expected to continue their previous work with minor modifications not affecting income.

In McCorkle and Quint-Benoliel's(1983) study of symptom distress, current concerns and mood distress of cancer and myocardial infarction patients at one and two months following diagnosis, the MI patients prioritized their concerns as dependency, work, and existential at both occasions. The mean percentage of possible concerns about

finances was reported to be 18 % at one month post-diagnosis, and 13% at two months following diagnosis.

Modification of lifestyle habits as a source of distress. The tasks of socialization as a heart patient include acknowledging the need to make lifestyle changes and working on incorporating the needed changes in lifestyle (Bilodeau and Hackett, 1971; Idelson et al., 1974; Mayou et al., 1978; Wishnie et al., 1971). In the study of changes in self concept following an MI (Idelson et al., 1974), during hospitalization the patients envisioned making major changes within their lifestyle as a way to recover successfully and prevent recurrence of an MI. At one month following hospital discharge, the illness of coronary artery disease was described by the men as requiring modifications in them and their way of life. Respondents were concerned about the effects of lifestyle change. The authors report that the men exhibited a "recovering patient" self-concept and perceived themselves to be in a clearly defined and restricted situation as they began to modify their daily habits in conjunction with physician advice and family members' expectations.

In discussing the basis for depression in the post-MI patient, Wishnie, Hackett, and Cassem (1971) identified one of the stresses acting upon the person convalescing from an MI as the deprivations of reduced and modified eating, activity, and smoking. The authors commment that patients seldom foresee the problems that convalescence and the

rigors of rehabilitation will present. This leads to frustration as they attempt to carry out the therapeutic regimen, and failure to succeed in altering ingrained habits of a lifetime. Seven out of nine who were determined to lose weight failed to do so. Of the fourteen patients who resolved to stop smoking, nine failed to carry out their resolutions. Five out of six who vowed to stop drinking did not succeed in their attempt.

A primary issue of concern during convalescence is smoking. Discussion of issues related to smoking were ranked first out of 34 issues in Bilodeau and Hackett's (1971) study of issues raised in a group setting during recovery from an MI. Nine percent of the group's time was spent discussing smoking. All members viewed smoking as inequivocably leading to a second heart attack, and will-power was discussed as an important factor in stopping smoking.

The issue of nutrition and eating ranked third out of 34 and occupied 7.5% of the group's discussion time (Bilodeau and Hackett, 1971). The authors state that members discussed with considerable feeling the problems involved in adhering to diets. Although all members recognized the importance of weight control, 80% found the task difficult. The authors conclude that because so many pleasures are stripped from the patient recovering from an MI, issues of modification of lifestyle habits are a major source of difficulty.

In the study of outcomes two months following an MI (Mayou et al., 1978), patients were questioned about their thoughts as to the implications of their illness for their future lives. The most common ideas were to stop or reduce smoking (data not reported) and to eat less (data not reported). At two months following the MI, 90% were less active than before their MI, although their pre-morbid level of activity had in many cases not been very high. In line with this data, 60% thought that they would reduce their leisure activity as a result of the MI, while 10% expected to increase it. Twenty percent intended to reduce stress in their lives while 67% thought this unnecessary or beyond their control. Of individuals considering the extent to which they would modify their lifestyle habits, 43% planned to comply with the recommendations for a therapeutic regimen meticulously, 50% planned to comply on the whole, 7% planned to comply occasionally, and 0% planned to ignore the regimen.

Summary of consequences and implications of an MI as sources of distress. Empirical studies were reviewed to describe the level and source of distress during the first three months following hospital discharge for individuals with an MI. Research was reviewed that identified the nature of the individuals' concerns. Issues of concern during the post-hospital period following an MI include awareness of change in body and myocardial functioning, recognition of alterations within family and social roles

and relationships, negative impact of the MI upon the financial situation. The potential for comparison and generalization of most of the studies cited is hampered by small sample size and measurement of different concepts within the studies.

Research evidence supports that during the process of integration of the experience of the MI, the individual reviews and reevaluates the events and experiences associated with his illness in the attempt to understand his illness. Results of research studies support that integration of the experience includes examination of the causal explanation for the MI and exploration of personal role in the etiology and onset of the MI.

The impact of the MI upon the heart's functioning is a source of distress to the individual which is associated with an enhanced awareness of one's body and thoughts about cardiac function. Concern with heart function is manifested in anxiety and sleep disturbance.

The onset of an MI has pervasive and ongoing effects upon family roles and relationships. Alteration of roles within the family has been described as a source of distress to the individual following an MI. The nature of role changes following an MI have not been clearly delineated. The MI patient's response to role changes following an MI has not been empirically investigated.

There is a lack of research evidence of changes within relationships with friends following an MI. There appears

to be a change in the patterns of interaction with friends following an MI, but the nature of changes within relationships with friends has not been empirically investigated.

The effects of illness upon the financial situation are associated with socioeconomic status and occupation. Research results are contradictory about the degree of concern about the financial situation following an MI. Concerns about financial status identified through research include effects of an MI upon future job and income status.

As part of convalescence following an MI, individuals plan to modify smoking habits, eating habits, exercise habits, and reduce stress as part of therapeutic regimen. Modification of smoking habits and eating habits are primary sources of distress as documented through empirical investigation.

Reappraisal of Life Situation and Self

There is extensive anecdotal and clinical description within the literature documenting appraisal of life situation (Croog, 1983; Delaney-Naumoff, 1980; Rheinscheld, 1980) and self (Croog, 1983; Delaney-Naumoff, 1980; Lefkowitz, 1980; Parnes, 1983; Rheinscheld, 1980; Smith, 1971) following a myocardial infarction. There is, however, a lack of empirical investigation of a process of reappraisal during early convalescence following an MI. There are several reports of the outcome of reappraisal of aspects of one's life situation following an MI. Studies of

long term recovery following an MI (Mayou et al., 1978; Meddin and Brelje, 1983; Rahe et al., 1973; Stern et al.) which identify changes in the marital relationship support the conclusion that reappraisal of life situation and self have taken place following an MI.

Outcomes of reappraisal. In a small scale study (Meddin and Brelje, 1983), five sets of husbands and wives were interviewed two to ten years following the husband's MI sustained during the mid-forties to late-fifties. The goal of the study was to describe how social workers might assist heart attack patients and their wives during the recovery process. Results were consistent with studies of emotional responses during early convalescence following an MI. An unanticipated finding was that two couples described positive outcomes from the experience of the MI. In both cases, the husband's heart attack forced each person to put day-to-day matters aside and take stock of their spouses. The threat of sudden loss of a spouse shook their complacency about the relationship and caused them to reevaluate the bond that they now realized could be abruptly and permanently severed. The authors recognize the limitations of the study which include: small sample, lack of standardized interview schedule, and wide range of time periods following the MI. The findings within this study suggest an area for further empirical investigation.

Within a study of psychosocial adjustment following an MI (Mayou et al., 1978), at one year post-MI, the number of

couples, who reported an improvement in their marriages was striking (24.1%). The authors report that for these couples the shock of the heart attack prompted a lasting reevaluation of the marriage despite the anxieties and irritations of the year. Couples stopped taking each other for granted and several made deliberate attempts to show more tolerance and consideration to each other. Relationships within the larger family circle tended to follow the same pattern as changes within the marriage. Some men felt the illness had drawn the family together.

Within a study of life adjustment (Stern, 1977), at one year post-MI, a small group of patients (10.4%) increased their frequency and quality of sexual functioning. The authors report that most of these patients thought that having an infarct influenced them and their spouses to think about the importance of each other and to increase communication. Increased frequency and quality of sexual activity was seen as a by-product of the valuing process.

The limitation of the studies cited (Meddin and Breije, 1983; Mayou et al., 1978; Stern et al., 1977) is that the positive outcomes described were unexpected findings, and the factors associated with positive outcomes were the subjective impressions of the investigators. Empirical research is required to systematically explore the growth process and growth outcomes following a myocardial infarction.

In the study of adaptation to MI from a developmental perspective (Meyer, 1983), middle adult males reevaluated their lives following an MI, and a major life change was common. Those in early adulthood experienced the MI as a crisis, reevaluated their lives, but made essentially no major life changes. Late adulthood MI victims did not reevaluate their lives and readily accepted their illness as part of their aging process.

Threats to sense of personal worth, sense of predictability of body, sense of control, and concerns about death. Several studies of individuals during recovery from an MI indicate that following an MI a significant percent sustain a threat to the sense of personal worth (Idelson et al., 1974; Rosen and Bibring, 1966; Stern et al., 1978), a threat to the sense of predictability of the body (Idelson et al., 1974; Krantz, 1980), the perception of loss of control (Hackett and Cassem, 1971; Idelson et al., 1974; Krantz, 1980; Meyer, 1983; Rosen and Bibring, 1966; Stern et al., 1978), and concerns about death (Bilodeau and Hackett, 1971; Meyer, 1983; Wishnie et al., 1971).

Idelson's (1974) longitudinal case analysis of eleven men who sustained their first MI was an exploratory study with the aim of identification of emergent patterns and delineation of stages in the recovery process of male heart attack patients from an adult socializaton perspective. The authors contend that response and adjustment to an MI

involve major changes in the self-concept. Several themes related to revision of the self-concept emerged at one month following hospital discharge. At this point in their recovery, the individuals had begun their movement from the sick role and exhibited a concept of themselves as "recovering patients." The men expressed doubt and uncertainty about their future capabilities and whether they would recover their former capacities. The time period of four months after hospital discharge was characterized as a period of ambiguity and conflict. The men conveyed the concern that some aspects of their identity were unclear to them and they were distressed regarding their "foggy" self-image. They appeared to be struggling to come to terms with this discrepancy between their former selves and what was current reality.

The description of doubt about return to former capacities was substantiated within a study of long - term psychosocial adjustment following an MI (Stern, McLoone, and Pascale, 1978). A major goal of the study was to develop a profile of patients with good and poor short-term outcomes and correlate good and poor short-term outcomes with long-term measures. Two groups of patients were so defined. Those who were depressed at the six week follow-up interview, (15.4%), as measured by the Zung Depression Scale were classified as poor responders. The patients who denied being apprehensive or depressed throughout their hospital stay and measured at the high end of the Zung

Depression Scale in the six week followup interview were classified as good responders. Each group was not significantly distinguishable from the other by severity of infarct. The poor responders were distinguished from the good responder group by the persistence of their psychological distress thoughout the one year of study and their lower level of vocational and sexual functioning. The subjects in the poor responder group reported feeling damaged and less worthwhile in their own and other's eyes. They perceived themselves as reduced in stature and seriously limited.

Krantz (1980), in a review of the literature of psychological responses during recovery from a myocardial infarction, analyzed human and animal research that suggests that recovery outcomes may depend upon patient interpretation of illness and success of coping mechanisms. He proposed a model of response to heart attack based upon factors which mediated reaction to stress: predictability and perceived control. Predictability is defined within the model as the ability to anticipate a particular stimulus. Perceived control is defined as the felt ability to escape, avoid, or modify a threatening stimulus.

Krantz' model (1980) postulates that the illness of a heart attack induces feelings of helplessness and loss of control. The onset of an MI constitutes an unpredictable and uncontrollable and, hence, stressful event of major proportions. Patients are confronted with unpredictable

physical discomfort that may continue beyond the acute phase of illness as well as uncertainties about employment, family and lifestyle activities that represent threats to perceived control. Krantz (1980) suggests that particular aspects of illness will have a less negative impact to the extent that they are perceived to be predictable and/or controllable. Changing the ability to predict, anticipate, or understand aversive stimuli often reduces distress. In addition, changing a person's interpretation of a particular situation can also lessen appraised threat. Krantz (1980) suggests that an initial step to applying the model and conducting empirical research is to formulate specific procedures or naturally occurring dimensions that correspond to the conceptual variables of predictability and perceived control.

At one month following hospital discharge, the men within the study by Idelson et al. (1974) expressed feelings of vulnerability and felt that a recurrence of a heart attack was a distinct possibility due to the ambiguous and unpredictable nature of coronary disease. At one year following the MI, the men described themselves and their lives as normal except that they were permanently vulnerable which required a continued self-awareness. They continued to view the illness of coronary artery disease as unpredictable. The authors concluded that the men had redefined normalcy and the self to include the uncertainty and unpredictability of the coronary disease process within their role as chronic heart patients.

Two studies by Stern, McLane, and Pascale (1976, 1978) support that a sense of control distinguishes between individuals with good and poor rehabilitation outcomes. Within the study of adaptation following an MI (Stern et al., 1976), a major factor differentiating good and poor responder groups at six weeks following hospital discharge was whether or not the subjects expressed a sense of control. The respondents within the poor responder group expressed the sense of being out of control and subject to being struck down with another infarct at any time. The subjects within the good responder group expressed the belief that either the doctor, God, or themselves were in control.

To build upon their previous study that differentiated between the two groups of patients based upon their rehabilitation outcomes (Stern et al., 1976), another study (Stern, McLane and Pascale, 1978) was conducted to explore long-term rehabilitation progress within subgroups and to determine predictive variables for life adjustment post MI. Interviews were conducted with 68 patients at six weeks, six months, and one year following an MI to explore psychosocial status, return to work, family activities, and social activities. Results from this study substantiate the previous study (Stern et al., 1976). At six weeks post MI, 18.9% of the sample were anxious, and 17.3% weQe depressed. All of the patients depressed at six weeks remained depressed at six months; 70% of this group

remained depressed at one year. The depressed individuals who continued to function as poor responders throughout the year withdrew from social relationships and became preoccupied with the state of their well-being. In response to a semi-structured interview schedule, the depressed patients reported that physical symptoms caused them to feel out of control. This differentiated the poor responders from the nondepressed who saw their physical problems as being temporary in nature and likely to subside in a reasonable amount of time. The good responders expressed confidence that they could avoid another MI through controlling their identified risk factors. In contrast to the previous study, the good responders were not significantly differentiated at one year from the general nondepressed patient population with good outcomes. The authors conclude that patients with poor rehabilitation outcomes can be identified early in the post-hospital period.

Rosen and Bibring (1966) suggest that uncertainty is a hallmark of a myocardial infarction. Their study was conducted to determine if there are age-related or socioeconomic differences in psychological reponses during the acute phase of illness in a group of males with a heart attack. A sample of 50 employed male patients under 70 years of age was selected, 29 of whom were white collar and 21 who were blue-collar workers. Occupational status was the sole indicator of social class. A subgroup of 20

patients were selected for intensive longitudinal study through hospital and post-hospital interviews, and 30 were studied indirectly during their hospitalization utilizing semi-structured interviews with nursing personnel. Depression was significantly higher in the 50-59 year old age group compared to those aged 60 and over and those under age 39. The authors postulated that because the heart attack accentuates the developmental issues of achievement and autonomy with which a man in his fifties is actively struggling, he is vulnerable to the psychological impact of an MI upon his self-esteem, rendering him depressed.

How the patient subjectively coped with uncertainty was a major factor for investigation of the subsample (Rosen and Bibring, 1966). Variations in socioeconomic background appeared in reponse to questions about the respondents' theories of causation in heart disease, factors responsible for the MI, what they perceived could be done to prevent subsequent episodes, and whether this was possible for them as individuals. A central concern of white-collar workers was that the future course of the disease might be beyond their control. These individuals identified the risk of another MI and the uncertainties of coronary artery disease development as a threat to their sense of control. The blue collar workers tended to give concrete and definitive theories of causation and prevention. Consistently, they implicated one or two physical factors which they did not seem eager to question and

expressed confidence that they could avoid another heart attack. The authors concluded that the MI was not a threat to the blue-collar workers' sense of control due to their acceptance of the perceived control of outside authorities.

Hackett and Cassem (1971) concluded that the basis for depression in the post-MI patient is the threat of invalidism and the loss of autonomy and control. Within their study of emotional distress during convalescence, 23 out of 24 subjects spontaneously complained of feeling frustrated at being inactive during the first months at home. They felt a lack of structure in their lives when unable to work and claim that they had been altogether unprepared for the sense of foundering which resulted. Hackett and Cassem describe the depression which results as the most formidable problem in cardiac convalescence and rehabilitation.

In the study of an MI from a developmental perspective (Meyer, 1983), personal sovereignty was threatened for men in early and middle adulthood. The MI facilitated a growing sense of need for personal sovereignty for the middle adult male. Early adult males (below age 40) had great difficulty in increasing their personal soveriegnty, feeling they had too many responsibilities toward others to put themselves first. For the late adult males (above age 60), there was no impact on their personal sovereignty because many had already begun to live more for themselves before their illness. As described earlier, a limitation

of the study by Meyer (1983) is that the concepts under study were not conceptually or operationally defined, therefore, it is unclear the exact definition of personal sovereignty.

Results of research studies support the conclusion that concerns about death are present during convalescence (Bilodeau and Hackett, 1971; Croog, 1977; Meyer, 1983; Wishnie, Hackett, and Cassem; 1971; Wynn, 1968). In Bilodeau and Hackett's (1971) study of issues raised in a group setting following an MI, four out of five stated that the thought of death came to mind frequently, and one of the men found his sleep affected by these thoughts. The issue of death was ranked 12th and occupied 3.3% of the group's discussion time. Wishnie et al., (1971) reported that nearly all 24 patients within this study of emotional distress following an MI were concerned about sudden death. The authors report that some coped bravely with their fear, but many are demoralized by it. In Meyer's (1983) study of adaptation to MI from a developmental perspective, there was tremendous concern and panic regarding personal mortality for the middle adult male. However, death was viewed as a distant companion for early adult MI victims. Late adulthood males had come to the realization that the end of life was near and expressed a feeling of acceptance.

Summary of reappraisal of life situation and self. The potential for developing generalizations about the psycho-social aspects of recovery from an MI is limited by the

nature of the research reported within the literature. The scientific literature reflects limited conceptualization of problems experienced during recovery from an MI related to reappraisal of life situation and self. Study results of investigations of psychosocial factors related to recovery and rehabilitation have yielded descriptive information related to the reappraisal process that provide the basis for generation of hypotheses and empirical investigation. However, factors involved in reappraisal of life situation and self must be more precisely conceptually and operationally defined prior to empirical investigation.

Limited empirical attention has been given to re-evaluation of life situation following an MI. Meyer's (1983) study of responses following an MI from a developmental perspective identifies reevaluation of life situation as a response to a myocrdial infarction by the middle adult male. This study, however, has serious conceptual and methodological limitations. Improvement in the marital relationship as a result of reappraisal has been documented by a descriptive exploratory study (Meddin and Brelje, 1983) several years following an MI, and as an unexpected finding in studies of adaptation to an MI at one year post-myocardial infarction (Mayou et al., 1976; Stern et al., 1977).

Revision of the self-concept following an MI has been explored through a case study approach (Idelson et al., 1974). Following an MI the individual's sense of personal

worth is threatened within a subgroup identified as poor responders (Stern et al., 1978). A model of predictability and control (Krantz, 1980) has been identified. Several studies have been cited which support that the individual's sense of control and predictability are threatened during early convalescence as described in Krantz' (1980) model (Hackett and Cassem, 1971; Idelson et al., 1974; Meyer, 1983; Rosen and Bibring, 1966; Stern et al., 1976, 1978). Descriptive research supports that concerns about death are present during early convalescence (Bilodeau and Hackett, 1971; Croog, 1977; Meyer, 1983; Wishnie et al., 1971; Wynn, 1968). The nature of concerns about death were not specified.

Middle Adulthood-Introspection

Overview

Introspection has been identified by this investigator as a characteristic that differentiates the developmental period of middle adulthood from other adult developmental phases. Introspection has been demonstrated through empirical studies to be a characteristic of individuals during middle adulthood (Gould, 1975; Levinson et al., 1977; Neugarten, 1968a; Vaillant, 1977). Scholarly papers and empirical studies of adult development related to introspection will be reviewed within this section for the purpose of placing in context the issues that are most pertinent to the middle adult male who has sustained a myocardial infarction.

Introspection

Studies by Neugarten (1968a, 1968b, 1970) have examined the lifespan developmental process with particular attention to the developmental tasks and issues that arise during middle adulthood. Neugarten proposes that middle age is a distinct period in the life cycle that is qualitatively different from other age periods. She contends that during middle age there is a movement toward an inner world focus which is entitled interiority.

Based upon 100 indepth interviews with men and women aged 45 to 55 who were successful in their careers and civic pursuits, Neugarten (1968a) described the salient characteristics of middle adulthood. Within the individuals, there was an emphasis upon reflection, stock-taking, and conscious self-evaluation. Accompanying the inner world focus was a new realization of the finiteness of time. Life was restructured in terms of time left to live rather than time since birth.

A study of adaptation to life during adulthood (Vaillant, 1977) supports the contention that introspection is a characteristic of middle adulthood. Vaillant (1977), utilizing unstructured depth interviews and questionnaires in his longitudinal study of adult development over a thirty year period with 95 men, states that during the forties men leave the compulsive and unreflective busywork of their occupations and become "explorers of the world within" (pg. 220) He suggests that the forties are a tran-

sitional period when old value patterns are often cast aside and "ill-fitting identities, no longer faithful to their owner, must be discarded" following reassessment and reordering of one's experience (Vaillant, 1977).

The focus of a study by Levinson et al. (1977) was the normal process of individual development in early and middle adulthood. Levinson et al.(1977) states that a major developmental task of middle adulthood is to find a better balance between the needs of the self and the needs of society. This task is accomplished through introspection and a process of reappraisal.

