

COPING WITH ANGINA PECTORIS FOLLOWING DIAGNOSIS

By

MARJORIE ANNE KENT

B.N., Dalhousie University, 1976

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF

THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF SCIENCE

IN NURSING

in

THE FACULTY OF GRADUATE STUDIES

(The School of Nursing)

We accept this thesis as conforming
to the required standard

THE UNIVERSITY OF BRITISH COLUMBIA

September 1985

© Marjorie Anne Kent, 1985

In presenting this thesis in partial fulfilment of the requirements for an advanced degree at the University of British Columbia, I agree that the Library shall make it freely available for reference and study. I further agree that permission for extensive copying of this thesis for scholarly purposes may be granted by the head of my department or by his or her representatives. It is understood that copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Department of Nursing

The University of British Columbia
1956 Main Mall
Vancouver, Canada
V6T 1Y3

Date September 25, 1985

ABSTRACT

COPING WITH ANGINA PECTORIS FOLLOWING DIAGNOSIS

The purpose of this study was to determine how angina pectoris patients experience and cope with their chronic illness following diagnosis.

Qualitative methodology, using phenomenological theory, was used to guide the study. The study was conducted with a convenience sample of six male angina patients, ranging in age from 42 to 72 years, with recency of diagnosis from two to thirty-four months. None of these subjects were known to have had a myocardial infarction (MI). Using a semi-structured interview guide with open-ended questions, the investigator interviewed each subject at home, on two occasions. Data coding and analysis were approached using the constant comparative method developed by Glaser and Strauss (1967).

The findings of the study revealed angina patients progressing through four phases of coping experience as they adjusted to their illness and its concomitant need for risk modification. These phases were identified as: (1) Initial Coping Response; (2) Managing Specific Adjustment Areas; (3) Secondary Coping Response; and (4) Awareness of Resulting Changes.

The findings supported the use of a chronic illness framework adapted from Strauss et al. (1984) for identifying some of the adjustment areas encountered and coping strategies utilized by the angina patients investigated. Nurses and other health professionals are

angina patients investigated. Nurses and other health professionals are in a critical position to assist angina patients in coping with their illness. The phases of coping experience identified in this study may serve as a useful guide to help these health professionals assess the nature of problems and concerns related to coping with angina so that better adjustment in daily life will ensue.

TABLE OF CONTENTS

| | <u>Page</u> |
|--|-------------|
| ABSTRACT..... | ii |
| LIST OF TABLES..... | vii |
| ACNOWLEDGEMENTS..... | viii |
| CHAPTER ONE - INTRODUCTION | |
| Background to the Study..... | 1 |
| Statement to the Problem..... | 2 |
| Conceptual Framework..... | 3 |
| Definition of Terms..... | 5 |
| Purpose of the Study..... | 6 |
| Assumptions..... | 6 |
| CHAPTER TWO - REVIEW OF RELATED LITERATURE | |
| The Coping Process..... | 7 |
| Meaning of Coping..... | 7 |
| Coping Styles and Strategies..... | 9 |
| Dimensions of Coping..... | 10 |
| The Intrapsychic Dimension..... | 10 |
| The Behavioural Dimension..... | 11 |
| The Social Dimension..... | 12 |
| The Meaning of Illness..... | 13 |
| Threat..... | 13 |
| Loss..... | 15 |
| Gain..... | 16 |
| Insignificance..... | 16 |
| Coping with Chronic Illness..... | 17 |
| Coping with Coronary Artery Disease..... | 21 |
| Coping with MI..... | 22 |
| Anxiety..... | 23 |
| Denial..... | 23 |
| Depression..... | 24 |
| Aggressive Sexual Behaviour..... | 24 |
| Relationship to Angina Patients..... | 25 |

| | |
|----------------------------------|----|
| Coping with Angina Pectoris..... | 26 |
| Summary..... | 27 |

CHAPTER THREE - METHODOLOGY

| | |
|--------------------------------------|----|
| Introduction: An Overview..... | 28 |
| The Research Setting..... | 29 |
| Sample Selection..... | 29 |
| Data Collection..... | 31 |
| Data Coding and Analysis..... | 32 |
| Reliability and Validity Issues..... | 33 |

CHAPTER FOUR - FINDINGS OF THE STUDY AND DISCUSSION

| | |
|---|----|
| I. Initial Coping Response..... | 37 |
| Downplaying..... | 38 |
| Reflecting Back..... | 40 |
| Responses Unique to Specific Individuals..... | 42 |
| II. Managing Specific Adjustment Areas..... | 44 |
| Interactions with Others..... | 45 |
| Health Professionals..... | 45 |
| Family..... | 48 |
| Others..... | 50 |
| Regimen Management..... | 54 |
| Evaluating Regimens..... | 54 |
| Diet Regimens..... | 58 |
| Exercise Regimens..... | 60 |
| Medication Regimens..... | 62 |
| Symptom Control..... | 67 |
| Fatigue..... | 67 |
| Angina Pain..... | 68 |
| Discovering Limitations..... | 69 |
| Job-Related Concerns..... | 72 |
| Effect on Job Performance..... | 72 |
| Dealing with Stress..... | 73 |
| Retirement/Financial Concerns..... | 73 |

| | |
|---|-----|
| Attendant Psychological Concerns..... | 76 |
| Frustration..... | 76 |
| Acceptance..... | 79 |
| Future Implications..... | 83 |
| III. Secondary Coping Response..... | 87 |
| Basic Strategies for Illness in General..... | 87 |
| Taking Control..... | 88 |
| Normalizing..... | 90 |
| Continuation of Downplaying..... | 91 |
| Information Seeking..... | 94 |
| Basic Strategies for Specific Adjustment Areas..... | 97 |
| Coping with Fatigue..... | 98 |
| Managing Chest Pain..... | 98 |
| Eliminating Stress at Work..... | 101 |
| IV. Awareness of Resulting Changes..... | 103 |
| Concrete Changes Made..... | 103 |
| Changes Experienced..... | 104 |
| Physical Change..... | 104 |
| Psychological Change..... | 105 |
| CHAPTER FIVE - SUMMARY, CONCLUSIONS AND IMPLICATIONS FOR NURSING | |
| Summary and Conclusions..... | 108 |
| Implications for Nursing Practice..... | 114 |
| Implications for Nursing Education..... | 118 |
| Implications for Nursing Research..... | 119 |
| Summary..... | 120 |
| BIBLIOGRAPHY..... | 121 |
| APPENDICES..... | 126 |
| Appendix I - A Framework for Understanding the Experiences of Chronically Ill Persons..... | 127 |
| Appendix II - Physician Consent Form..... | 128 |
| Appendix III - Participant Information Letter..... | 129 |
| Appendix IV - Participant Consent Form..... | 131 |
| Appendix V - Participant Information Letter..... | 132 |
| Appendix VI - Data