Levinson et al. (1977) maintains that the life course evolves through a relatively orderly sequence during the adult years, and there is underlying order in the adult's movement through his life cycle. Each life cycle has its own character. Change goes on within each phase, and a transition is required for the shift from one phase to the next. The essential character of the sequence consists of a series of alternating stable (structure-building) periods and transition (structure-changing) periods. These periods shape the course of adult psychosocial development. The primary task of every stable period is to build a life structure which includes making major life choices, forming a structure around choices, and pursuing goals and values within this structure. Each stable period, which lasts six to seven years, has distinctive tasks which reflect its place in the life cycle. During the transitional period,

the life structure that has formed the basis for stability is questioned and must be modified. The fundamental tasks of the transition are to question and reappraise the existing structure, to search for new possibilities in self and world, and to modify the present structure so that a new one can be formed.

Utilizing the biographical method of study, 40 men in the mid-life decade (35 to 45 years of age) were interviewed by Levinson and his colleagues to determine the developmental processes that oocurred within this age range. The sample was composed of four occupational subgroups, each containing ten men. Each man was interviewed five to ten times a for total of ten to twenty hours within a span of two to three months. The aim of the interviews was to produce a systematic reconstruction of the individual's life course as it evolved over the years.

The results of the study by Levinson et al. (1977) indicate that there is a transitional period that begins at approximately age forty which serves as a developmental link between early and middle adulthood and lasts four to five years, entitled the mid-life transition. The period of middle adulthood begins by about age 45 and involves making choices and beginning to form a new life structure.

The major task of the mid-life transition is to reappraise the existing life structure (Levinson et al., 1977). Beginning at approximately age 40, a man begins to reappraise his life. He makes an effort to "reconsider the

direction he has taken, the fate of his youthful dreams, and the possibilities for a better life in the future" (pg. 32). Levinson et al.(1977) maintain that the need to review the past arises in part from a heightened awareness of his mortality and a desire to use the remaining time more wisely.

Increased introspection during the mid-life transition takes the form of calling into question the existing life structure (Levinson et al., 1977). Eighty percent of the subjects experienced a tumultuous struggle as profound reappraisal of their lives took place. During reappraisal of the life structure, the men discovered how many of their life choices and goals had been based upon illusions, and they are faced with the task of recognizing that long-held assumptions and beliefs about self and world are not true, thus causing stress and turmoil.

As a man enters middle adulthood around age 45, the main tasks are to make crucial choices, give these choices meaning and commitment, and build a life structure around them (Levinson et al., 1977). In order to carry out these tasks, he explores the options the world has for him and his own resources. He makes and evaluates preliminary choices. By the late forties, men have formed an initial life structure for middle adulthood. Although the fifties were not studied by the researchers, they state that there is evidence to support the sequence of stable and transitional periods continuing through the entire life

cycle. They propose that the age 50 transition takes place between age 50 and 55, and the life structure formed in the forties is reappraised and modified. A stable period devoted to building a second middle adult structure follows the age 50 transition and provides a vehicle for completing middle adulthood.

The researh results by Levinson et al. (1977) are limnited in generalizability by sample characteristics--all male, white, and middle class; and by size. The concepts under study are not precisely conceptually or operationally defined. A highly specified timetable is proposed as a general characteristic of men's lives and individual differences are not addressed within the study.

Within the research literature, there are very few attempts to validate Levinson's model of adult development or his research findings on the mid-life decade. A study was undertaken to investigate a primary component of Levinson's mid-life transition state, reevaluation of one's purpose and meaning in life (Hedlund and Ebersole, 1983). Three groups of men were interviewed concerning components of the life reevaluation process. Seventy-seven percent reported that their reevaluation was a continual process rather than being particular to the mid-life or any other period. Therefore, Levinson's contention that reevaluation is a universal phenomenon that occurs primarily during the mid-life transition is not supported. The findings of this s+udy are more consistent with Neugarten's (1968a) study

results which suggest that reappraisal is exhibited throughout middle adulthood.

Stevenson (1977), in her conceptualization of adult development, divides the period of middle adulthood into the Core of the Middle Years (age 30 to 50, Middlescence I) and the New Middle Years (age 40 to 70, Middlescence II). Middlescence is defined as the "stage in life when the adult lifestyle, the occupational mode, and the family life pattern have been chosen, and the individual settles down to implementing their choices" (pg. 170). She summarizes the tasks of Middlescence I as assuming responsibility for growth and development of self and organizational enterprises and providing help to younger and older generations without trying to control them. The major task of Middlescence II is to assume primary responsibility for the continued survival and enhancement of the nation. Specific developmental tasks of Middlescence will be identified and discussed as they relate to the literature review on introspection during middle adulthood.

One of the developmental tasks of Middlescence I (age 30 to 50) is evaluation of one's occupation or career in light of one's personal value system (Stevenson, 1977). In order for the person to feel comfortable in the occupation it should be compatible with his or her value system. During the middle years, one's value orientation goes through major changes as the individual reevaluates and reformulates values. Following reformulation of one's

values, the occupation is evaluated and may potentially lead to stress if there is incompatibility or inconsistency between one's value system and one's occupation. Stevenson (1977) does not specify a developmental task during Middlescence II that directly relates to introspection. She states, however, that during the fifties, a focus of the individual is upon what he has learned and how he has evolved during his half century of existence. There is a gradual change in the attitudes and values from a mastery oriented to a more nurturant approach to life and loved ones.

Gould (1975) studied the developmental sequence during the early and middle adulthood years with the aim of identification of the nature of issues that concerned individuals within different age groupings. A questionnaire developed from Gould's group therapy experiences was administered to a sample of 524 white, middle- class people. Questionnaire statements pertaining to certain issues brought distinctly different responses from adjacent age groups, and it was through these statements that Gould defined the phases of adult life. Gould (1975) states that a process of questioning and seeking occupies a relatively small part of one's time and energy during the 20s and 30s and grows to larger proportions during the 40s. The adult developmental sequence is marked by thoughtful confrontation with age-related issues and a continuing process of growth throughout adulthood.

Analysis of the data from Gould's study suggests that the 40s are an uncomfortable time. Compared with other adult phases, there is a downward shift in the perception that "there is still plenty of time to do most of the things I want to do." There is a corresponding rise in the perception that it is "too late to make any changes in my career." During the 40s, friends and loved ones become increasingly important. There is a sharp rise in regrets for mistakes made in raising children.

During the 50s, the individuals seemed to focus upon what they had accomplished in half a century (Gould, 1975). They expressed eagerness to have more human experiences such as sharing the joys and sorrows of everyday life with loved ones rather than searching for power and prestige in one's occupation. Gould (1975) contends that the direction of change in the 50s is toward becoming more tolerant of oneself. Increased stability marks the 50s, but there is a large concern about time, and death becomes a new presence. With one's allotment of life more than half used up, people respond with pessimism to the statement "there is still plenty of time to do most of the things I want to do" and with increased agreement that "I try to be satisfied with what I have and not think so much about the things I probably won't be able to get."

Personal reassessment often results in a revision of goals and values (Diekelman, 1975; Levinson et al., 1977; Lowenthal, Thurnher, and Chiroboga, 1975; Stevenson, 1977).

Individuals during middle adulthood display a need to commit themselves in areas which had been relatively neglected earlier in their lives--beyond work toward interpersonal commitment (Levinson et al., 1977; Stevenson, 1977). A turning toward the family for increased affiliation, nurturance, and intimacy first appears in middle-age, along with an increased family focus (Lowenthal et al., 1975; Neugarten, 1968a; Stevenson, 1977).

Reevaluation and reassessment of life attainments and reorientation of goals are part of the developmental process of middle adulthood (Thurnher, 1974). As part of a larger longitudinal study of four normative transitions of the adult life span (Lowenthal, Thurnher, and Chiroboga, 1975), Thurnher (1974) examined the transition to retirement from the perspective of goal setting and reorientation of goals and values. The sample consisted of 60 men and women, with a mean age of 60, who were facing imminent retirement. Data for this analysis was derived from semi-structured depth interviews designed to obtain comprehensive data regarding the individual's goal domain. Sixty percent of the individuals identified and described personal and occupational goals that they had abandoned following a period of reassessment and reevaluation. When questioned about their purpose in life, the themes presented by the pre-retirees centered on development and maintenance of interpersonal relationships rather than on themes of achievement and success. Many men commented that

their goals for young adulthood had been more ambitious than was reasonable and dismissed their achievement goals as normative but fanciful characteristics of their earlier stage in life. The authors state that the pre-retirees' aspirations had been modified and brought in line with more feasable goals following a review of their past life and self-appraisal.

Events of the middle years frequently give rise to a measuring of one's achievements against one's goals (Buhler, 1968; Levinson et al., 1977; Medinger and Varghese, 1981; Neugarten, 1968a). Medinger and Varghese (1981), in their analysis of stress and anxiety during adult development, state that mid-life is a time of taking stock of how far one has traveled toward important goals and objectives in life. During mid-life, descrepancies between desired goals and attained goals become troublesome and in need of resolution. Middle-aged men in particular become increasingly aware of whether or not they are "on schedule" with respect to career goals.

In her conceptual model of human development based upon 202 biographical studies and interviews, Buhler (1968) states that during the fourth phase of human development, which takes place between ages 45 and 60--entitled self-assessment--a comprehensive survey of a person's life in retrospect takes place. Self-assessment includes taking stock of one's past life, leading to anticipatory thinking about later years, and revised planning for the future in

light of necessary limitations. Buhler states that the purpose of self-assessment is to put the achievements and failures into perspective, and then face the future with reorganized priorities that suit the individual's wishes. Buhler describes different patterns of fulfillment or non-fulfillment that are generated through self-assessment.

The reappraisal process taking place during middle adulthood is associated with stress and anxiety (Levinson et al., 1978; Medinger and Varghese, 1981). Medinger and Varghese (1981) contend that the psychological development which characteristizes middle adulthood leads to a cycle of stress and anxiety. The middle aged person is continually becoming aware of diverse elements within his experience, and is engaging in the task of organizing elements of his experience into a coherent whole so as to meaningfully interpret his experiences. Stress results from the need to integrate and reconcile newly identified aspects of one's experience with one's existing set of beliefs and assumptions about the self and life in general.

Summary

Within studies of adult development, a distinction between middle adulths and individuals during other phases of adult development is increased introspection (Gould, 1975, Levinson et al., 1977; Neugarten, 1968a, Vaillant, 1977). Introspection during middle adulthood takes the form of evaluation of one's existing life situation (Levinson et al., 1977) and taking stock of one's achieve-

ments and accomplishments (Buhler, 1968; Levinson et al., 1977; Medinger and Varghese, 1981; Neugarten, 1968a). Personal reassessment often results in a revision of goals and values (Diekelman, 1975; Levinson et al., 1977; Stevenson, 1977; Thurnher, 1974). The process of self evaluation is often accompanied by stress and anxiety (Levinson et al., 1977; Medinger and Varghese, 1981; Stevenson, 1977).

Relatively little research has focused upon middle adulthood compared with other stages of the life cycle (Borland, 1978). In her critique of research conducted on middle age, Borland (1978) cites several limitations of empirical findings on middle age including: (a) middle age research has been treated as an auxilliary research topic rather than the main focus of empirical attention, (b) most of the existing research is based on small local samples, (c) non-specific definitional labels have been applied to middle age, with no consistency as to the operational definitions of middle age among studies of adult development, and (d) the results of specific studies based on different definitions of middle age have been generalized to middle aged persons in general.

Stevenson (1984), in her critique of nursing literature on adulthood, states that research on adult development from a nursing/health care perspective is sparse. Nurses must develop knowledge about the normal life processes during adulthood and must incorporate a developmental pers-

pective and knowledge about normal adult development in the study of a variety of life experiences (Stevenson, 1977).

Summary of Literature Review

A review of the existing literature has been presented on the following areas: cogitive and spiritual aspects of grieving, psychological impact of a myocardial infarction, and introspection during middle adulthood. A great deal of information was found that addressed these areas, however, there is a limited body of scientific knowledge directly related to the cognitive and spiritual aspects of grieving following a myocardial infarction.

Sources of distress following a myocardial infarction have been empirically identified, but have not been linked through research to the losses that have been sustained as a result of an MI or to grieving as a response ot illness. THe process of reappraisal of life situation and self following a myocardial infarction is in the early stages of conceptualization and empirical investigation. The present study will attempt to contribute to the body of knowledge relative to grieving within the cognitive and spiritual dimensions following a myocardial infarction.

In the next chapter, the methodology utilized within this study for the collection of data will be described.

CHAPTER IV

METHODOLOGY

Overview

This research study was designed to describe grieving in middle adult males following a myocardial infarction. A semi-structured interview schedule was utilized to collect data to describe grieving within the cognitive and spiritual dimensions at four to six weeks following hospital discharge. Within this chapter the selection of study subjects will be described including the population and sample, research permission procedures, and sites for identification of study participants. The development of the interview schedule, including objectives of the interview, question formulation, response alternatives, operationalization of variables, and the pretest is discussed. Data analysis plans are identified.

Research Approach

A descriptive research approach was chosen to explore grieving within the cognitive and spiritual dimensions in middle adult males following hospital discharge with a myocardial infarction. A descriptive study is concerned with obtaining information about the status of the

phenomenon of interest (Polit and Hungler, 1983). The purpose of a descriptive study is to observe, describe, and document aspects of the phenomenon of interest (Polit and Hungler, 1983). A descriptive study was conducted to obtain information about and describe the phenomenon of interest--grieving following a myocardial infarction. The major limitation of this descriptive approach is that the data do not permit the researcher to infer cause and effect relationships.

Criteria for Selection of Study Subjects

The study subjects consisted of males, 40 through 60 years of age, who sustained their first myocardial infarction. A convenience sample was utilized for the purpose of collecting descriptive data about grieving following an MI. The criteria for inclusion in the study were:

1. Males aged 40 though 60
2. Primary diagnosis is first myocardial infarction as confirmed by a 12 lead EKG, and attending physician and/or cardiologist having noted diagnosis in medical record
3. Time since hospital discharge with diagnosis of the myocardial infarction is four to six weeks
4. Person speaks English.
5. Individuals with diagnosis of arteriosclerotic heart disease including angina pectoris, hypertension, and diabetes were included

The criteria for exclusion from the study consisted of:

1. History of previous myocardial infarction
2. Individuals with heart disease other than arteriosclerotic heart disease were excluded
3. Patients with congestive heart failure were excluded
4. Patients with cardiogenic shock or cardiac arrest during hospitalization as evidenced by systolic blood pressure below 80 mm Hg or physician notation, insertion of pacemaker, arrhythmia of ventricular fibrillation, complete heart block, or idioventricular rhythm were excluded
5. Those individuals rehospitalized for any reason after initial hospitalization were excluded

Consent and Data Collection Procedures

Informed Consent

The researcher contacted four health care settings in Lansing, Michigan to request permission for identification and initial contact of potential study participants. Institutional approval was granted by research committees at Ingham Medical Center, Lansing General Hospital, and St. Lawrence Hospital for identification and contact with potential participants during their hospital stay. (See Appendix A.) The fourth Lansing hospital refused approval specifying that a more appropriate method for identification of study participants was to communicate directly with physicians within the community. Approval for the

research study was granted by the Michigan State University Committee Involving Human Subjects (UCRIHS). (See Appendix B.) Following institutional and UCRIHS approval, the researcher met with the nursing administrators and presented the research proposal both verbally and in writing. At this time there was determination of a contact person within the setting for the purpose of on-going communication.

The researcher met with the contact persons at each health care setting to discuss the nature and purpose of the study, to identify the nature of the assistance requested by the researcher, and to develop a method of identification of potential study participants. The researcher telephoned the contact person within each institution once a week at a prespecified time to identify individuals who met study criteria. Prior to patient contact, the study was discussed with the patient's primary physician, and approval for the patient's participation was obtained. An initial contact consent form was provided by the contact person to each individual who met study criteria (See Appendix C.) The form contained a space for the individual's signature which indicated that he was willing to be contacted by the researcher to discuss the study.

After consent was given by the patient to be contacted, the researcher visited the potential study participant during his hospital stay to explain and discuss the study in detail in the following manner:

1. Introduction of self by name, title, and association as a graduate student with Michigan State University College of Nursing
2. Acknowledgement of interest in obtaining information about the study by signing initial contact consent form
3. Explanation of the study including nature and purpose of study and criteria for inclusion in study
4. Explanation of what was expected of each participant and an indication of the amount of time needed to participate in the study
5. Assurance of confidentiality
6. Request for participation in the study

If the individual agreed to participate in the study he was asked to sign the consent form (See Appendix C) which provided an explanation of the study and human rights protection information with the understanding that he may change his mind about participation in the study at any time. If the person refused to participate in the study at this time, he would have been thanked for his time and assured he would still receive his regular care.

Approximately three weeks after hospital discharge, a phone call was made to study participants to review the study nature and purpose, to provide an opportunity for questions to be addressed, and to request participation in the interview at his home. Assurance was provided that he may choose at this time to <u>not</u> participate in the study.

A date and time was set for the interview to take place at his convenience. The interview was tape-recorded, and the tape was stored in the researcher's home in preparation for data analysis.

Sites for Identification of Study Participants

The Cardiac Rehabilitation Program at Ingham Medical Center (IMC) provides a multidisciplinary in-hospital and out-patient education and exercise program to individuals who have sustained a myocardial infarction. All patients with an MI are hospitalized on 6 North, and the Patient Care Manager for 6 North is a member of the Cardiac Rehabilitation Team. The Patient Care Manager was the contact person for the researcher. On a weekly basis she identified patients who met study criteria and obtained initial contact consent from these individuals. Dr. Walter Baird, an IMC cardiologist, was a co-sponsor of the research proposal for presentation to the IMC Research Committee. He facilitated approval of patient participation in the study through submitting a letter to his colleagues requesting approval of patient participation in the research study.

The Cardiac Rehabilitation Program at Lansing General Hospital provides education and monitoring of exercise for MI patients on an out-patient basis following a physician referral. The referrals are received during the patient's hospital stay. The Nurse Director of the Cardiac Rehabilitation Program was the contact person for the

researcher. She identified patients who met study criteria through in-hospital referral information on a weekly basis and obtained initial contact consent during the patient's hospital stay. No patients who met study criteria were identified through Lansing General Hospital.

St. Lawrence Hospital provides nursing services to all MI patients on a Cardiac Step Down Unit. The Head Nurse of the step down unit was identified as the contact person. She or her staff nurse designate identified persons who met study criteria weekly and obtained initial contact consent.

Due to the limited number of study subjects available in the Lansing area, contact was made with St. Mary's Hospital in Grand Rapids. The study proposal was discussed with the Nurse Administrator and Clinical Nurse Specialist from the Out-Patient Cardiac Rehabilitation Program and approval was granted for identification of potential study participants during their participation in the exercise program following hospital discharge.

Instrumentation

Objectives of the Interview

The interview was chosen as the data-gathering method because the concepts being measured required bringing to the respondent's awareness his experience related to the concepts under study prior to asking quantifying questions. Therefore, depth levels of questioning were required as

well as the flexibility to adapt the line of questioning to the level of the person's response to interview questions.

The primary objective of the interview was the measurement of the extent to which the defining characteristics of each grieving theme within the cognitive and spiritual dimensions of grieving were present four to six weeks after hospital discharge as reported by middle adult males with first myocardial infarction. A secondary objective was the discovery of additional defining characteristics of grieving themes within the selected dimensions of grieving.

Interview Schedule

The instrument was a standardized, semi-structured interview schedule. (See Appendix D.) Questions within the instrument were based upon grieving theory, the literature review of the impact of an MI, and application of selected concepts of grieving to the middle adult male who has sustained his first myocardial infarction. The concepts operationalized included: extent of searching, extent of examination of consequences of loss, extent of exploration of implications of loss, extent of reappraisal of purpose within life after loss, and extent of challenge to the personal belief system. The concepts were measured through determination of the frequency and duration of the defining characteristics for each concept. Therefore, questions were developed by the researcher to elicit the data required to measure frequency and duration.

One of the guiding principles in interview development is that prior to asking the individual to quantify his experience, he is provided with the opportunity to pull together his experience related to each concept (Cannell and Kahn, 1968). Therefore, the researcher developed questions designed to provide accessibility of his experience related to each concept and maximize his motivation to convey his experience related to each concept.

A standardized interview schedule is designed to collect the same categories of information from a number of respondents, and the answers of all respondents are comparable and classifiable (Gorden, 1975). The standardized interview schedule developed for this research study specified the order of the topics to be covered, the probes used with each question, and the categories of response alternatives. As a result, the data elicited through administration of the interview schedule was directly comparable and classifiable without the need for coding of responses to interview questions.

Within the interview schedule there were five topic areas; each related to one grieving theme. The sequence of topics was the same for each respondent. The chronological order of topics was organized so that they progressed logically through related issues, leaving the more thought-provoking and potentially threatening topics for later in the interview when maximum trust and rapport had been established. Within each topic, the wording of the

questions was specified, but the question sequence varied for each respondent allowing the interviewer flexibility to follow the respondent's lead.

Question Formulation

The objective in question formulation is to obtain comparable information about the experience of many respondents, and yet this experience is uniquely organized for each individual. Each person perceives and organizes the events of his life into meaningful patterns in characteristic ways and at different levels of conceptualization (Cannell and Kahn, 1968). To accomplish this task, the following pattern was established within the interview: (a) with the introduction of each topic area, a context was supplied to help convey the meaning of the question, (b) a lead-in question was used to introduce each topic, (c) neutral probes were utilized to enhance the response to the lead-in question, (d) a focused question was used to direct attention to the defining characteristic that is to be quantified, (e) elaborative probes were utilized to enhance the response to the focused question and encourage verbalization of his experience directly related to the defining characteristic, and (e) following the response to the lead-in and focused questions, specific questions about the frequency and duration of the defining characteristic were used to elicit the data which will be analyzed.

Each topic was introduced by a lead-in question. Gorden (1975) states that it is helpful to ask a preliminary question that is interesting to the respondent and related to the questions that follow. The lead-in question puts the spotlight on the respondent's experience and allows him to tell his story in his own terms. He may focus on the aspect of the question which is most important to him. A lead-in question also prepares him to provide more accurate and valid information to the specific questions that will follow his response. This approach helps the person to recall his experiences more efficiently as he is allowed to report them following his own paths of association (Gorden, 1975).

Elaborations of the prepared interview questions took the form of non-directive probing. Probing is a way to motivate the respondent and steer him toward giving relevant, complete and clear responses to meet the objectives of the interview (Cannell and Kahn, 1968). Utilization of probes implies that the interviewer understands and accepts what has been said and would like to hear more if the respondent has more to verbalize. Within this interview, probes were used to assist the respondent to elaborate upon the response to the lead-in question in preparation for answering specific questions about his experience.

Neutral probes are used for the purpose of allowing the respondent freedom in following his own paths of association and providing his own context (Gorden, 1975).

The neutral probes that were used within the interview schedule included the encouragement probe and the elaboration probe. Encouragement probes which were used include phrases such as "go on," "I see," "mm hmm," a nod of the head, and an expectant facial expression. Elaboration probes which were used included: "Would you please tell me more about that?," "Please elaborate," "Could you spell that out a little more?", "Can you give me more detail about that?", and repeating the question.

Following the response to the lead-in question and probes, a more focused question was asked. The purpose of the focused question is to direct attention to the aspect of the respondent's experience that will be quantified through specific questions and to set the stage for the specific questions. The format of the focused question was "Do you find yourself...." or "Have you been.... (specification of defining characteristic)?"

Specific questions were used to elicit the responses which will be used in the analysis of data to address the research questions: (a) What is the reported frequency of the defining characteristics within each grieving theme? and (b) During the subject's most recent recalled experience, what is the reported duration of the defining characteristics within each grieving theme? The format of the specific quantifying questions was: (a) How often do you... (specification of defining characteristic)? and (b) The last day you...(specification of defining characteristic), how long was this on your mind?

Operationalization of Variables

Extent of searching was defined as frequency and duration of thoughts related to the onset of the MI. To operationalize extent of searching, the following questions were developed by the researcher:

> How often do you review the events leading up to your heart attack?
>
> The last day you thought about the events leading up to your heart attack, how long was this on your mind?
>
> How often do you try to figure out why your heart attack happened?
>
> The last day you tried to figure out why your heart attack happened, how long was this on your mind?
>
> How often do you try to figure out your own role in bringing on your heart attack?
>
> The last day you tried to figure out your role, how long was this on your mind?
>
> How often do you ask yourself why this heart attack happened to you?
>
> The last day you asked yourself why this happened to you, how long was this on your mind?

Extent of examination of consequences of loss was defined as the frequency and duration of examination of changes within the heart's functioning, roles within the family, relationships with friends, and financial situation as a result of the MI. To operationalize examination of consequences of loss, the following questions were developed by the researcher:

How often do you think about the change in your heart's functioning?

The last day you thought about the change in your heart's functioning, how long was this on your mind?

How often do you think about the change in your role as a husband?

The last day you thought about the change in your role as a husband, how long was this on your mind?

How often do you think about the change in your role as a father?

The last day you thought about the change in your role as a father, how long was this on your mind?

How often do you think about how your relationships with your friends have changed?

The last day you thought about the change in your relationships with friends, how long was this on your mind?

How often do you think about a change in your financial situation?

The last day you thought about a change in your financial situation, how long was this on your mind?

Extent of exploration of implications of loss was defined as the frequency and duration of exploration of the need for modification of eating habits, smoking habits, exercise habits, and level of stress because of the MI. To operationalize extent of exploration of implications of loss, the following questions were included within the interview:

How often do you think about modifying your eating habits?

The last day you thought about modifying your eating habits, how long was this on your mind?

How often do you think about modifying your exercise habits?

The last day you thought about modifying your activity or exercise habits, how long was this on your mind?

How often do you think about modifying your smoking habits?

The last day you thought about modifying your smoking habits, how long was this on your mind?

How often do you think about modifying your level of stress?

The last day you thought about modifying your level of stress, how long was this on your mind?

Extent of reappraisal of purpose within life after loss was defined as the frequency and duration of reappraisal of life choices following an MI. Operationalization of this concept was achieved by the development of the following interview questions:

How often have you been reflecting on the accomplishments in your life?

The last day you reflected upon your accomplishments, how long was this on your mind?

How often do you consider whether you are pursuing goals that are most important to you?

The last day you considered whether you are pursuing goals that are most important to you, how long was this on your mind?

Now that you have had a heart attack, are you considering what you want differently out of your life?

The last day you considered what you want differently out of your life, how long was this on your mind?

Extent of challenge to the personal belief system was defined as the frequency and duration of questioning beliefs and assumptions about one's self following an MI. To operationalize extent of challenge to the personal belief system, the following questions were developed by the researcher:

How often do you question or doubt your personal worth?

The last day you questioned your sense of worth, how long was this on your mind?

How often do you question or doubt your sense of control?

The last day you questioned your sense of control, how long was this on your mind?

How often have you been considering your own mortality?

The last day you considered your own mortality, how long was this on your mind?

How often do you question or doubt how predictable your body is?

The last day you questioned the predictability of your body, how long was this on hour mind?

Response alternatives

To measure the extent of each grieving theme, two questions were asked about each defining characteristic

within the grieving themes as discussed in the previous section. The wording of question (a),"How often do you...?," implies that the answers should be in terms of frequency. The response alternatives were:

1. Every day
2. Every other day
3. About once a week
4. I used to but I don't anymore
5. Never

The wording of question (b),"The last day you..., how long was this on your mind?", implies that the answer should be in terms of duration. The response alternatives were:

1. A few moments
2. About an hour
3. Several hours
4. On and off most of the day

An explanation of the procedure for choosing the most appropriate response alternative was provided during the introduction to the interview. The respondent was provided with two cards that identified the response alternatives from which he could choose. The researcher had a one page checklist which enabled her to record the respondent's choice of responses to the questions about frequency and duration as they were addressed during the interview. The entire interview was tape-recorded.

Post-Interview

Following the interview, the investigator stated to the respondent that the interview was completed, and the tape-recorder was turned off. The investigator inquired as to what the experience of the interview was like for the individual. If, during the interview, a descrepancy was noted between the respondent's description of his experiences and his choice of response alternatives, the investigator initiated discussion about the descrepancy and inquired about reasons why the descrepancy existed. Discussion of this issue will be presented in Chapter 6.

Sociodemographic Instrument

The Sociodemographic Questionnaire (See Appendix E.) was designed to elicit descriptive information about the sample under study. Sociodemographic data collected through use of this instrument included: age, racial/ethnic background, marital status, occupation and present work status, yearly family income, number of living children, number and ages of children living at home, current medication use, and hospital discharge date. Upon completion of the questionnaire, the respondent was asked to describe his current activity level including household activities, activity restriction, walking or exercise program, and presence of chest pain. Prior to the study participant's hospital discharge, the hospital chart was reviewed for the presence of chronic health problems and hospital admission date so that the length of hospital

stay could be determined. The chart review, conducted after patient consent for participation in the study, was also completed to verify that the participant met criteria for inclusion in the study.

Pretest

The initial data collection phase included a pretest of the interview with three individuals who were similar to the study sample in that they were males between the ages of 40 and 60 who had sustained a myocardial infarction. During the pretest, it was determined whether the questions were understood and if there were discrepancies between the content of the questions and respondent understanding of the questions. The purpose of the pretest included checking the feasibility and determining the effectiveness of the interview questions in evoking the intended response. The pretest enabled the researcher to determine if the questions were appropriate to the respondents' conceptual organization and their terms of reference. The response alternatives were evaluated for appropriateness of categories.

As a result of the pretest, there was revision and/or further development of the instructions to the participants, interview questions, and procedures for clarification and expansion of interview questions with probes, development of a smoother technique of administration of the interview schedule, more clearly differentiated response alternative categories, and

development of a more favorable order of the interview topics and questions. As a result of the pretest, instructions to the participants included explanation of the types of questions within the interview and interpretation of response alternatives. The interview questions were modified to include examples within some of the questions to clarify their meaning. The format of the questions utilized to quantify the frequency and duration of the defining characteristics of each grieving theme was modified to clarify the type of data requested. A smoother technique of administration of the interview schedule was accomplished through reorganizing procedures for conducting the interview session with the respondent and providing the individual with two cards identifying the response alternatives. The response alternatives were modified so that the choices were clearly differentiated from each other and mutually exclusive. The order of the interview topics and questions within each topic area were altered to provide a smoother flow between the content areas addressed by the questions.

The format for each topic area was evaluated to determine the effectiveness of lead-in questions, when followed by probees, in eliciting a description of the respondents' experience. The pretest demonstrated that this format was useful, as the lead-in questions were interpreted by the respondents as open-ended questions and elicited description of the respondents' experience related to the topic areas addressed by the questions.

Data Analysis

Descriptive statistics are used to describe and synthesize data obtained from empirical observations and measurements (Polit and Hungler, 1983). Descriptive statistical techniques will be used to describe the extent of grieving themes reported by the sample.

Research question # 1: Within the past week, what is the reported frequency of the defining characteristics within each grieving theme?

Research question # 2: During the subject's most recent recalled experience, what is the reported duration of the defining characteristics within each grieving theme?

The reported frequency and duration for each defining characteristic will be reported in the form of response categories. To address research question #1 and #2, a frequency distribution will be developed for the frequency and duration response categories of defining characteristics within each grieving theme. Data will be presented as number of respondents and percentages of the total number of respondents.

Data obtained through the research questions will be utilized to address the problem under study which is to describe grieving within the cognitive and spiritual dimensions at four to six weeks following hospital discharge with first myocardial infarction. Specifically, frequency and duration of defining characteristics will be

used to address the description of grieving within the cognitive dimension:

1. What is the extent of searching?
2. What is the extent of examination of consequences of loss?
3. What is the extent of exploration of implications of loss?

Frequency and duration of defining characteristics will be used to describe grieving within the spiritual dimension:

1. What is the extent of reappraisal of purpose within life after loss?
2. What is the extent of challenge to the personal belief system?

Summary

The research approach, selection of study subjects, instrumentation, including interview schedule development and operationalization of variables, and plans for data analysis were presented within Chapter 4. In the next section, Chapter 5, the data results and analysis are presented.

CHAPTER V

DATA PRESENTATION AND ANALYSIS

Overview

The data presented in this chapter describe the study population and grieving by middle adult males within the cognitive and spiritual dimensions at four to six weeks after hospital discharge with first myocardial infarction. Data are provided about the frequency and duration of the grieving themes within the cognitive dimension. These themes include searching, examination of consequences of loss, and exploration of implications of loss. Data are presented about the frequency and duration of grieving themes within the spiritual dimension. These themes include reappraisal of purpose within life after loss and challenge to the personal belief system. A discussion of study results with analysis and interpretation of study findings is presented.

In Chapter 5, a description of findings of the study and data presentation to address the following problem statement is included:

1. Describe grieving within the cognitive dimension in middle adult males with first myocardial infarction four to six weeks after hospital discharge
   a. What is the extent of searching?
   b. What is the extent of examination of consequences of loss?
   c. What is the extent of exploration of implications of loss?
2. Describe grieving within the spiritual dimension within middle adult males with first myocardial infarction four to six weeks after hospital discharge
   a. What is the extent of reapprasial of purpose within life after loss?
   b. What is the extent of challenge to the personal belief system?

Descriptive Findings of the Study Sample

The study sample consisted of fifteen men with a first myocardial infarction, aged 40 to 60, following hospital discharge. The population was obtained from three Lansing area hospital cardiac rehabilitation units and an out-patient cardiac rehabilitation program in Grand Rapids, Michigan.

Sociodemographic variables

The sociodemographic variables utilized in the present study were age, racial/ethnic status, marital status, educational level, occupation, and total family income. The distribution and percentages of these variables are presented in Table 4. Data was also collected on number and ages of living children and children living at home. These data are presented within the text.

The age of the study participants ranged from 40 to 60 with a mean age of 48.4. The study subjects were predominantly white (80%) and married (73.3%). The educational level ranged from less than seven grades completed to post-graduate or professional education. The occupations of the study respondents included six of the seven categories specified by the U.S. Census Bureau Occupational Classification (1982). Most of the men were not presently working (n=13, 86.7%). The two men who were working at the time of the interview were working 40 hours per week. Total family income ranged from the category of 0-$9,999 to over $60,000, with a mode of $40,000 - $49,999. The number of living children ranged from 0-8, with a mean of 2.8. Ten of the study participants (66.7%) had children living at home with a range of one to three children.

Data was collected on the number of days hospitalized, current activity level, participation in a program of exercise, medications taken, and chronic illness. Number of

Table 4. Sociodemographic characteristics of subjects. (n = 15)

	n	%
AGE		
40 - 50	8	53
51 - 60	7	47
Total	15	100
RACIAL/ETHNIC BACKGROUND		
Black	2	13
White	12	80
Mexican-American	1	7
Total	15	100
MARITAL STATUS		
Married	11	73
Single	1	7
Divorced	2	13
Separated	1	1
Total	15	100
EDUCATIONAL LEVEL (HIGHEST GRADE COMPLETED)		
<7 grades	1	7
8-9 grades	0	0
10-11 grades	2	13
12 grades	3	20
Technical, business or trade school	4	27
<4 years college	3	20
4 years college	0	0
Post-graduate or professional school	2	13
Total	15	100
OCCUPATION		
Administrative, engineering, scientific teaching and related occupations	4	27
Technical, clerical, sales, and related occupations	0	0
Service occupations	1	7
Farming, forestry, fishing, and hunting occupations	1	7
Precision, craft, and repair	6	40
Operators, fabricators, and laborers	2	13
Retired	1	7
Total	15	100
TOTAL FAMILY INCOME		
0 - $ 9,999	1	7
$10,000 - $19,999	2	13
$20,000 - $29,999	0	0
$30,000 - $39,999	2	13
$40,000 - $49,999	5	34
$50,000 - $59,999	2	13
over $60,000	2	13
Total	15	100

days of hospitalization ranged from nine to twenty-one with a mean of twelve days. Current activity level and exercise program participation are presented in Table 5. Current activity level was classified into one of five categories based upon the American Heart Association functional classification of people with cardiovascular disease. Twelve (80%) respondents were classified at the highest activity level (#5) and three (20%) were classified at activity level #4, with restriction in strenuous activity. Six (40%) of the study subjects participated in an out-patient monitored bicycle exercise program, and seven (46.7%) walked at least 1 1/2 miles three or more times a week. The majority had no other chronic illness. Two had a history of hypertension, one had angina, and one had hypertension and diabetes.

Thus, in summary, this is a sample of middle adult, predominantly white, middle class, married men who are in the progressive rehabilitation phase of recovery from a myocardial infarction. The descriptive findings of the study population have been presented within this section. Descriptive data to address the problem statement and research questions are presented in the following section.

Table 5. Activity level and exercise program participation. (n = 15)

ACTIVITY LEVEL	n	%
1. Completely disabled. Cannot carry on any self-care; totally confined to bed or chair	0	0
2. Capable of only limited self-care; confined to bed or chair more than 50% of waking hours	0	0
3. Walking about and capable of all self-care; but unable to carry out any household activities; up and about more than 50% of waking hours	0	0
4. Restricted in physically strenuous activities; but walking and able to carry out work of a light and quiet nature, i.e., light housework, office work	3	20
5. Fully active; able to carry out all pre-heart attack activities without restriction	12	80
Total	15	100

PARTICIPATION IN EXERCISE PROGRAM		
1. Participation in out-patient, monitored bicycle exercise program three times per week	6	40
2. Ambulation 1 1/2 miles three times per week or more	7	47
3. No participation in bicycle or ambulation program	2	13
Total	15	100

The defining characteristics of grieving themes within the cognitive dimension that at least 50% of the sample report they experience every day or every other day are presented in Table 6 in descending order. The total distribution of frequency and duration responses for each defining characteristic is presented in Table 7 and Table 8.

Extent of searching. Four (26.7%) of the respondents reported examination of the causal explanation for the MI, asking "Why did this happen to me?", and exploration of personal role in the etiology and onset of the MI once a week or more frequently. Six (40%) stated that they review the events leading up to the MI once a week or more frequently. In response to the question "Do you ever ask yourself why this heart attack happened to you?" one respondent replied:

> " Why did it happen to me when I'm so healthy? I worked construction all my life. Why should I come down with a heart attack when there's some little man walking around that will never have a heart attack? What in the devil do I got (sic) to have a heart attack for?

Between five (33.3%) and six (40 %) of the sample stated that they used to examine the causal explanation for the MI, ask "Why did this happen to me?", and explore their personal roles in the etiology of the MI but that they don't anymore. For the individuals who reported experiencing any of the defining characteristics of searching within the past week, most (88.9%) reported that the thoughts were on their mind a few moments.

Table 6. Defining characteristics of grieving themes within the cognitive dimension that 50% of sample report every day or every other day.

	n	%
Examination of consequences of loss		
Examines consequences of an MI upon financial situation	10	66.7
Exploration of implications of loss		
Explores implications of an MI for modification of eating habits	11	73.3
Explores implications of an MI for modification of level of stress	11	73.3
Explores implications of an MI for modification of smoking habits (seven smokers within sample)	3	71.4*
Explores implications of an MI for modification of exercise habits	9	60.0

*of the smokers

Table 7. Frequency distribution of frequency response for defining characteristics of grieving within the cognitive dimension.

Defining Characteristics	Total n	Every day		Every other day		Once a week		I used to but I don't anymore		Never	
SEARCHING		n	%	n	%	n	%	n	%	n	%
--reviews the events leading up to the MI	15	0	0	1	6.7	5	33.3	1	6.7	8	53.3
--asks "Why did this happen to me?"	15	2	13.3	1	6.7	1	6.7	5	33.3	6	40.0
--examines causal explanation for the MI	15	1	6.7	2	13.3	1	6.7	6	40.0	5	33.3
--explores personal role in etiology and onset of the MI	15	1	6.7	1	6.7	2	13.3	5	33.3	6	40.0
EXAMINATION OF CONSEQUENCES OF LOSS											
--upon heart's functioning	15	1	6.7	3	20.0	5	33.3	2	13.3	4	26.7
--upon roles within the family (husband)	11	2	18.0	1	9.0	1	9.0	1	9.0	6	54.5
(father)	10	2	20.0	1	10.0	3	30.0	1	10.0	3	30.0
--upon relationships with friends	15	1	6.7	1	6.7	2	13.3	2	13.3	9	60.0
--upon financial situation	15	7	46.7	3	20.0	2	13.3	0	0	3	20.0
EXPLORATION OF IMPLICATIONS OF LOSS											
--for modification of eating habits	15	9	60.0	2	13.3	2	13.3	2	13.3	2	13.3
--for modification of activity and exercise habits	15	6	40.0	3	20.0	2	13.3	2	13.3	2	13.3
--for modification of smoking habits	7	4	26.7	1	6.7	1	6.7	1	6.7	0	0
--for modification of level of stress	15	9	60.0	2	13.3	0	0	1	6.7	3	20.0

Table 8. Frequency distribution of duration responses for defining characteristics of grieving within the cognitive dimension.

Defining Characteristics	Total n	A few moments		About an hour		Several hours		On and off most of the day		Not presently	
SEARCHING		n	%	n	%	n	%	n	%	n	%
--reviews the events leading up to the MI	15	6	40.0	0	0.0	0	0.0	0	0.0	9	60.0
--asks "Why did this happen to me?"	15	4	26.7	0	0.0	0	0.0	0	0.0	11	73.3
--examines causal explanation for the MI	15	3	20.0	1	6.7	0	0.0	0	0.0	11	73.3
--explores personal role in etiology and onset of the MI	15	3	20.0	1	6.7	0	0.0	0	0.0	11	73.3
EXAMINATION OF CONSEQUENCES OF LOSS											
--upon heart's functioning	15	6	40.0	1	6.7	1	6.7	1	6.7	4	26.7
--upon roles within the family (husband)	11	2	18.0	1	9.0	1	9.0	0	0.0	7	63.6
(father)	10	2	20.0	3	30.0	1	10.0	1	10.0	0	0.0
--upon relationships with friends	15	4	26.7	0	0.0	0	0.0	0	0.0	11	73.3
--upon financial situation	15	5	33.3	2	13.3	2	13.3	3	20.0	3	20.0
EXPLORATION OF IMPLICATIONS OF LOSS											
--for modification of eating habits	15	9	60.0	1	6.7	0	0.0	1	6.7	4	26.7
--for modification of activity and exercise habits	15	4	26.7	5	33.3	1	6.7	1	6.7	4	26.7
--for modification of smoking habits	7	5	71.4	0	0.0	1	14.3	1	14.3	0	0.0
--for modification of level of stress	15	4	26.7	3	20.0	2	13.3	2	13.3	4	26.7

Data Presentation for Problem Statement and Research Questions

In this section, each problem statement and research question will be presented with its associated data. Data will be presented for the cognitive dimension of grieving following an MI and the spiritual dimension of grieving following an MI.

Cognitive Dimension of Grieving Following a Myocardial Infarction

The problem under study is to describe grieving within the cognitive dimension in middle adult males with a first myocardial infarction four to six weeks after hospital discharge. Grieving within the cognitive dimension will be described through addressing the following problem statements:

1. What is the extent of searching?
2. What is the extent of examination of consequence of loss?
3. What is the extent of exploration of implications of loss?

The research questions to address the problem statements include:

1. What is the reported frequency of the defining characteristics within each grieving theme?
2. During the subject's most recent recalled experience, what is the reported duration of the defining characteristics within each grieving theme?

Six (40%) of the fifteen respondents reported that they used to engage in two or more of the defining characteristics of searching, but that they don't anymore. Of the remaining seven respondents, five (33.3%) reported that they engaged in two or more of the defining characteristics of searching, but don't anymore. Of the remaining seven respondents, five (33.3%) report that they engaged in two or more defining characteristics of searching within the past week. All but four of the study subjects have experienced two or more defining characteristics of searching and seven (46.7%) have engaged in three or more of the defining characteristics of searching following a myocardial infarction. Two individuals reported that they have never engaged in any of the defining characteristics of searching.

In summary, eleven (73.3%) reported that they experienced two or more defining characteristics following the MI. Five individuals (33.3%) specified that they have experienced two or more defining characteristics within the past week, and six (40%) reported that they used to experience two or more defining characteristics within the past week, but that they don't anymore.

Extent of examination of consequences of loss. Ten respondents (66.7%) reported the examination of consequences of the MI upon their financial situations every day or every other day, and two individuals reported examination of this issue once a week. Of the twelve (80%) men who reported examination of the consequences of the MI

upon their financial situations within the past week, five (41.6%) reported that this issue was on their minds for several hours or on and off most of the day, and two (16.7%) reported it was on their mind about an hour. In response to the question "Do you think about how your financial situation has changed because of your heart attack?", one respondent replied:

> " When something hurts it's hard not to think about it. (pause) I keep going over the books and we've got just so much money, so I'm wondering about selling my place up north."

Three individuals (20%) reported that they had not examined the consequences of the MI upon their financial situations within the past week.

Ten (66.7%) of the study participants have children living at home. Of this group, seven (70%) reported examination of the consequences of the MI upon their role as a father once a week or more frequently; three considered this issue every day or every other day. In response to the question "Do you think about how your role as a father has changed since your heart attack?", one subject replied:

> " The limitation (pause) at the present, not so much down the road. Not being able to throw a football to my son, or wrestle. I wanted to take him fishing in July, or get involved with some things with my daughter. I wanted to go up to see my daughter a couple of times when she was a camp counselor."

Of the respondents who have children living at home (n=10), three had not examined the consequences of the MI upon their roles as a father within the past week. Of the study

participants with children living at home who reported that they are presently examining this issue (n=7), five reported that the consequences of the MI upon the role of father was on their mind an hour or more the last day they thought about it.

Nine (60%) individuals reported examination of consequences of the MI upon the heart's functioning once a week or more frequently. Four, however, report never examining this issue. Of the eleven married men within the sample, five (45.6%) reported examination of the consequences of the MI upon their roles as a husband and six (54.4%) reported never examining this issue. Five (33.3%) reported examining consequences of the MI upon relationships with friends. Of the individuals who reported examining the consequences of the MI upon their hearts' functioning, their roles as husbands, or relationships with friends within the past week, most (73.7%) reported these issues on their minds "a few moments" the last day they thought of them.

Eleven of the fifteen study participants (73.3%) reported examination of one or more consequences of the MI every day or every other day. Of this group of eleven, six reported examination of two or three consequences of the MI every day or every other day. Only one respondent reported never examining any consequences of his MI.

Ten of the study subjects reported examination of two to four consequences of the MI once a week or more

frequently. Of this group, seven reported the duration of examination of one or more consequences to be several hours or on and off most of the day. Of the individuals who reported examination of less than two consequences once a week (n=5), the duration of examination of a singular issue was reported to be about an hour for two men, and one person specified that he used to examine three consequences of his MI, but he doesn't anymore.

In summary, to answer the research questions, 93.3% (n=14) of the study subjects reported examining at least one consequence of an MI within the past week, and 66.7% (n=10) reported examining two to four consequences of the MI within the past week. The most frequently reported consequence examined was the impact of the MI upon the financial situation (80%; n=12). Seven out of the twelve stated examination of the financial situation was on their minds an hour or more the last time they thought about it. In addition, of the ten men with children living at home, seven reported examination of consequences of the MI upon their roles as father. Five out of the seven indicated this issue was on their mind an hour or more within the past week.

Extent of exploration of implications of loss. Eleven (73.3%) of the men reported exploration of the implications of the MI for modification of eating habits every day or every other day. In response to the question "How have you been thinking about modifying your eating habits because of

your heart attack?", one respondent answered:

> "I'm supposed to walk every day and I hate to walk. I love salt and can't have it. Have you ever tried an ear of corn that you're used to putting lots of margarine on and lots of salt and all of a sudden you can't put salt on and it changes the taste a little (sarcastically). You know how good pizza tasted? Can't have pizza! (angry silence)"

Of the people who reported exploring the implications of the MI for modification of eating habits within the past week (n=11), most (81.8%) reported that this issue was on their minds for "a few moments" the last day they thought about it.

Eleven (73.3%) reported exploration of the implications of the MI for modification of level of stress" every day" or "every other day"; nine admitted thinking about this issue every day, and two considered it every other day. Of this group of eleven, four reported that the issue of modification of level of stress was on theirs mind several hours or on and off most of the day the last day they thought about it, and three indicated it was on their minds about an hour.

Seven of the respondents reported smoking prior to the MI. All were trying to quit at the time of the interviews. Of the group of seven smokers, six (85.7%) reported exploration of implications of the MI for modification of smoking habits every day or every other day. Of the smokers who reported exploring modification of smoking habits within the past week (n=7), most (71.4%) stated that this issue was on their minds for "a few moments". Two indicated the

issue of modification of smoking habits was on their minds several hours or on and off most of the day the last day they thought about it.

Nine (60%) men reported exploration of the implications of the MI for modification of exercise habits every day or every other day. Of the eleven men who reported exploration of this issue within the past week, seven reported modification of exercise habits was on their minds about an hour or more the last day they thought about it.

Eleven of the fifteen subjects reported exploration of two or more implications of the MI for modification of lifestyle habits every day or every other day. Within this group of eleven, eight explored three or four modifications every day or every other day. Of the individuals who are not presently exploring more than one modification in their lives every day or every other day (n=4), two reported that they used to think about two or more modifications but they don't anymore. No individual reported never exploring implications of the MI for modification of lifestyle habits. Of the men who report exploration of two or more modifications every day or every other day (n=11), five explored at least one modification about an hour, and four explored at least one modification for several hours or on and off most of the day.

In summary, 93.3% (n=14) reported presently exploring implications of the MI for modification of at least one lifestyle habit, and 80% (n=12) reported presently ex-

ploring implications for modification of two to four lifestyle habits. Exploration of eating habits, exercise habits, and level of stress were reported by 73.3% (n=11) of the sample. Of the seven smokers, all reported exploration of implications of the MI for modification of smoking habits.

Summary of Major Findings For Grieving Within the Cognitive Dimension Following a Myocardial Infarction

1. Eleven respondents (73.3%) reported they have experienced two or more of the defining characteristics of searching following the MI. Between 25% and 40% are presently engaged in two or more of the defining characteristics of searching, and 40% of the sample reported that they used to engage in two or more of the defining characteristics of searching but don't anymore.
2. Ten respondents (66.7%) reported presently examining two to four consequences of the MI. Seven (46.7%) reported the duration of examination of one or more consequences to be several hours or more within the past week.
3. Examination of consequences of the MI upon the financial situation is reported by 80% (n=12) of the sample. Seven reported this issue on their minds about an hour or more the last day they thought about it.
4. Of the ten men who had children living at home, seven (70%) reported examination of consequences of the MI upon their roles as fathers. Five reported this issue on their minds an hour or more within the past week.

5. Eleven respondents (73.3%) reported exploration of two to four modifications in lifestyle habits every day or every other day.
6. Eleven men (73.3%) reported exploration of modification of the level of stress every day. Seven reported this issue on their minds an hour or more the last day they thought about it.
7. Six of the seven smokers report exploration of implications of the MI for modification of smoking habits every day.
8. Exploration of implications of the MI for modification of eating habits and exercise habits were reported by 73.3% (n=11) of the sample within the past week.

Spiritual Dimension of Grieving Following the Myocardial Infarction

The problem under study is to describe grieving within the spiritual dimension in middle adult males with first myocardial infarction four to six weeks after hospital discharge. Grieving within the spiritual dimension will be described through addressing the following problem statements:

1. What is the extent of reappraisal of purpose within life after loss?
2. What is the extent of challenge to the personal belief system?

The research questions to address the problem statements include:

1. What is the reported frequency of the defining characteristics within each grieving theme?
2. During the subject's most recent recalled experience, what is the reported duration of the defining characteristics within each grieving theme?

The defining characteristics of grieving themes within the spiritual dimension that at least seven (46.7%) of the sample reported they experience once a week or more frequently are presented in Table 9 in descending order. The total distribution of frequency and duration responses with percentages for each defining characteristic within the spiritual dimension is presented in Tables 10 and 11.

Reappraisal of purpose within life after an MI. Seven study participants reported reflecting upon life's accomplishments once a week or more frequently, and two reported that they used to, but don't anymore. In response to the question "Have you been reflecting upon the accomplishments in your life?", one person replied:

> "You always look at the fine times; but are they fine times? (Pause) What's really important? Financial success? Success in your profession? Or just success at being a good individual? I reflect upon those things."

Of the seven persons who were reflecting upon life's accomplishments, three reported considering this issue about an hour, and four reported this issue on their mind "a few moments" within the past week.

Seven individuals were presently evaluating the importance of goals pursued prior to the MI; four reported

Table 9. Defining characteristics of grieving themes within the spiritual dimension that 46.7% or more of the sample (7 or more) experience once a week or more frequently.

	n	%
REAPPRAISAL OF PURPOSE WITHIN LIFE AFTER LOSS		
Explores alternate life goals	8	53.3
Evaluates importance of goals pursued prior to the MI	7	46.7
Reflects upon life's accomplishments	7	46.7
CHALLENGE TO THE PERSONAL BELIEF SYSTEM		
Challenge to belief in personal control	7	46.7
Challenge to belief in predictability of body	7	46.7

Table 10. Frequency distribution of frequency responses for defining characteristics within the spiritual dimension.

Defining Characteristics	Total n	Every day		Every other day		Once a week		I used to but I don't anymore		Never	
		n	%	n	%	n	%	n	%	n	%
--reflects upon life's accomplishments	15	1	6.7	1	6.7	5	33.3	2	13.3	6	40.0
--evaluates importance of goals pursued prior to the MI	15	4	26.7	0	0.0	3	20.0	1	6.7	7	46.7
--explores alternate goals	15	3	20.0	1	6.7	4	26.7	0	0.0	7	46.7
--explores new methods to achieve goals	15	1	6.7	1	6.7	2	13.3	0	0.0	11	73.3
--challenge to belief in personal worth	15	1	6.7	1	6.7	2	13.3	1	6.7	9	60.0
--challenge to belief in personal control	15	6	40.0	0	0.0	1	6.7	2	13.3	6	40.0
--challenge to belief in immortality	15	1	6.7	1	6.7	3	20.0	3	20.0	7	46.7
--challenge to belief in predictability of body	15	3	20.0	1	6.7	3	20.0	0	0.0	8	53.3

Table 11. Frequency distribution of duration responses for defining characteristics within the spiritual dimension.

Defining Characteristics	Total n	A few moments		About an hour		Several hours		On and off most of the day		Not presently	
		n	%	n	%	n	%	n	%	n	%
--reflects upon life's accomplishments	15	4	26.7	3	20.0	0	0.0	0	0.0	8	53.3
--evaluates importance of goals pursued prior to the MI	15	5	33.3	2	13.3	0	0.0	0	0.0	8	53.3
--explores alternate life goals	15	7	46.7	0	0.0	1	6.7	0	0.0	7	46.7
--explores new methods to achieve goals	15	3	20.0	1	6.7	0	0.0	0	0.0	11	73.3
--challenge to belief in personal worth	15	2	13.3	1	6.7	0	0.0	1	6.7	11	73.3
--challenge to belief in personal control	15	4	26.7	1	6.7	1	6.7	1	6.7	8	53.3
--challenge to belief in immortality	15	4	26.7	1	6.7	0	0.0	0	0.0	10	60.0
--challenge to belief in predictability of body	15	5	33.3	0	0.0	1	6.7	1	6.7	8	53.3

evaluation of this issue every day. Two men reported this issue on their minds about an hour, and five reported considering this issue "a few moments" within the past week.

Eight men reported exploration of alternate life goals once a week or more frequently. In response to the question "Now that you've had a heart attack, are you considering what you want differently out of your life ?", one person responded:

> "I'd like to start doing the things that I realize are more important to me, but it's hard to change your life around to do some of those things, you know. The kids are getting bigger, and it's hard to spend more time with them. They've got their own interests now, and they're kind of doing their own thing. Some things you can turn around and some things you can't. I don't know how much I can turn around."

Of the eight men who were exploring alternate life goals, seven considered this issue for" a few moments" and one considered it for several hours within the past week.

Four (26.7%) individuals reported exploration of new methods to achieve goals once a week or more frequently. Eleven (73.3%) reported never exploring new methods to achieve goals. Of the four men who reported considering new methods to achieve goals within the past week, three stated that this issue was on their minds " a few moments," and one specified an hour.

During the interview. two individuals expressed reevaluation of the importance of specific aspects of their lives (marriage and job). Two men also described rethinking of values in response to open-ended questions. All four,

however, reported one or none of the defining characteristics of reappraisal of purpose within life after loss.

Thirteen (86.7%) of the respondents reported one or more components of the reappraisal process once a week or more frequently. Nine (60%) of the subjects reported experiencing two or more components of the reappraisal process. Only two men reported never experiencing any of the components of the process of reappraisal. Of the thirteen persons who reported one or more of the components of the reappraisal process once a week or more frequently, two specified the duration of at least one component to be several hours, and two reported that at least one issue was on their minds about an hour. The remainder (n=7) reported that the components of reappraisal were on their mind for an hour or more the last day they dealt with them.

In summary, thirteen respondents (86.7%) reported that they engaged in one or more of the components of reappraisal of purpose within life after loss and nine (60%) reported engaging in two or more of the components. The most frequently reported defining characteristics of the reappraisal process were evaluation of importance of goals pursued prior to the MI reported by seven men within the past week; and exploration of alternate life goals, reported by eight men. Four men described reevaluation of aspects of life situation which was not reported to involve more than one defining characteristic of reappraisal of purpose within life.

evaluation of this issue every day. Two men reported this issue on their minds about an hour, and five reported considering this issue "a few moments" within the past week.

Eight men reported exploration of alternate life goals once a week or more frequently. In response to the question "Now that you've had a heart attack, are you considering what you want differently out of your life ?", one person responded:

> "I'd like to start doing the things that I realize are more important to me, but it's hard to change your life around to do some of those things, you know. The kids are getting bigger, and it's hard to spend more time with them. They've got their own interests now, and they're kind of doing their own thing. Some things you can turn around and some things you can't. I don't know how much I can turn around."

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In summary, thirteen respondents (86.7%) reported that they engaged in one or more of the components of reappraisal of purpose within life after loss and nine (60%) reported engaging in two or more of the components. The most frequently reported defining characteristics of the reappraisal process were evaluation of importance of goals pursued prior to the MI reported by seven men within the past week; and exploration of alternate life goals, reported by eight men. Four men described reevaluation of aspects of life situation which was not reported to involve more than one defining characteristic of reappraisal of purpose within life.

Extent of challenge to the personal belief system.

Six (40%) of the men reported that the MI presented a challenge to their belief in personal control every day. Two (13.2%) stated that they used to question or doubt their belief in personal control, but they don't anymore. Of the individ-uals who reported a challenge to their belief in personal control within the past week (57.1%; n=7), four indicated that this issue of personal control was on their minds "a few moments," and three stated it was on their minds an hour or longer.

A challenge to the belief in the predictability of the body takes place once a week or more frequently for seven (46.7%) of the respondents. In response to the question "How have your feelings about the predictability of your body been affected by having your heart attack?", one man stated:

> "Now when I have the pains that before I used to ignore; when I have them now, I get a little jumpy. It scares me because you don't know if you want to trust your body or not. You're very vulnerable; you know, really; the body*is* when you think about it. Right now I don't trust my body very much at all."

For the seven individuals who were presently experiencing a challenge to the predictabililty of their body, five (71.4%) reported that this issue was on their mind "a few moments" the last day they thought about it, and two (28.6%) specified that questioning or doubting was on their mind several hours or on and off most of the day.

Four (26.7%) of the respondents reported a challenge to their belief in their personal worth once a week or more frequently. Of the four persons who reported a challenge to their personal worth within the past week, two reported this issue on their minds an hour or longer, and two reported it on their minds "a few moments."

In response to open-ended questions, three individuals reported doubts about what their capabilities will be in the future and expressed concerns about their capacity to return to previous work responsibilities. However, within the interview, the men reported that concern about return to previous capacities did not present a challenge to their belief in personal worth.

A challenge to the belief in immortality occured once a week or more frequently for five (33.3%) of the respondents, with four (20%) reporting that they used to consider their own mortality but don't anymore. For the four individuals who reported a challenge to their belief in their immortality within the past week, three reported this issue on their minds for "a few moments", and one specified considering it about an hour the last day it was on his mind.

Nine of the fifteen respondents reported a challenge to one or more beliefs every day. Seven men reported a challenge to two beliefs or more every day or every other day. Twelve men reported a challenge to at least one belief once a week or more frequently. Only two men

reported never having any of the beliefs challenged. Seven men reported that questioning at least one belief was on their minds every day for an hour or more. Of these seven men, five reported the duration to be several hours or on and off most of the day. Of the men who had not experienced a challenge to any of the beliefs for an hour or more within the past week (n=87), two reported they used to question at least one belief, but don't anymore; and three reported questioning two or more beliefs at least once a week for a few moments.

In summary, twelve (80%) reported a current challenge to one or more beliefs within the personal belief system. Seven (46.7%) reported a challenge to two or more beliefs. A challenge to the belief in personal control was reported by nine (60%) men, six of whom reported this challenge every day. Within the past week, seven (46.7%) men reported a challenge to their belief in the predictability of their bodies. Eight men (53.3%) reported a challenge to their belief in immortality following an MI.

Summary of Major Findings For Grieving Within the Spiritual Dimension Following A Myocardial Infarction

1. Nine individuals (60%) reported that they are presently engaged in two or more components of reappraisal of purpose within life.
2. Seven men reported evaluation of importance of goals pursued prior to the MI. Of this group, four reported evaluation of this issue every day.

3. Eight men (53.3%) reported exploration of alternate life goals, and nine (46.7%) reported reflection upon life's accomplishments.
4. Seven individuals (46.7%) reported a challenge to two or more beliefs every day or every other day. Seven men reported that a challenge to at least one belief was on their minds every day for an hour or more.
5. Six men (40%) report a challenge to their belief in personal control every day. Three reported this issue on their minds about an hour or longer.
6. Seven men (46.7%) reported a challenge to their belief in the predictability of their bodies.

Other Related Findings

1. Three individuals reported a markedly lower number of defining characteristics within grieving themes in the cognitive and spiritual dimensions than other men within the sample. These individuals reported one defining characteristic within the spiritual dimension and three to six defining characteristics within the cognitive dimension. All three men reported the duration of two or more defining characteristics to be an hour or more in duration the last day they thought about them.
2. Eight men expressed at some point in the interview that their lives were "on hold." They expressed the sense of marking time until their physician or diagnostic tests indicated they could resume their normal pattern of life activities.

3. Within responses to interview questions regarding exploration of implications for modification of life-style habits, seven men expressed a sense of deprivation; i.e., food deprivation, deprivation of smoking, deprivation of valued activities.

Discussion and Interpretation of Study Results

Within this section, study findings will be discussed and interpreted. Descriptive data about the frequency and duration of defining characteristics will be discussed to address the problem statements. Study results pertaining to the defining characateristics within each grieving theme will be discussed in relation to previous research and will be interpreted within the context of previous research and the conceptual framework.

Grieving Within the Cognitive Dimension

Descriptive data was obtained about the frequency and duration of defining characteristics within the cognitive dimension that will be used to address the following problem statements:

1. What is the extent of searching?
2. What is the extent of examination of consequences of loss?
3. What is the extent of exploration of implications of loss?

Extent of searching. Study findings that two-thirds of the sample reported reviewing the events leading up to loss, exploration of their personal role in the etiology of loss, examination of the causal explanation for loss, and asking "Why did this happen to me?" support the findings of recollection and reexamination of the loss experience following loss of a spouse (Parkes, 1970a; Glick et al., 1974). In addition, study findings that two-thirds of the sample reviews the events leading up to the MI and examines the causal explanation for the MI confirm study results following a myocardial infarction (Cowie, 1976; Idelson et al., 1974; Rudy, 1980).

Study results indicate that approximately half of the individuals who reported defining characteristics of searching stated that they used to experience them, but they don't anymore. Therefore, study findings raise questions about the onset and period of time during which specific defining characteristics are experienced. Studies of grieving following loss of a spouse (Parkes, 1970a; Glick et al., 1974) suggest that components of searching begin following a phase of shock and disbelief and continue at one month following bereavement. Studies of impact of an MI (Cowie, 1976; Rudy, 1980) do not specify the onset and time period of review of events or examination of causal explanation. Idelson et al., (1974) indicate that a focus for men during hospitalization is the personal role in the etiology of the MI. Therefore, one interpretation

of the study results is that defining characteristics of searching may begin immediately following an MI.

The reported duration of defining characteristics of searching also raises questions about the intensity, as well as, the time period of their existence. Most men (88.9%) reported that when they last experienced the defining characteristics, the thoughts were on their minds for a few moments. This finding suggests that, following the MI, individuals are not preoccupied with thoughts of the loss, and they spend a limited amount of time engaged in the defining characteristics of searching. An alternative explanation, in light of reports that one-third of the sample experienced defining characteristics prior to the interview, is that the peak of the experience of the defining characteristics of searching had subsided by the time of the interview.

In summary, the study results of frequency and duration of the defining characteristics of review of events leading up to the MI, examination of causal explanation of the MI, exploration of personal role in the etiology of the MI, and asking "Why did this happen to me?" demonstrate that they are experienced following the myocardial infarction by two-thirds of the sample. Longitudinal investigation is required to determine the onset of the defining characteristics of searching and to provide validation of their existence.

Extent of examination of consequences of loss. Two-thirds of the sample examined two to four consequences of the MI following the myocardial infarction, and half of the sample spent several hours or more examining at least one consequence within the past week.

Study results indicated that over three-quarters of the sample examined consequences of the MI upon the financial situation, and half of the sample reported this issue on their minds an hour or more within the past week. These findings confirm that consequences of the MI upon the financial situation is a primary source of concern as demonstrated in studies of the impact of an MI (Bilodeau and Hackett, 1971; Croog, 1977; McCorkle and Quint-Benoliel, 1983).

Examination of consequences of the MI upon the role of father is reported by three-quarters of the men with children living at home, and half of this group spent an hour or more examining this issue within the past week. These results suggest that alteration of the parental role is a primary source of concern following an MI. There has been no research that investigates alteration of the parental role or response to alteration of the parental role during the first month following hospital discharge with an MI. Examination of consequences of the MI upon the role of husband was reported by less than one-third of the married respondents. This finding is inconsistent with other study results that identify alteration in the role as

husband as a source of concern following an MI (Bilodeau and Hackett, 1971; Idelson et al., 1974; Wishnie et al., 1971). However, study results are consistent with Meyer's (1983) reports that during middle adulthood, men were undergoing role changes prior to the MI. He reports that the role changes which took place following the MI were in the preferred direction and were not a source of distress. Although role changes take place following the MI (Croog, 1977), the data suggest that role changes are not undesired and are not perceived as a source of distress. Another explanation for this finding may lie in the lack of clear conceptualization of aspects of the marital role addressed within this study and inadequate conceptualization of this issue within the interview schedule. The findings within this study regarding examination of parental and marital roles within the family underlines the need to empirically investigate the impact of an MI upon family roles and response to role change following an MI.

Examination of consequences of the MI upon the heart's functioning is reported by two-thirds of the sample. This finding is consistent with studies which report that alteration in cardiovascular functioning is a source of concern following an MI (Bilodeau and Hackett, 1971; Mayou et al., 1978; McCorkle and Quint-Benoliel, 1983; Idelson et al., 1974; Wishnie et al., 1971). Examination of conequences of the MI upon relationships with friends was reported by one-quarter of the respondents within the past week. These

study results suggest that this issue is not a primary source of concern following the MI.

In summary, of primary concern to men following an MI is the examination of consequences upon the financial situation, which is reported by over three-quarters of the sample; half considering it every day. Half of the sample reported consequences upon the financial situation were examined an hour or more the last day it was on their minds. Examination of consequences of the MI upon the role of father was reported by five of ten fathers to for an hour or more every day or every other day. Two thirds of the respondents reported examination of consequences of the MI upon the heart's functioning within the past week; most for only a few moments.

Extent of exploration of implications of loss. All individuals within this study reported exploration of at least one lifestyle modification, three-quarters of the sample explored two modifications, and half of the sample explored three modifications. Two-thirds of the respondents spent an hour or more every day or every other day in exploration of modification of lifestyle habits. These results are consistent with the observations of Idelson et al. (1974) that patients envision making major modifications in their way of life for the future following an MI. In addition, study results suggest that modification of lifestyle habits is a source of distress following an MI which is consistent with study findings of Bilodeau and Hackett (1971), Croog (1977), and Mayou et al. (1977).

Approximately three-quarters of the sample reported exploration of modification of level of stress every other day or every day, and half of the sample indicates this issue was on their minds an hour at that time. The data suggest that the exploration of implications of the MI for modification of level of stress is a primary issue of concern. There are no studies of the impact of MI which identifies modification of level of stress as a source of concern.

Exploration of modification of eating habits was reported by three-quarters of the sample, and exploration of modification of smoking habits was reported by all smokers. However, the duration of both of these issues for most people was a few moments. These study results are inconsistent with the reports of Bilodeau and Hackett (1971) and Wishnie et al. (1971) who report that issues of eating and smoking were primary sources of concern during convalescence. A clue may be provided by the interview responses of a number of people who stated that they try not to dwell on smoking and/or eating and try to occupy their time so as not to think about these issues. In addition, investigation of methods of coping may also provide explanation for duration responses.

Exploration of modification of exercise habits following an MI was reported by three-quarters of the sample and was on the minds of half the sample for an hour or more the last day they thought about it. There has been

no research that identifies modification of exercise habits as a source of concern following an MI. Interview responses indicate that exploration of implications of an MI for modification of exercise habits needs to be reconceptualized to include diminished activity due to activity restriction during convalescence as well as increased participation in an exercise program. Interview responses indicated that exploration of these issues must be distinguished to provide a clearer understanding of subjects' responses. The two men who indicated that they used to explore modification of exercise suggests the possibility that this issue may be of heightened importance one to three weeks following hospital discharge, as this is the time the men begin to implement their therapeutic regimen following hospitalization.

In summary, of primary concern for individuals is exploration of implications of the MI for modification of the level of stress and exercise habits. This is evidenced by half of the sample who described modification of level of stress on their minds an hour or more every day or every other day, and half the sample who indicate modification of exercise was on their minds an hour or more within the past week. Also of concern is modification of eating habits, explored by three-quarters of the sample every day or every other day, and modification of smoking habits, explored by five out of seven smokers every day or every other day. The majority indicated the latter two issues on their minds for a few moments.

Grieving Within the Spiritual Dimension

Descriptive data were obtained about the frequency and duration of defining characteristics within the cognitive dimension to address the following problem statements:

1. What is the extent of reappraisal of purpose within life after loss?
2. What is the extent of challenge to the personal belief system?

Reappraisal of purpose within life after loss. Nearly two-thirds (60%) of the sample reported two or more components of reappraisal of life purpose as defined within this study. Study results which indicate that nearly two-thirds of the sample reflected upon life's accomplishments partially supports Parkes' (1971) proposition that psychosocial transitions such as illness evoke the review of past attainments. Of the individuals who reported reflection upon life's accomplishments, two reported that they used to reflect upon this issue, but they don't anymore, which raises the possibility that reflection upon this issue may begin earlier in convalescence. The finding that more than half of those who reported reflection on life's accomplishments reported a duration of a few moments suggests that this issue is of limited concern. Another interpretation is that reflection on this issue began prior to the time of the interview and was, at the time of the interview, a focus of less attention.

Approximately half of the sample reported evaluation of importance of goals pursued prior to the MI within the past week. Four evaluated this issue every day. Two out of the seven who reported evaluating the importance of goals pursued prior to the MI report that they spent about an hour the last day it was on their minds. Half of the sample reported exploration of alternate life goals, and one-quarter reported exploration of new methods to achieve goals within the past week. The majority of individuals reported a short duration of these issues on their minds.

Carlson (1978) states that during grieving, new meaningful goals may be sought, or goals that were previously important may be affirmed and energy directed toward finding new methods to achieve goals that were important prior to loss. Therefore, one might expect that, as part of the process of reappraisal of purpose within life after loss, the defining characteristics of exploration of alternate life goals or exploration of new methods to achieve goals would be reported based upon the person's reevaluation of goals. Indeed, eight of the respondents reported either exploration of alternate life goals or exploration of new methods to achieve goals in addition to evaluation of importance of goals pursued prior to the MI which is consistent with Carlson's hypothesis. Therefore, an interpretation of these findings is that the importance of goals pursued prior to the MI is evaluated as part of the process of exploring alternate life goals or affirmation of previous goals.

During the interviews two men reported reevaluation of specific aspects of their lives, and two men reported rethinking of values. All but four individuals reported either no defining characteristics of reappraisal of purpose within life or one defining characteristic which was on their minds for a few moments. In exploration of this descrepancy during the post-interview, it appears that the four men were engaged in reevaluation within their life situation, but the evaluation was not directly related to purpose within life. Therefore, the grieving theme of reappraisal of purpose within life after loss must be reconceptualized. This issue will be discussed in Chapter 6.

In summary, the defining characteristics of reflection on life's accomplishments appears to be a primary component of the reappraisal process as two-thirds of the sample reported this component. Three men reported this issue on their minds about an hour within the past week. Eight men reported evaluation of importance of goals pursued prior to the MI; five reported this issue being considered every day, suggesting that this issue is a component of reappraisal of purpose within life after the MI. Exploration of alternate life goals or exploration of new methods to achieve goals was also reported by half of the sample. Four out of the eight reported spending an hour or more addressing at least one of the latter three issues.

Challenge to the personal belief system. Three-quarters of the sample experienced a challenge to one or

more beliefs following the MI. Approximately one-half of the study participants experienced a challenge to two beliefs every day or every other day. Half of the sample reported one or more beliefs were challenged for an hour or more the last day this took place.

Six men reported a challenge to their belief in personal control every day. Three of the six specified the duration to be an hour or longer the last day they confronted this issue. These study results lend support to the studies which report that patients experience a threat to their sense of control following loss of a limb (Parkes, 1972) and following an MI (Hackett and Cassem, 1971; Idelson et al., 1974; Rosen and Bibring, 1966).

One-half of the sample reported a challenge to their belief in immortality. Within interview responses, three men reported a confrontation with the possibility of their own deaths during hospitalization. Two of the five men who reported a challenge to their belief in immortality within the past week described thoughts about death. The interview questions did not distinguish between these two issues. Therefore, the concept of challenge to the belief in immortality is in need of revision. Reports of thoughts about death are consistent with study results of Bilodeau and Hackett (1971), Croog (1977), and Wishnie et al. (1971). Reports of a confrontation with personal mortality are consistent with Meyer's (1983) findings.

Half of the study respondents reported a challenge to their belief in the predictability of their bodies within the past week; four out of seven reported this challenge every day or every other day. The majority of this group reported a duration of a few moments; although two reported this issue on their minds for several hours or on and off most of the day. These study findings suggest that predictability of the body is an issue confronted by half of this sample. There have been no other studies that have investigated predictability of the body. Study findings partially support Krantz's (1980) proposition that following an MI, individuals experience a threat to perceived predictability. In addition, study results are consistent with Idelson et al. (1974) in that symptoms of coronary artery disease are unpredictable and require continued awareness of one's body.

One-quarter of the sample reported a challenge to their belief in personal worth. This is inconsistent with studies that report a threat to the sense of personal worth following an MI (Idelson et al., 1974; Rosen and Bibring, 1966; Stern et al., 1978). Three men described their concern about their ability to return to their previous capabilities without reporting a challenge to their belief in personal worth. An interpretation of these responses is that the threat of decreased capacity to perform previous activities is not experienced as a threat to the sense of worth.

In summary, the belief in personal control and belief in predictability of the body were confronted and challenged by approximately half of the sample within this study. One-half of the sample experienced a challenge to the belief in immortality following an MI.

Response to Interview

Most men welcomed the opportunity to share the issues they had been actively struggling with. Within the interview, most men talked of the frustration and distress they were experiencing during their convalescence. Several men indicated prior to the interview that they had little to share. Most of these men expressed surprise over how much they had to share about their current experiences and the issues they were dealing with. An indication of the number of issues discussed and the positive response to the interview was in the length of the interview. Most interviews lasted between 60 and 70 minutes. In addition, within the post-interview, many men took the opportunity to expand upon an issue that was particularly thought-provoking or distressing for them.

In summary, the response to the interview was positive in that all men were willing and able to share their experiences as middle adult males encountering the frustrations and difficulties as well as the positive aspects of convalescence with a myocardial infarction.

Summary

In Chapter 5, data were presented that described the study sample and grieving within the cognitive and spiritual dimensions following an MI. Data were presented that described extent of searching, extent of examination of consequences of loss, extent of exploration of loss, extent of reappraisal of purpose within life after loss, and extent of challenge to the personal belief system. Discussion of study results included interpretation of study results and explanation of study findings.

In Chapter 6, the research study will be summarized. Conclusions will be discussed in relation to the conceptual framework, and implications for nursing education, service, and research will be described.

CHAPTER VI

SUMMARY AND CONCLUSIONS

Overview

A research study was designed with the purpose of collecting descriptive data about grieving in middle adult males following an MI--a subject that has received no empirical attention. A conceptual framework based upon loss and grieving theory and Schneider's (1984) model of the dimensions of grieving following loss provided the structure to describe grieving themes within the cognitive and spiritual dimensions of grieving. Orem's (1980) self-care theory was utilized within this study as a basis for understanding the application of study concepts to the nursing process. A literature review of the impact of a myocardial infarction was completed, and loss and grieving concepts were applied to the empirical findings of the impact of an MI following hospital discharge. Grieving themes within the cognitive and spiritual dimensions and their defining characteristics were identified for the middle adult male with a myocardial infarction following hospital discharge.

A semi-structured interview schedule was developed to determine the frequency and duration of defining characteristics of grieving themes within the cognitive and spiritual dimensions. The interviews were conducted with fifteen middle adult males with their first myocardial infarction at four to six weeks following hospital discharge. A frequency distribution was calculated for the reported frequency and duration of defining characteristics within grieving themes in the cognitive and spiritual dimensions. Data provided about the frequency and duration of defining characteristics within grieving themes were utilized to address the study problems.

Within Chapter 6, study findings that were presented in the previous chapter will be discussed and interpreted. Sociodemographic characteristics of the study sample will be compared with the sample characteristics within previous research on the impact of an MI. Limitations of the study will be addressed, and study results will be interpreted in the context of study limitations. Recommendations for modification of the conceptual model and operationalization of variables within the interview will be presented. Methodological issues in the study of grieving will be discussed with identification of the strengths and weaknesses of qualitative and quantitative approaches Implications of study findings for nursing practice, nursing research, and nursing education will be identified.

Sociodemographic Characteristics of the Sample

In the following section, the sociodemographic characteristics of the study sample are discussed and compared with previous research on the impact of an MI and grieving following loss. The sample consisted of fifteen men with first MI, aged 40 through 60, who were interviewed between four and six weeks following hospital discharge. The researcher controlled for age, sex, previous MI, and complications of illness so as to describe the responses of individuals within one developmental phase who encountered an illness experience during middle adulthood and were progressing without medical complications through the rehabilitation phase of myocardial infarction. The homogeniety of the sample, however, limits the comparison with previous studies of the impact of an MI and grieving following loss.

The sample of men selected for this study ranged in age from 40 to 60 with a mean age of 48.4. The majority of studies of the impact of an MI (Mayou et al, 1978; McCorkle and Quint-Benoliel, 1983; Rudy, 1980; Wishnie et al., 1971; Ott et al., 1983) utilized samples with age ranges from 45 to 70 with means between ages 52 and 60. The age range of individuals within previous studies may have obscured the responses of individuals during middle adulthood. Neugarten (1970) states that an unanticipated event is more likely to precipitate upheaval within one's life if it is "off-time." It would be expected that illness experienced during the middle adult years would produce more disruption

than if illness were experienced after age 60. A group of studies (Bilodeau and Hackett, 1971; Croog, 1977; Idelson et al., 1974; Meyer, 1983) related to the impact of an MI excluded individuals above 60 years of age. Results of this research study are consistent with findings of previous studies which indicate that an MI during middle adulthood produces major distress as a result of the consequences of an MI, deprivation from modification of lifestyle habits, reevaluation of self-concept, and reevaluation of life situation.

Twelve out of the fifteen study subjects had incomes $30,000 or above. Previous studies of the impact of an MI (Croog, 1977; Mayou et al., 1978; Idelson et al., 1977; McCorkle and Quint-Benoliel, 1983; Ott et al., 1983; Stern et al., 1978) utilized samples with lower family income levels with means of $10,000 to $20,000 or socioeconomic status with means of Hollingshead class III. The previous studies indicated that the financial situation is a primary source of concern for individuals with lower socioeconomic status. Study results of grieving following an MI indicate that consequences of an MI upon the financial situation is a major source of concern in higher income groups also. A question to be raised by this study is: what is the relationship between socioeconomic status and financial situation as a source of distress, and why does this relationship exist? Meyer's (1983) study of adaptation to an MI from a developmental perspective is one

of the few studies of the impact of an MI with a sample of white collar workers. Meyer's (1983) study findings that white collar workers reevaluated their lives and made major life changes following reevaluation is partially supported by this study. Half of the study sample reappraised purpose within life following an MI.

The study sample was a group of men who were predominantly healthy prior to the MI, with twelve of the fifteen having no chronic illness prior to the MI and no previous history of an MI. All individuals were progressing satisfactorily at the time of the interview, with no rehospitalization and no complications of congestive heart failure or rhythm disturbance. In addition, the majority of the subjects were able to carry out their previous activity level without restriction. As men without a previous MI or complications from their first MI, they were, on the whole, persons with a relatively favorable medical prognosis. Previous studies of the impact of an MI have utilized samples with a history of an MI as well as a lower functional ability, presence of chronic illness, and complications of the MI (Mayou et al., 1976, 1978; Rudy, 1980; Stern, 1978; Wishnie, Hackett, and Cassem, 1971).

The sample of men utilized for this study were less likely to sustain losses associated with illness due to their relatively high activity and exercise levels, limited number of chronic illnesses, and lack of complications of

the MI than samples utilized within previous research. Given the favorable health status of the study sample, the extent to which these men experience grieving within the cognitive and spiritual dimensions has implications for the more typical and less fortunate general population of heart attack patients. The implication is that individuals who have a lower functional ability due to complications of an MI, presence of chronic illness, or a previous MI are more likely to sustain an increased number of losses or increased severity of loss associated with illness. The grieving experienced by individuals due to an increased number and/or severity of losses may be more intense than that of individuals with a more favorable health status. Therefore, the extent of grieving within the cognitive and spiritual dimensions, as documented within this study, is likely to be lower than the larger population of individuals who have sustained an MI.

One of the strengths of utilizing a homogenous sample related to the timing of an MI is that the experience of individuals at a certain point in the recovery process is described. Study results can then be compared with other studies of individuals at the same point in the resolution process following loss. The studies conducted by Croog (1977), Idelson et al., (1974), Mayou et al., (1978), McCorkle and Quint-Benoliel (1983), Rudy (1980), and Stern et al., (1978) all describe the impact of an MI at four to six weeks following the hospital discharge of a person with

an MI. Glick et al. (1974) and Parkes (1972) describe individuals at four to six weeks following a loss event. Previous study findings (Idelson et al. 1974; Rudy, 1980) that individual's engage in an interpretive process in an attempt to understand the cause of their MI are supported by study results. However, study findings indicate that individuals engage in searching prior to one month following hospital discharge and, in fact, may begin searching immediately following the MI.

The study results that individuals in this sample examined the consequences of loss upon their life situation and explored the implications of loss for the future is consistent with previous study findings (Croog, 1977; Idelson et al., 1974; Mayou et al., 1978; McCorkle and Quint-Benoliel (1983) which indicate that consequences and implications of an MI are identified as a source of distress at four to six weeks following hospital discharge. In addition, study findings are consistent with Glick et al. (1974) and Parkes' (1972) studies of grieving following loss in which individuals examined consequences of loss and explored implications of loss at approximately the same point following the loss event.

The study finding that approximately half of the sample engaged in components of reappraisal of purpose within life is the first empirical report to document a reappraisal process following MI at four to six weeks following hospital discharge. This finding is consistent

with Parkes' (1972) report that amputees restructure their plans for living in the world following loss. The study finding that individuals experience a challenge to their personal belief system support findings by Idelson et al. (1974) and Stern et al. (1978) that individuals experience threats to their belief in personal worth and control, and Parkes' (1972) findings that amputees experience a challenge to their assumptive world at four to six weeks following hospital discharge.

Limitations of the Study

The limitations of this study are related to the fact that concepts representing the phenomenon of interest, grieving following a myocardial infarction, are in their initial stages of development. The concepts of grieving within the cognitive and spiritual dimensions following a myocardial infarction have been explicated for the first time within this exploratory study. As such, the explication of the concepts is limited by lack of clarity and ambiguity at this point in the concept development process. The concepts utilized within this study are in need of concept clarification--the work of clarifying and relating abstractions about the phenomenon of interest. It is through repeated and systematic description of phenomena of interest to nurses, with synthesis of empirical descriptions, that concepts are developed and clarified (Norris, 1982).

During the development of study concepts, the research on chronic illness was not utilized. Consequently, concepts of grieving within the cognitive and spiritual dimensions with their defining characterisitics did not incorporate the state of knowledge about adaptation and adjustment to chronic illness.

Concepts of grieving within the cognitive and spiritual dimensions have been operationalized for the first time within this study. Limitations within the conceptualzation of the grieving experience of individuals following an MI have contributed to weaknesses within the conceptual operationalization. Within the interview, the use of terminology that was vague and abstract limited respondent understanding of the total meaning of several questions. The limited number of response alternative choices appears to have contributed to inaccurate measurement of duration of grieving themes due to inavailability of responses that most accurately reflected their experience.

In summary, it is this researcher's contention that limitations within the conceptualization of the grieving experience of individuals following a myocardial infarction and weaknesses in conceptual operationalization have conributed to inaccurate measurement of the extent of grieving themes within the cognitive and spiritual dimensions following an MI. Further concept clarification and modification of data collection methods is required prior to future empirical investigation of grieving associated with losses of illness.

Interpretation of Study Results

The problem under study is to describe grieving within the cognitive dimension of grieving and the spiritual dimension of grieving in middle adult males with a first myocardial infarction four to six weeks after hospital discharge. Research questions pertaining to the frequency and duration of defining characteristics within grieving themes were utilized to provide quantitative data to address the problem statements. For the cognitive and spiritual dimensions of grieving, study findings of importance will be described. Interpretation of study results will be discussed and conclusions will be identified.

Cognitive Dimension of Grieving

The cognitive dimension of grieving has been defined within this study as the thought processes utilized to perceive and comprehend a loss throughout grieving. The distinguishing feature of grieving within the cognitive dimension is losscentered thinking. Carlson (1978) states that during acknowledgement of loss, thinking is loss-centered, and the individual searches for every evidence of what has been lost, what the loss means in terms of daily life, and implications for the future.

Twothirds of the sample report experiencing two to four components of searching following the MI. This is consistent with studies of grieving which demonstrate that searching is exhibited following bereavement (Glick et al., 1974; Lindemann, 1944; Parkes, 1970a; Sanders, 197980).

Although only one-third of the sample were searching through their experiences in an attempt to understand and make sense of their loss at the time of the study, onethird of the sample indicated they had experienced two to four defining characteristics earlier in their convalescence. Study results suggest that searching is experienced as a grieving response to loss but indicate that the onset of searching begins earlier in convalescence.

The pattern of searching supports the conclusion that searching is one of the requirements for accepting the reality of the loss intellectually. Parkes and Weiss (1983) suggest that in order to successfully resolve major loss, the loss has to have a rationale, and the individual must be able to understand it. Making the loss understandable requires developing an "account" and an explanation of how it happened (Parkes and Weiss, 1983). Study findings suggest that searching is experienced early in convalescence as the individual is confronted by losses associated with illness and processes information related to the loss experience over time.

The consequences of loss are unique for each individual. While studies of bereavement indicate that the consequences of loss of a loved one include traumatic disruption of one's life and loneliness (Glick et al., 1974; Marris, 1974; Parkes, 1970a; Sanders, 197980), it is clear that the consequences of an MI are different from that of bereavement as indicated by empirical studies of sources of

distress following an MI (Bilodeau and Hackett, 1974;; Wishnie et al., 1974). Within this study, consequences of an MI following hospital discharge include alteration in heart's functioning, alteration in role of father, and alteration in the financial situation. The combination of consequences examined by each individual is different, and no clear pattern can be discerned. The consequences of loss depend upon the specific losses sustained and the individual's interpretation of the loss event (Carlson, 1978; WernerBeland, 1978).

The consequences of loss as perceived by the individual are examined as a component of grieving four to six weeks following the MI. Two-thirds of the sample examine two to four consequences of the MI once a week or more frequently. Nearly half of the sample examined one or more consequences of the MI for several hours or more every day or every other day. The study finding that individuals examine the consequences of loss upon their own life situations supports Werner-Beland's (1979) contention that individuals who sustain long-term illness are confronted with the consequences of their losses and must deal with these consequences as part of their grief work.

The consequence of loss that appears most distressing is the impact of the MI upon the financial situation. Based upon the review of the literature, it was expected that the consequences of the MI upon the role as a husband would be a source of distress. However, one half of the married men

indicated they did not examine this issue. This finding can be explained by the incomplete conceptualization of consequences of the MI upon their roles as fathers.

During acknowledgement of loss, the individual realizes that certain aspects of his lifestyle are thought to contribute to illness development (Carruth and Pugh, 1982; Werner-Beland, 1979). All individuals acknowledged the need to make lifestyle change, and fourteen out of fifteen men explored the need for two to four lifestyle modifications at four to six weeks following their hospital discharge. Three-quarters of the sample explored the implications of loss for three or four lifestyle modifications. However, most men indicated that issues of modification of lifestyle were explored briefly. This may be explained by the expectation that most men begin to implement the therapeutic regimen immediately following hospital discharge, and by the time a month has elapsed following discharge, modification of lifestyle habits is not a source of concern. An alternative explanation is that the choice of response alternatives may have not provided the most accurate description of their experiences. Many men indicated, in response to open-ended questions, that modification of lifestyle habits remained a focus of attention and a source of distress. In addition, several men indicated that the duration of issues of lifestyle modification was more than a few moments, but less than an hour.

In conclusion, loss-centered thinking is a characteristic of middle adult males with first MI at four to six weeks following hospital discharge as evidenced by the extent of searching, examination of consequences of loss, and exploration of implications of loss. The frequency and duration of grieving themes support the conclusion that searching, examination of consequences of loss, and exploration of implications of loss are grieving themes within the cognitive dimension.

Spiritual Dimension of Grieving

The spiritual dimension of grieving has been defined within this study as the processes utilized to redefine and internalize meaning and purpose within life after loss. The distinguishing feature of grieving within the spiritual dimension is that the individual is dealing with issues involving the nature of the self. He is questioning and appraising his existing life structure and the core of the self that has evolved through a lifetime of experiences. Schneider (1984) states that the spiritual process of grieving is reflected in the extent to which the person, through the process of grieving, can discover and internalize a sense of life purpose that no longer depends upon what has been lost.

Four individuals engaged in three or four components of the reappraisal process, sometimes every day for several hours or more. These may be the individuals for whom the illness of MI is the culminating event indicating where

they now stand as far as the goals in their lives and how far they have to go. Levinson (1978) suggests that, for the middle adult, a marker event such as major illness has special meaning; in his mind it symbolizes the outcome of his striving during young adulthood and represents the highest affirmation he will receive in this phase of his life. These men use the event of illness to estimate their chances for realizing their aims for the future. Study results which suggest that men reevaluate their lives support Meyer's (1983) reports that middle adult males reevalate their lives and make major life changes based upon their reevaluation.

One-third of the sample reports none of the components of reappraisal of purpose within life or one component of the reappraisal process for a few moments within the past week. These may be individuals who do not engage in a process of reappraisal of life purpose after loss. These may be men who do not reevaluate their lives in light of their MI, or they may choose not to look back at their lives due to the discomfort it evokes. One man replied in response to the question "How have you been looking back at your life as a result of your heart attack?"

> "...With this much time off, I've thought about a lot of things like that (mistakes made in life) but I don't think about them for too long of a period. That's why I like to be kept busy. Some of those things you really don't want to think about. You might not be satisfied with some of the answers or some of the mistakes you've made. You can't do anything about them anyway. So there's no sense in setting around dwelling on

> them. They're just common honest mistakes you made out of ignorance or lack of a better motive I guess."

Another interpretation is that the reappraisal process is in the initial phases or has not begun yet. Carlson (1978) states that the acknowledgement phase of grieving may last several months or more as the initial loss expands to include numerous secondary losses. She states that most individuals move beyond the painful phase of acknowledgement and go on to reorganize their lives. Therefore, reappraisal and reorganization may follow the full impact of loss. Further conceptualization and longitudinal investigation are required to determine at what point in the recovery process individuals engage in reappraisal following an MI.

Another interpretation is that the concept of reappraisal of purpose within life as defined within this study does not reflect the reappraisal process as experienced following an MI. Interview responses suggest that evaluation of additional components within the life structure takes place in addition to purpose within life. Therefore, the grieving theme of reappraisal of purpose within life after loss needs to be reconceptualized. Based upon reports by study respondents, reconceptualization will need to incorporate reevaluation of aspects of life structure and rethinking of one's value system.

Thirteen of the fifteen respondents experience a challenge to one or more beliefs following the MI. This

finding suggests that most individuals experience a challenge to their personal belief systems following the illness of a myocardial infarction. Nearly half experience a challenge to two beliefs or more every day or every other day. Study results support Parkes' (1972) assertion that major life transitions lead to a challenge to the existing assumptions about one's self and the need to modify one's assumptive world.

Interview responses suggest that some individuals experience a threat to their sense of competence without experiencing a challenge to their personal worth. Therefore, an additional component needs to be incorporated into the concept of challenge to the personal belief system.

A challenge to the belief in personal worth is experienced by one-third of the sample every day. However, for each belief within the personal belief system, approximately half of the sample stated they have never experienced a challenge to it. This finding may be explained by the hypothesis that certain subgroups within a sample of MI patients may be more likely to experience a challenge to their personal belief system. Another interpretation, in light of the limitations within the study, is that the concept of challenge to the personal belief system is in need of further clarification and refinement. In addition, terminology utilized within the interview led to ambiguity and inadequate conceptual operationalization.

In conclusion, reappraisal of purpose within life is a characteristic of some middle adult males with a first MI at four to six weeks following hospital discharge with first MI as evidenced by the extent of reappraisal of purpose within life after loss and challenge of the personal belief system. The extent of grieving themes supports the conclusion that reappraisal of life structure and challenge to the personal belief system are grieving themes within the spiritual dimension.

Methodological Issues In The Study of Grieving

Introduction

The purpose of nursing research is to develop nursing knowledge upon which to base improvements in nursing practice (Diers, 1979). There are two broad approaches to designing nursing research to generate the kinds of knowledge needed to improve nursing practice: qualitative and quantitative approaches. Qualitative and quantitative approaches to nursing research, with their rationale, will be described. The strengths and limitations of qualitative and quantitative approaches in the study of grieving will be described. The interview as a mode of data collection in the study of grieving will be discussed, including benefits and limitations of the interview in the study of grieving, the methods utilized within this study to maximize the benefits and minimize the limitations of the interview approach, and recommendations for modification of

the interview schedule. The benefits and drawbacks of studying grieving at one point in time will be discussed.

Quantitative and Qualitative Methods in the Study of Grieving

The kinds of nursing knowledge needed to improve nursing practice and the kinds of research problems posed depends upon the current state of nursing knowledge about the phenomenon of interest and guides the selection of research approach (Diers, 1979). When there are no ways to describe the phenomenon of interest to nurses or the usual way the situation is described does not help nurses improve clinical judgement, the researcher must develop ways to usefully characterize the important aspects of the situation (Diers, 1979). The purpose of a qualitative approach is to isolate factors within the phenomenon of interest, with their descriptive definitions, and to systematically develop and define concepts that will usefully characterize the phenomenon of interest (Diers,1979).

The quantitative approach assumes that the variables within the phenomenon of interest are known and quantitative evidence of the existence or the degree of concepts can be collected. The goal of the quantitative approach is to minimize the influence of contextual variables so that results of a study may be generalized to the population under study. In studies to determine the relationship between variables, this goal is usually sought by means of control and manipulation of variables.

In analyzing a nursing problem that is to be empirically investigated, the researcher begins with one's experience and the experience of others so that the phenomenon of interest is characterized in conceptual terms (Diers, 1979). In the observations of this researcher, aspects of the experience of individuals during convalescence following an MI resembled grieving following bereavement. The non-research literature indicated that, following illness, individuals experience grieving in response to loss associated with illness. However, there has been no empirical investigation of grieving following illness. Given the state of nursing knowledge about grieving following illness, a qualitative approach to empirical investigation of the experience of the MI patient from a grieving perspective is indicated. Empirical investigation of grieving utilizing qualitative methodology requires the researcher to pose the question "What is this? Grieving?"

The strength of qualitative methodology in the study of grieving is that the focus of the empirical investigation is upon understanding and conceptualizing the experience of grieving from the perspective of the study participants. A criticism of the qualitative approach to empirical investigation is that there is an absence of systematic quantitative analytic procedures which are required to convince other scientists of the validity of the results.

Quantitative research design requires thorough explication of the concepts involved in the phenomenon of interest, with their operational definitions. A model of the concepts, including their components and the stated relationships among them, allows the investigator to generate hypotheses to be tested and identify dependent and independent variables. Concept development of grieving within the cognitive and spiritual dimensions is in the initial stages of development and clarification. This researcher began the process of empirical investigation of grieving following illness through application of grieving concepts to the current state of knowledge about the experience of individuals following a myocardial infarction. A quantitative approach was designed, utilizing a standardized, semi-structured interview schedule.

The strength of the quantitative approach to the study of grieving is that, through application of theory to existing knowledge about the experience of individuals following an MI and quantification of the variables under study, the extent of grieving themes within the cognitive and spiritual dimensions can be objectively measured. Steps to minimize investigator bias and subjectivity can be taken during interview schedule development, thereby increasing control and reliability of the data collection methods in the measurement of grieving. Based upon study results, concepts can be modified and hypotheses can be generated about relationships between variables. Quantification of

study concepts offers the only scientifically acceptable method for determining relationships between variables.

A major limitation of the quantitative approach to the study of grieving is that in the process of quantification of variables, the richness and complexity of the human experience is not fully or precisely expressed. To quantify part of the experience of grieving is a simplistic reduction of the human experience. Another limitation of utilizing a quantitative approach in the study of grieving is that prior to this study, concepts of grieving following illness have not been conceptually or operationally defined. The concepts under study are in their initial stages of development and, as such, require clarification. Operationalization of conceptual variables which require clarification leads to imprecision and ambiguity in the development of instrumentation and analysis of quantitative data. An additional limitation in utilizing a quantitative approach to the study of grieving is that there are no instruments currently available with demonstrated reliability or validity to measure grieving concepts, as this researcher has conceptually defined them.

In summary, the major strength of the quantitative approach to the study of grieving, the approach utilized within this exploratory study, is that concept development of grieving within the cognitive and spiritual dimensions can be facilitated through application of grieving theory to the current state of knowledge about the experience of

individuals following an MI. The extent of grieving within the cognitive and spiritual dimensions can be documented through instrumentation designed to increase reliability of data collection. The limitations of the quantitative approach to the study of grieving were reduced within this study through inclusion of open-ended questions within the data collection instrument. Responses to open-ended questions and quantitative study results can be utilized to continue concept development and generate hypotheses for future investigations of grieving following illness.

The Interview as a Mode of Data Collection

The semi-structured interview was utilized within this study of grieving because the study aims required bringing to the respondent's awareness his experience related to the concepts under study prior to asking him to quantify his experience. In addition, the sensitive and personal nature of many of the topics addressed within the interview required the development of rapport and a trusting relationship to provide for maximum disclosure of information about the concepts under study.

An advantage of the interview in the collection of data about grieving is that the individual can be provided with the opportunity to verbally express his experience pertaining to the study concepts in his own words, through carefully worded questions and judicious use of probes. In an exploratory study of grieving, the use of open-ended

questions with probes facilitates the development of rapport and maximizes accessibility of data. When concepts are in the initial stages of development, responses to open-ended questions can lead to further development of concepts.

The interview as a data collection method is highly susceptible to errors of measurement. A limitation of the interview is that the interaction of respondent and interviewer can affect the subject's responses and introduce bias. Another limitation is that, due to the face-to-face nature of the interview, the individual may be reluctant to disclose requested information leading to inaccurate reports of his experience.

Many steps were taken during interview construction to maximize the benefits and overcome the limitations of the interview as a data collection and measurement tool. During interview schedule development, techniques for maximizing accessibility and motivation of the respondent to convey his experiences were incorporated to overcome barriers to communication. Reliability of the interview as a data collection tool was enhanced through construction of the interview schedule utilizing principles of research interview development, and conducting the interview guided by well-defined procedures for interviewer behavior. To reduce interviewer bias and increase the reliability of the interview, all respondents were presented with the same order of topics, the wording of all the questions remained

the same for all subjects, and the respondents were presented with a card from which to choose response alternatives in answer to quantifying questions. In seeking to quantify the extent of grieving themes, provision of response alternative choices ensures comparability of data. Subjectivity during data analysis was minimized because the respondent had chosen the response alternative which most accurately reflected his experience.

In summary, the use of a semi-structured interview is an effective mode of data collection in the study of grieving following an MI. The interview schedule was designed to maximize the benefits and minimize the limitations of the interview as a method of collecting data. The interview was effective in evoking the verbal expression of the respondents related to grieving concepts as well as evoking comparable information about the extent of grieving themes within the cognitive and spiritual dimension following a myocardial infarction.

Timing of Data Collection

There are benefits and drawbacks to measuring extent of grieving themes at four to six weeks following the hospital discharge of patients with a myocardial infarction. Benefits and drawbacks of studying grieving at one point in time will be discussed.

One benefit of investigating grieving during the selected time period is that application of grieving theory to the experience of an MI is based upon research which

describes the impact of an MI at a specific time within the recovery period--four to six weeks following hospital discharge. Therefore, it is within the period of four to six weeks following hospital discharge that one would expect to observe the defining characteristics of grieving themes as specified within the conceptual framework. Through identification of the frequency and duration of defining characteristics at one point in time, one can objectively describe the major issues which may confront individuals during one particular point in the recovery process following a myocardial infarction.

The major limitation of collecting data to describe grieving at one point in time is that it is difficult to describe progression through the grieving process and the changes in the nature of issues addressed during grieving. Sampling the extent of grieving themes at one point in time provides a limited perspective on grieving as a process. In sampling during one particular point in time, the problem is how extensive a coverage of the desired time period is needed to fully understand the nature of the phenomenon under study (Fox, 1983).

A drawback of describing grieving at four to six weeks following hospital discharge is that the data can not be used to describe changes in the extent to which individuals experience grieving issues during convalescence following an MI. Within this study, individuals experienced some of the grieving themes and their defining characteristics

prior to the time of data collection. In addition, as grieving continues, individuals will potentially confront grieving issues at a later point in time. Longitudinal investigation of grieving following an MI is required to describe changes in the nature of grieving over time, and the extent to which individuals experience grieving themes at different points in time.

Sample characteristics

As described previously, the sample selected for this study of grieving following illness is not representative of the general population of individuals who have sustained a myocardial infarction. The sample selected is a younger group of men, more highly educated, and has a higher income level than the general population of MI patients. In addition, the health status of the sample is better than the general population of men with MIs as evidenced by the history of no previous MI, lack of complications of MI, lower number of chronic illnesses, and higher activity and exercise level at four to six weeks following the MI. The sample selected may experience a smaller number of losses than the population of heart attack patients due to higher health status, higher functional ability, and more favorable financial status. Grieving experienced by the sample under study is potentially less extensive than in a sample more representative of MI patients. Future investigations of grieving must explore the extent of grieving following an MI with samples more representative

of the population of MI patients. In addition, factors of age, socioeconomic status, health status, activity limitations, and their relationship to losses experienced and the extent of grieving following an MI must be explored through control and manipulation of these variables.

Qualitative Analysis

There was a descrepancy between the experience of grieving as described in response to open-ended questions and the response alternatives chosen to quantify the extent of grieving themes. Analysis of discussion within the post interview and some of the inconsistencies between verbal expression of experience and choice of response alternatives suggests that the descrepancy was the result of several factors. The descrepancies appear to be the result of a lack of clear conceptualization of some of the concepts. Areas of descrepancy include description of examination of consequences of the MI upon role as a husband, exploration of new methods to achieve goals, and challenge to all beliefs within the personal belief system.

The mens' responses to open-ended questions within the interview yielded a vast quantity of potentially insightful information about the experience of middle adult males following an MI. It is this researcher's contention that a qualitative analysis of responses within the interview will yield different information than measurement of grieving themes, which can be used to clarify and continue the development of grieving concepts. In addition, an outcome

of a qualitative analysis of interview responses would be the formulation of hypotheses that could be tested more formally in subsequent research.

In the analysis of interview responses utilizing a qualitative approach, the researcher would do a content analysis to classify the content of responses to open-ended interview questions. Content analysis is a procedure for the categorization of verbal and behavioral data for purposes of classification, summarization, and tabulation. The purpose of content analysis is to systematically and objectively describe the attributes of communication (Fox, 1982). A semantic content analysis involves the development of a set of categories intended to represent the actual content of the responses (Fox, 1982). A categorization system for classification of interview responses would be developed integrating the recommended changes in the conceptual model, making explicit the system of coding interview responses. Based upon the content analysis of the data, hypotheses would be generated for further empirical investigation.

Recommendations For Change Based Upon Study Results

Recommendations for Modification of Conceptual Model

The concepts which formed the basis for the research need to be revised and reformulated to more accurately describe the experience of grieving following illness. Concepts in need of revision based upon study results will

be discussed with recommendations for revision of the conceptual model. (Figures 4 and 5)

Within examination of the consequences of loss, the consequences of the MI upon the role of father was examined by a large majority of the respondents with children. Examination of the consequences upon the role as husband was reported by relatively few men. Responses to open-ended questions indicated that some men examined the impact of an MI upon the relationship between their wives and themselves. Therefore, the researcher recommends development of two separate defining characteristics for consequences within the family: examination of consequences of the MI upon the husband-wife relationship and examination of consequences of the MI upon father-children relationships. This will enable the researcher to investigate two distinct consequences of loss in future investigations.

Reappraisal of purpose within life after loss as defined within this study takes place for approximately half of the sample. Interview responses suggest that reappraisal of purpose may be part of a larger process of reevaluation of life structure following an MI. Concept development of reappraisal of life structure, based on interview responses, will include reflection upon accomplishments within life, evaluation of importance of goals pursued prior to the MI, decision to affirm selected goals and/or choose alternate goals, exploration of alternate goals, exploration of new methods to achieve goals, and rethinking of the value system.

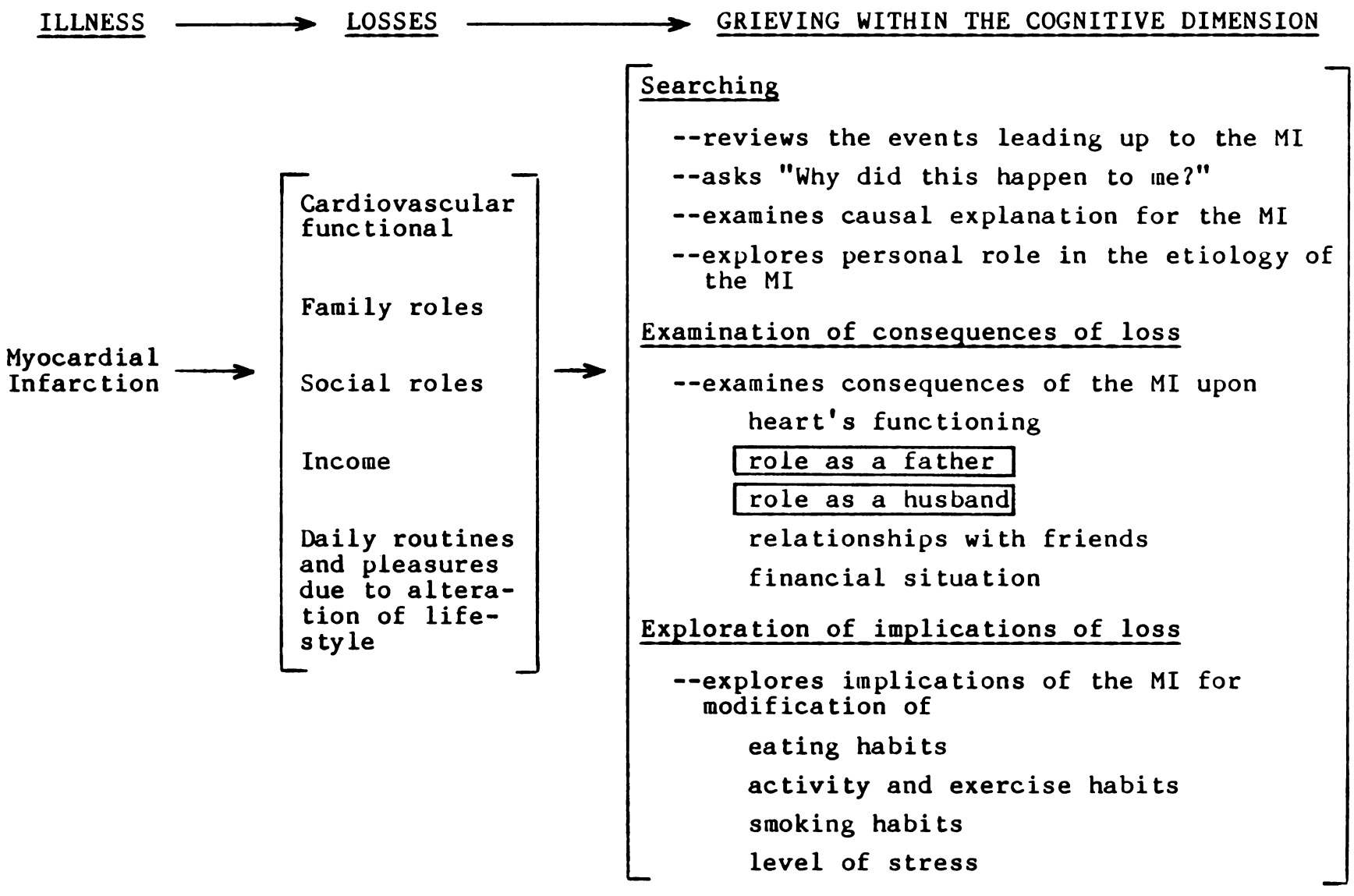

Figure 4. Revised model of grieving within the cognitive dimension. (Outlined areas have been modified)

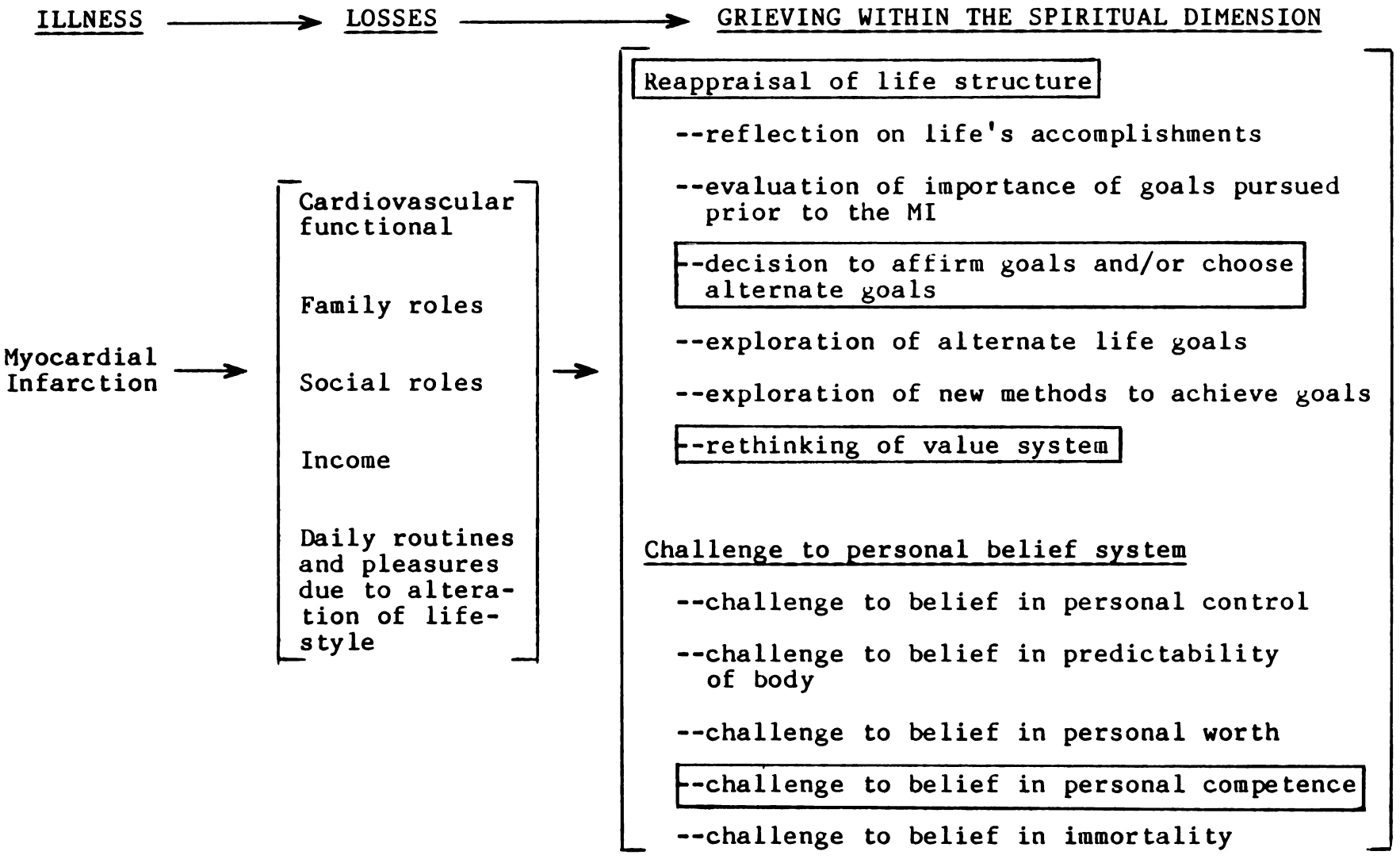

Figure 5. Revised model of grieving within the spiritual dimension. (Outlined areas of model have been modified)

Study findings indicate that some individuals experience a threat to their sense of competence. These individuals do not experience a challenge to their belief in personal worth which suggests that these are separate concepts. For example, several men expressed concern about their ability to return to their previous capabilities without reporting a challenge to their belief in personal worth. The threat to the sense of competence is a source of distress which suggests that one of the beliefs challenged following an MI is the belief in competence to return to previous capabilities.

Recommendations for Modification of Interview Schedule

Based upon observations of the responses of subjects to questions within the interview, a description of the barriers to accurate collection of data within the interview will be provided. Recommendations for modifications within the interview schedule to more effectively operationalize study variables will be described.

Within the cognitive dimension, conceptualization of the defining characteristics of examination of consequences of the MI upon the role of husband did not specify aspects of the husband role upon which the MI may have an impact. Therefore, questions within the interview selected to elicit his experience regarding this defining characteristic were ambiguous, leading to lack of understanding of the full meaning of the questions. In addition,

questions regarding examination of consequences of the MI upon the role as a husband came early in the interview before the development of rapport and trust. As a result of the ambiguity of the defining characteristic and inadequate operationalization, study results to measure the extent of examination of consequences of the MI upon role as husband are likely to be inaccurate. It has been recommended that the defining characteristic be changed to examination of consequences of the MI upon the relationship between husband and wife. The researcher must identify the various aspects of the marital relationship that the respondent must consider in responding to questions which operationalize the extent of examination of this consequence so that he is aware of the full meaning of the questions.

The operationalization of exploration of implications of loss was confusing to many people within the interview. It is the author's contention that inadequate operationalization stems from the lack of clarity of the concept. Many men had made modifications within their lifestyles by the time of the interview. Questions designed to elicit their thoughts about the need to make lifestyle modifications did not distinguish between thoughts about modifications already made and thoughts about the need to make lifestyle modifications in the future. The limitation within this concept is that lack of concept clarity leads to imprecise operationalization.

In development of the concept of reappraisal of purpose within life after loss, the concept was defined as the reappraisal of life choices and goals following the MI. In response to open-ended questions, several respondents described reevaluation of aspects of life structure not presently incorporated by the concept. In addition, questions to operationalize extent of reappraisal of life purpose after loss contained terminology that did not adequately convey the total meaning of questions to all individuals. Consequently, in response to open-ended questions about reappraisal of purpose within life, several men described their experiences with defining characteristics of this concept while later, in response to questions about frequency and duration, they stated they never experienced defining characteristics of reappraisal of purpose within life. It appears that modification of the concept to incorporate reappraisal of additional aspects of life structure may more accurately describe the reevaluation process that takes place in middle adult males following an MI. There is a need for revision of the concept and modification within the interview based on further concept development. In addition, terminology that have different meanings to people or that are abstract must be more specific.

The limitation of not utilizing the body of literature about chronic illness in concept development is most clearly evident in the concept of challenge to the personal

belief system, i.e. challenge to the beliefs in predictability and immortality. Operationalization of challenge to each of the beliefs within the belief system included terminology which prevented the full understanding of the meaning of the questions as evidenced by requests for clarification during the interview and discussion within the post-interview. Full clarification of the concept must precede modifications within the interview. Terminology to convey the meaning of abstract terms must be incorporated in interview questions.

In determining alternate methods to measure the extent of grieving within the cognitive and spiritual dimensions, the researcher would review the literature for study methodology in the measurement of the extent to which individuals engage in processes of adaptation to illness. In considering alternate ways of measuring grieving, the researcher would continue to measure frequency and duration but would modify response alternatives to more accurately reflect the individual's experience.

Implications of Study Results For Nursing

Nursing Practice

The Clinical Nurse Specialist (CNS) is concerned with the components of self-care now modified by both the myocardial infarction and grieving following loss and their effects upon man's integrated functioning. The CNS is also concerned with the developmental and health-deviation components of care that arise as a result of the MI and

grieving in response to loss. As self-care is both an on-going activity and a competence to be developed (Orem, 1980), the CNS is concerned with developing increased competency for universal self-care in health maintenance and health promotion.

The design of a nursing system to meet patient needs emerges as the nurse and the patient interact and take action in order to (a) calculate and meet therapeutic self-care demands, (b) overcome identified action limitations of patients, and (c) regulate the development and exercise of the patient's self-care abilities (Orem, 1980). The initial measurement of the patient's need for nursing begins at the time of entry into the health care system with the seeking of subjective and objective information with the purpose of designing an individualized nursing system. The foundation for the design of an individualized system of nursing is identfication and description of the nursing focus (Orem, 1980). Six components of the nursing focus include the patient's perspective of the health situation, the physician's perspective of the patient's health situation, the individual's state of health, health results sought, therapeutic self-care demand, and present abilities and disabilities to engage in self-care (Orem, 1980).

Identification of the patient's perspective of the health situation during grieving the losses associated with an MI begins with identification of perceived losses

immediately following the MI. Assessment of objective characteristics of change within the person's life following an MI and the subjective meaning of the change events must be accomplished to determine actual and potential losses. Change events take on meaning according to how, and the extent to which, they affect the individual's actual and potential goal achievement. Since loss is defined in goal-achievement terms, careful assessment of the individual's goal structure, patterns of working toward goals, and success in goal achievement are necessary to discover actual or potential losses as a result of myocardial infarction. On-going assessment of loss is essential because all losses may not occur at one time. Initial loss may expand to include numerous secondary losses (Carlson, 1978).

Calculation of therapeutic self-care demand for the individual who is grieving the losses associated with an MI involves identification of self-care deficits as a result of the MI or grieving responses to loss. For example, one of the universal self-care requisites is maintenance of a balance between solitude and social interaction (Orem, pg. 42). The CNS must recognize that during recovery following an MI, the individual does not return to work for six to eight weeks, his daily routine is altered as he remains home with family members, and his interaction with peers is altered as he is not participating in the work setting. The nurse must assess the impact of the MI upon the

maintenance of a reasonable balance between solitude and social interaction in light of alteration in his daily routine. Health-deviation self-care requisites of the individual grieving the losses associated with an MI arise from therapeutic and rehabilitative measures utilized to treat the MI, the coronary artery disease process itself, and grieving responses to loss. The health-deviation self-care requisites of the middle adult male who is grieving the losses associated with an MI have been identified within Chapter 2.

The self-care requisites of the individual who is grieving the losses associated with an MI will be met through the supportive-educative nursing system which is appropriate for situations where the individual is able to perform, or can and should perform, required measures of therapeutic self-care but cannot do so without assistance. Helping techniques within the supportive-educative system include combinations of support, guidance, provision of a developmental environment, and teaching. Health results sought by the individual who is grieving the losses associated with MI include: myocardial healing, development of a lifestyle conducive to decreasing the coronary artery disease process, and successful resolution of losses. Specific health results sought through nursing intervention utilizing the supportive-educative nursing system include: development of an account of events that makes the onset of the MI understandable, identification of

consequences of loss for his life situation, identification of goals for lifestyle modification, and implementation of health behaviors for risk reduction and health promotion. Additional health results sought include clarification of personal goals with greater consistency between goals and behaviors and maintenance of self-esteem. (Figure 6). The helping methods within the supportive-educative nursing system utilized in working with the person who is grieving the losses associated with an MI to attain the ultimate goal of successful resolution of losses will be described.

Facilitation of the work of grieving begins by respecting the work of grieving as a process of healing and growth (Schneider, 1984). The work of grieving requires the presence of an on-going and supportive relationship and time for healing. The CNS provides psychological support and an understanding presence to the person who is confronting the difficult issues that arise during grieving following an MI. These issues include exploration and identification of losses and exploration of the meaning of the losses within one's life. Within the safety of a supportive relationship, the person is provided with the opportunity to "tell the story" of the event of the MI to a caring listener who is interested in assisting the person to explore the full impact of what he has experienced. By allowing and encouraging the person to review the events leading up to the MI, to examine the causal explanation for the MI, and to explore his personal role in the etiology of

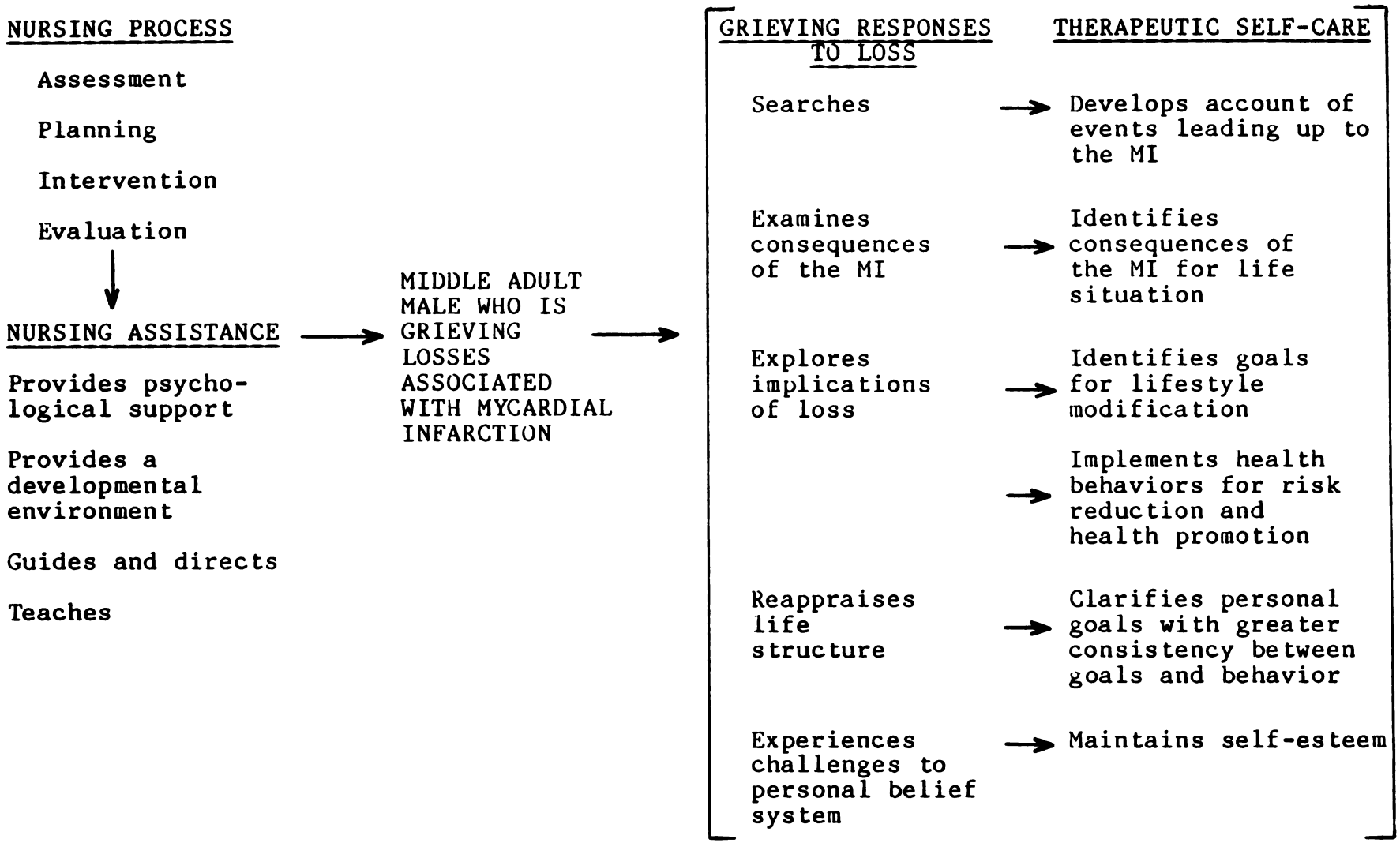

Figure 6. Revised model of nursing assistance to a middle adult male following an MI.

the MI, the CNS enables the person to develop his account of loss--an explanation of how the loss happened--and assists him to make sense of the loss.

One method of providing support is for the nurse to share with the person who has sustained loss her understanding about how people heal following loss. Through identification of the losses experienced and connection of losses with the grieving process, the individual will understand the normality of his experience, he will be provided with "permission" to grieve and will view grieving as a path toward healing.

Providing a developmental environment requires the nurse to provide or help provide environmental conditions that motivate the person being helped to establish appropriate goals and adjust behavior to achieve results specified by the goals (Orem, 1980). At the time of examination of life choices and goals, the CNS provides opportunities for interaction with the patient to explore his goals and increase his personal awareness of the degree of consistency between stated goals and present behaviors. In addition, the nurse provides opportunities for the individual to identify and express threats to his beliefs about himself. The nurse can create an environment where the person can be free to move toward self-organization as he confronts the realities of his losses.

As the individual grieves the losses associated with the MI, he is in need of on-going sources of social

support. The role of the CNS is to assess, strengthen, and develop social support systems to assist in the mobilization of resources to deal with loss. The CNS can assist the person in reviewing his existing resources for social support, for it is important for him to be aware of sources of support available to him. After examining sources of support, the individual and the CNS can mutually determine the adequacy of support. If inadequate, decisions should be made concerning what could be done to enhance existing social support networks.

The MI is a source of loss not only to the person who has the heart attack, but to members of his family. The CNS must assess family response to the MI and the adequacy of the supportive network within the family for coping with the events associated with the MI. Families, in order to provide appropriate support to family members, must be sensitive to the needs of family members, maintain effective communication, respect the unique needs of members, and establish expectations of mutual help and assistance (Pender, 1982). The CNS is in a unique position to provide anticipatory guidance and education to family members about rehabilitation following an MI and grieving as a response to losses associated with an MI. The nurse can assess the ability of family members to remain supportive of each other and provide support. The CNS encourages communication about the difficult issues that family members are confronting and assists them in understanding the unique

responses of one another. The CNS assists in the establishment of appropriate expectations for help and assistance by the heart attack patient.

A one-to-one relationship is only one approach to assisting in the resolution of losses. The CNS can organize and facilitate a support group in which individuals who are confronting the same issues participate in discussion, share experiences and consider together the problems they encounter in the attempt to redirect their lives. Weiss and Parkes (1983), in their discussion of the use of support groups following loss of a spouse, state that a group experience can be helpful in the process of coming to terms with the consequences of loss and moving on to a new life with new goals. In addition, groups with an educational emphasis provide a temporary community, together with access to needed information. Groups with an educational emphasis provide information, support, and linkages to others--all aimed at restructuring life.

While self-care in carrying out activities of daily living is one form of self-care, self-care also includes actions directed toward health promotion. Self-care for health promotion requires that the individual acquire knowledge that can be used to maintain and enhance health. Health education consists of teaching and counseling activities in which information is imparted to the client, and he is guided in applying what has been learned to every day living (Pender, 1982). During his exploration of

implications of the MI for modification of lifestyle, the individual needs accurate and timely information about recommendations for a therapeutic regimen and it's rationale. The nurse assesses readiness to learn and the knowledge the person possesses about the various courses of action available to him to maintain and promote health. To reach mutually agreed upon goals, the CNS provides planned learning experiences related to monitoring activity tolerance, development of a progressive exercise program tailored to the patient's health state, nutrition and weight control, stress reduction, and medications. The CNS provides education about other courses of action available to him to reach desired health outcomes.

Guiding is a method of assisting in situations where the person must make choices or pursue a course of action with direction and supervision (Orem, 1980). Following exploration of implications of the MI for modification of lifestyle habits, the individual makes choices about incorporating health-promoting behaviors into his daily life. The CNS guides the individual through the process of health education, assists the person in setting short and long-term goals, and assists him in maintaining healthful practices. In addition, the CNS plays a critical role in assisting the person to increase his awareness of the reappraisal process as an opportunity for personal growth, assisting him to clarify personal goals and make self-initiated changess in order to achieve valued goals.

Orem (1980) suggests that through providing emotional support and an on-going supportive relationship, the nurse is able to encourage the person to persevere in the performance of difficult tasks, such as the tasks of grieving, to think about unpleasant situations, or to make a decision. In addition, within an on-going relationship, following resolution of losses, the individual may want to explore and share the changes and growth he has experienced with someone who knows what he has or is going through.

As part of the counseling role, the CNS must assess the person's grieving responses to loss to determine whether the person is experiencing depression. The nurse will be alert for signs that the individual requires treatment and referral for depression, such as persistent inability to carry out universal self-care measures, sleep disturbances, a sense of worthlessness, suicidal ideas or feelings, or a consistent sense of depletion.

Nursing Research

Prior to empirical investigation, the concepts of grieving within the cognitive and spiritual dimensions, as well as their grieving themes, are in need of further clarification and refinement, as specified within the recommendations for revision of the conceptual framework. In additon, operationalization of the study concepts need to be considered in light of further conceptual development.

Responses to interview questions, in addition to study results, provide a basis for continuing the conceptualization process and provide a rich source of data from which to revise and refine the concepts. From concept clarification will evolve clearer and more specific interview questions which will enable the researcher to explore grieving following loss in future investigations. Specifically, interview questions need to be developed to explore the concept of examination of consequences of the MI upon the marital role. Responses to interview questions suggest that components of the marital role need to be identified for the respondent in order to most effectively measure the extent of examination of this issue. Challenge to the belief in personal worth must be conceptually distinguished from challenge to the belief in competence in order to develop questions to tap these concepts.

Descriptive studies should be undertaken to compare grieving of adults within different age groups following illness, to begin to understand how the extent of grieving within selected dimensions differs according to developmental phase. Studies of loss and grieving during adulthood must incorporate a developmental perspective. Studies should also be designed to compare grieving of middle adults in response to different types of losses, i.e. compare the grieving response to losses of illness with the grieving response to the loss of a job. A comparative study of grieving following losses of differing

severity should examine the relationship between severity of loss and grieving. Other topics for empirical investigation suggested by study results included: what are the losses perceived by middle adults following a myocardial infarction, and what is the relationship between objective change events and the perception of loss?

Longitudinal study needs to be undertaken to describe grieving immediately following the onset of illness, as well as during long term resolution of losses. Based upon study findings, similarities and differences in grieving at different points can be identified and hypotheses can be generated for further empirical investigation. Based upon the study finding that searching takes place prior to the interview, longitudinal investigation of the extent of searching is required. Specifically: (a) what is the extent of searching one week following the illness event and two weeks following hospital discharge?, (b) what is the relationship between searching during hospitalization, following hospital discharge, and identification of a causal explanation for the MI?, (c) what are the losses experienced by the middle adult male during the first year following a myocardial infarction, and (d) what is the relationship between interuption of goal achievement as a result of MI and perception of loss during convalescence?

On the basis of study findings of defining characteristics within grieving themes, several areas will be identified as requiring further empirical investigation.

Role changes within the family and response to role changes requires exploration. Seven out of tem men with children living at home report examination of consequences of the MI upon their roles as fathers. As there have been no other studies that have investigated parental role change following an MI, this topic needs exploration. Investigation of marital role change and response to role change from a developmental perspective requires investigation, due to the inconsistency of research findings.

The process of reappraisal within life following an MI requires further conceptualization and empirical investigation. Study findings indicate that some people engage in a process of reappraisal of purpose within life following an MI and some do not. What distinguishes the individuals who reevaluate their lives in light of their illness from those who do not?

Nursing Education

During the educational process, the nurse must develop a knowledge base about loss and grieving theory, adult development, the impact of illness upon adults, and how the phases of adult development affect grieving responses to losses associated with illness. Grieving theory is currently offered as part of the curriculum in most undergraduate and graduate nursing programs, most often presented as grieving in response to bereavemnt. Grieving theory must be integrated into the curriculum and applied to the experiecne of individuals who have sustained various

types of losses throughout adulthood. It is important for the nurse to learn to recognize personal losses that may take many forms, including changes in health, changes in body function, and changes in the life situation of the individual. In this context, the Clinical Nurse Specialist in primary care must be educated to assess an illness experience for actual and potential losses, on an on-going basis, through systematic assessment of the meaning of the illness and how the illness affects the individual's goal achievement.

The nurse must develop an understanding of grieving as the normal healing response to loss, and be able to facilitate the grieving process. Most of the educational offerings of grieving theory utilize a stage model of the grieving process. Little research has been conducted on grieving following illness. In addition, there is limited empirical support for the progression of grieving in sequential stages. Therefore, the nurse must be well-versed in the most current theories of grieving in light of the most recent research on grieving responses to loss and manifestations of grieving. Through education about the manifestations of grieving, the CNS will recognize the individuals who present to the health care system with symptoms of unresolved loss, or self-care deficits related to grieving response to loss. Therefore, the CNS must be educationally prepared to manage presenting symptoms, as well as facilitate the healthy resolution of loss. The CNS

in primary care must be prepared to utilize clinical judgement in diagnosing responses to losses associated with illness. In addition, the CNS must be prepared to distinguish between normal grieving and the pathological variants of grieving including depression and pathological grieving.

Stevenson (1978), in her discussion of adult development, suggests that within our educational system individuals should learn to accept lifelong growth and change as a condition of being human. Therefore, education about human responses to health problems must have a developmental perspective. It is imperative that nursing education at the undergraduate and graduate level include the developmental phases of adulthood and the health care needs of adults within the curriculum. Specifically, the nurse must be aware of the issues and tasks that are being addressed by men during middle aduldthood, and how these developmental issues affect, and are affected by, the response to a myocardial infarction. The CNS will then be able to provide primary care, from a developmental perspective, on an on-going basis to the person who has had an MI.

Working with individuals who are grieving the losses associated with an illness can be one of the most personally demanding forms of nursing assistance. One of the implications of this study for nursing education is that any program that undertakes to educate nurses in the

facilitation of positive loss resolution must provide on-going faculty support and guidance. Study findings indicate that issues likely to surface during the nurse-patient relationship following an MI include attempts to make sense of the loss, reappraisal of life structure, and confrontation with issues of mortality and personal control. As the CNS is learning to assist other adults in struggling with these issues of an intense nature, the student must be provided with opportunities to become aware of grieving responses to loss in her own life, and develop an awareness of how life experiences have shaped her attitudes and feelings toward loss. With faculty guidance and direction, the student will be provided with opportunities to utilize and develop her personal resources and develop her counseling skills as she assists clients to deal constructively with loss issues. Through self-awareness of one's life experiences and personal resources, and the counseling skills developed through faculty-guided clinical experience, the CNS will be prepared to assist clients in the positive resolution of their losses.

Another implication of study findings for nursing education is that the CNS needs to learn specific skills and strategies of intervention for the person who is grieving the losses of illness. The individual who engages in searching and examination of consequences of loss requires a nurse with adavanced skills in active listening. Study results indicated that individuals

explore the implications of loss for modification of lifestyle habits and, therefore, the nurse must be skilled in facilitating self-directed change. As part of an educational process, the nurse must learn the process of health education for self-care and strategies for education for health-promoting behavior. As the CNS will be providing support and guidance to individuals who are reappraising their life structure, the CNS needs to learn strategies for values clarification to assist the person to make important decisions about the direction of his life.

Summary

The major contribution of this study has been to demonstrate that grieving following losses associated with a myocardial infarction can be usefully characterized through use of the concepts of cognitive dimension of grieving and spiritual dimension of grieving. Another contribution of this study has been to demonstrate that the semi-structured interview is an effective method of data collection in the quantitative approach to the study of grieving. Study results of the extent of grieving themes within the cognitive and spiritual dimensions of grieving can be utilized to further develop concepts of grieving following losses associated with a myocardial infarction.

APPENDICES

APPENDIX A

INSTITUTIONAL APPROVAL

ST. LAWRENCE HOSPITAL
A DIVISION OF
SISTERS OF MERCY HEALTH CORPORATION

APPROVAL/DISAPPROVAL STATEMENT FOR CLINICAL INVESTIGATION

Clinical Investigation 83-1219-8 A Study to Describe Grieving Responses to Loss in Middle Adult Males After First Myocardial Infarction Karen Risch, R.N. Michigan State Univ.

was approved/disapproved on 12-19-83
date

WITH THE FOLLOWING CONDITIONS: Approval of nursing staff

Following are the names of the Human Subject Research Committee members whose APPROVAL vote is recorded for the Clinical Investigation:

David Rowe
Duane Warren
D. Miller
J. Theslook
Kathleen Dietz
Judy Hamburg

Following are the names of the Human Subject Research Committee members whose DISAPPROVAL vote is recorded for the Clinical Investigation:

The continued status of this study shall be formally reviewed by the HSRC on or before 12-19-84.
date

If you conclude your invesitgation prior to this date, please inform the Committee.

Original - file copy - investigator copy - pharmacy

INGHAM MEDICAL CENTER
401 W. Greenlawn Ave.
Lansing, Michigan 48909
(517) 374-2121

December 22, 1983

Walter Baird, M.D.
Cardiac Clinic
405 W. Greenlawn
Lansing, MI 48910

Dear Dr. Baird:

This is to advise you that the Board of Trustees of Ingham Medical Center approved your recently submitted research protocol entitled, "Grieving Responses to Loss in Middle Adult Males after First Myocardial Infarction" at its meeting December 19, 1983.

Sincerely,

Lynda Sanders
Research Committee

cc: Ms. Karen Risch, R.N.

APPENDIX B

UCRIHS APPROVAL OF RESEARCH STUDY

MICHIGAN STATE UNIVERSITY

UNIVERSITY COMMITTEE ON RESEARCH INVOLVING
HUMAN SUBJECTS (UCRIHS)
258 ADMINISTRATION BUILDING
(517) 355-2180

EAST LANSING • MICHIGAN • 48824

July 12, 1984

Ms. Karen Risch
3945 E Holt
Webberville, Michigan 48892

Dear Ms. Risch:

Subject: Proposal Entitled, "A Study to Describe Grieving within the Cognitive and Spiritual Dimensions in Middle Adult Males Four to Six Weeks After Myocardial Infarction"

UCRIHS review of the above referenced project has now been completed. I am pleased to advise that the rights and welfare of the human subjects appear to be adequately protected and the Committee, therefore, approved this project at its meeting on July 2, 1984.

You are reminded that UCRIHS approval is valid for one calendar year. If you plan to continue this project beyond one year, please make provisions for obtaining appropriate UCRIHS approval prior to July 2, 1985.

Any changes in procedures involving human subjects must be reviewed by the UCRIHS prior to initiation of the change. UCRIHS must also be notified promptly of any problems (unexpected side effects, complaints, etc.) involving human subjects during the course of the work.

Thank you for bringing this project to our attention. If we can be of any future help, please do not hesitate to let us know.

Sincerely,

Henry E. Bredeck
Chairman, UCRIHS

HEB/jms

cc: Given

APPENDIX C

CONSENT FORMS

INITIAL CONTACT CONSENT FORM

MICHIGAN STATE UNIVERSITY
COLLEGE OF NURSING

I, _____, would like to be contacted by Karen Risch, R. N. concerning participation in a research study on the impact of a heart attack after discharge from the hospital. This consent form only gives permission to contact me about the study. This form does not obligate me to participate in this study.

Signature _____ Date_____

Signature
of witness_____ Date_____

Michigan State University
College of Nursing
Consent Form

Investigator: Karen Risch, R.N., B.S.N.
Graduate Student
Family Clinical Nurse Specialist Program
Michigan State University
(517) 521-4027

Date

Dear

The study in which you will participate is designed to determine the impact of a heart attack upon men between the ages of 45 and 60. The results of this study will be utilized to determine how nurses can help men who have had a heart attack. This study is being conducted by myself as part of the requirements for a master's degree in nursing.

Participation in this study should take about one hour of your time and will require you to respond to a series of questions as honestly and accurately as you can. The interview will take place at your home during a time of your choice and will be tape-recorded. Please be assured that your answers will remain confidential. There will be no identifying information on the tape or within the report of study results. In addition, the tapes of the interview will be erased following completion of the study. You may withdraw from the study at any time. Participation or withdrawal from the study will in no way affect the care you are now receiving.

If you have any questions, please call the researcher at any time. I will be pleased to send you a summary of the results of the study following it's completion if you so desire.

Thank you for your time, effort, and co-operation.

Sincerely,

Karen Risch, R.N.
Family Clinical Nurse
Specialist Student
(517) 521-4027

I voluntarily consent to participate in this research study. I have had an opportunity to ask questions. I may change my mind to not participate in the study before the study is completed if I choose to do so.

I give permission for access to my hospital chart by the researcher for the purpose of obtaining information that will be used to describe the group of study participants.

Signature _____ date _____

Signature of
investigator _____ date _____

APPENDIX D

INTERVIEW SCHEDULE

INTERVIEW SCHEDULE

People who have had a heart attack go through many changes in their lives as a result of their illness. THe heart attack has an impact upon each person in different ways, including relationships with family and friends, activities, and other areas of life. In addition, many people modify their way of life as part of recovering from the heart attack and preventing another one. Some people report that a heart attack leads them to reconsider their attitudes about the quality and direction of their lives. The changes that occur for the person who has had a heart attack mean that he is dealing with many different issues and concerns.

As we have talked about before, the purpose of this study is to determine what kinds of issues and concerns that people who have had a heart attack are facing at this point in their recovery. The focus of the questions in this interview will be on the issues and concerns that are on your mind, now, as a result of your heart attack--and how important these issues are to you. I will be asking questions about how much time you spend dealing with the issues that you are facing.

Following a heart attack, a person has many thoughts related to his heart attack. I would like to focus upon the ways in which you have been thinking about your heart attack recently. I will be asking questions about how much you have been thinking about your heart attack.

In what ways have you been thinking about your heart attack recently? (use of neutral probes)

Do you find yourself reviewing the events leading up to your heart attack? (use of elaborative probes)

How often do you review the events leading up to your heart attack?

The last day you thought about the events leading up to your heart attack, how long was this on your mind?

Do you find yourself trying to figure out why your heart attack happened? (use of elaborative probes)

How often do you try to figure out why your heart attack happened?

The last day you tried to figure out why your heart attack happened, how long was this on your mind?

Do you try to figure out your own role in bringing on your heart attack? (use of elaborative probes)

How often do you try to figure out your own role in bringing on your heart attack?

The last day you tried to figure out your role, how long was this on your mind?

Do you ever ask yourself why this heart attack happened to you? (use of elaborative probes) Do you ever say to yourself "Why me?"

How often do you ask yourself why this heart attack happened to you?

The last day you asked yourself why this happened to you, how long was this on your mind?

Following a heart attack, changes can take place in many different areas of a person's life. The consequences of a heart attack are different and unique for every person depending upon his medical condition and his life situation. I would like to focus, now, on the changes that have occurred within your life as a result of your heart attack. I will be asking questions about how much you have been thinking about the changes in your life since your heart attack.

What kinds of changes have you noticed in your life as a result of your heart attack? (use of neutral probes)

Do you think about how your heart's functioning has changed because of your heart attack? (use of elaborative probes)

How often do you think about the change in your heart's functioning?

The last day you thought about the change in your heart's functioning, how long was this on your mind?

Do your think about how your role as a husband has changed since your heart attack (use of elaborative probes) Have you noticed a change in your relationship with your wife?

How often do you think about the change in your role as a husband?

The last day you thought about the change in your role as a husband, how long was this on your mind?

Do you think about how your role as a father has changed since your heart attack? (use of elaborative probes) Have you noticed a change in your relationship with your children?

How often do you think about the change in your role as a father?

The last day you thought about the change in your role as a father, how long was this on your mind?

Do you think about how your financial situation has changed because of your heart attack? (use of elaborative probes)

How often do you think about a change in your financial situation?

The last day you thought about a change in your financial situation, how long was this on your mind?

Do you think about how your relationships with friends have changed since your heart attack? (use of elaborative probes)

How often do you think about how your relationships with friends have changed?

The last do you thought about the change in your relationships with friends, how long was this on your mind?

Following a heart attack, many people consider making modifications in their life as part of recovery from their heart attack. People consider making different kinds of choices depending upon their lifestyle and their medical condition. I would like to focus, now, upon the modifications that you have made or that you have been considering. I will be asking questions about how much you have been thinking about modifications in your life because of your heart attack. When I ask about modifications, I

mean thinking about the changes that you have already made in your way of life as well as changes that you are considering now.

What kinds of modifications in your way of life have you made because of your heart attack? (use of neutral probes) What kinds of modifications have you been considering? (use of neutral probes)

How have you been thinking about modifying your eating habits because of your heart attack? How have you changed your eating habits? Are you on a weight reduction diet? Are you trying to cut down on salt? Are you trying to cut down on saturated fat? Are you considering going on a diet? (use of elaborative probes)

How often do you think about modifying your eating habits?

The last day you thought about modifying your eating habits, how long was this on your mind?

How have you been thinking about modifying your activity or exercise habits (use of elaborative probes)

How often do you think about modifying your activity or exercise habits?

The last day you thought about modifying your activity or exercise habits, how long was this on your mind?

Did you smoke before your heart attack? (If yes) How have you been thinking about modifying your smoking habits? (use of elaborative probes)

How often do you think about modifying your smoking habits?

The last day you thought about modifying your smoking habits, how long was this on your mind?

How have you been thinking about modifying your level of stress? (use of elaborative probes)

How often do you think about modifying your level of stress?

The last day you thought about modifying your level of stress, how long was this on your mind?

What other implications are there for you of having a heart attack?

Following a heart attack, many people look back over their lives and consider how they have lived their lives and how they want their lives to be different. I would like to focus, now, upon the ways in which you have been reappraising your life as a result of your heart attack. When I say reappraise, I mean evaluating where you are now in terms of goals in your life. I will be asking questions about how much you have been reappraising your life since your heart attack?

How have you been looking back over your life as a result of your heart attack? (use of neutral probes)

Have you been reflecting on the accomplishments in your life? (use of elaborative probes)

How often have you been reflecting on the accomplishments in your life?

The last day you reflected upon your accomplishments, how long was this on your mind?

Have you been considering whether you are pursuing goals that are most important to you? (use of elaborative probes)

How often do you consider whether you are pursuing goals that are most important to you?

The last day you considered whether you are pursuing goals that are most important to you, how long was this on your mind?

Are you considering new ways to reach your goals (use of elaborative probes)

How often have you been considering new ways to reach your goals?

The last day you considered new ways to reach your goals, how long was this on your mind?

In what other ways have you been reappraising or reevaluating your life?

Everyone has beliefs about themselves and their lives. These are ideas that a person assumes to be true as a result of the experiences he has had throughout his life. Following a heart attack, beliefs about one's self are often shaken and questioned. I would like to focus, now, on some of the beliefs that may have been shaken or that you may be questioning becaruse of your heart attack.

I would like to know how your beliefs about your own personal worth have been affected by your heart attack. For example, some men who have had a heart attack have doubts about what their capabilities will be and have doubts about their own competence. How have your feelings about you sense of worth been affected by having your heart attack? (use of elaborative probes)

How often do you question or doubt your personal worth?

The last day you questioned your sense of worth, how long was this on your mind?

Now I would like to focus on your beliefs about control. When I say control, I mean your sense of being able to control what happens to you. For example, some men feel frustrated and helpless over being unable to do tasks they used to do. How has your sense of control been affected by having your heart attack? (use of elaborative probes)

How often do you question or doubt your control over what happens to you?

The last day you questioned your sense of control, how long was this on your mind?

Some people say that because of their heart attack they become more aware of the possibility of their own death. How have your beliefs about your own immortality been shaken by having your heart attack? (use of elaborative probes)

How often have you been considering your own mortality?

The last day you considered your own mortality, how long was this on your mind?

I would like to focus, now, on how your beliefs about the predictability of your body have been affected by your heart attack. For example, some men who have had a heart attack find that they have symptoms that are unpredictable and they feel vulnerable because of this. How have your beliefs about the predictability of your body been shaken by your heart attack? (use of elaborative probes)

How often do you question how predictable your body is?

The last day you questioned the predictability of your body, how long was this on your mind?

APPENDIX E

SOCIODEMOGRAPHIC QUESTIONNAIRE

SOCIODEMOGRAPHIC QUESTIONNAIRE

1) What is your age? _____

2) What is your racial or ethnic background? (Please check one.)

_____ Black _____ Indian

_____ Oriental _____ Mexican-American

_____ White _____ Other (Please specify)

3) What is your marital status? (Please check one)

_____ Married _____ Single

_____ Divorced _____ Separated

_____ Widowed

4) How much schooling have you had? (Please check highest grade completed.)

_____ none or some grammar school (less than 7 grades completed)
_____ junior high school (9 grades completed)
_____ some high school (10 or 11 grades completed)
_____ high school (12 grades completed)
_____ technical, business, or trade school
_____ some college (less than 4 years completed)
_____ graduated college
_____ post-graduate or professional school

5) What is your occupation?

_____

Are you presently working? _____Yes _____No

If yes, how many hours a week are you working? _____

6) What is your total family income per year? (Please choose the range that applies.)

_____ between 0 and $9,999
_____ between $10,000 and $19,999
_____ between $20,000 and $29,999
_____ between $30,000 and $39,999
_____ between $40,000 and $49,999
_____ between $50,000 and $59,999
_____ over $60,000

7) How many living children do you have?

8) How many children are living at home? (Please specify and list their ages.)

_____

9) Please list the names of the medications you are currently taking.
Include medications prescribed by your doctor and over the counter medications.

10) On what date were you discharged from the hospital?

_____

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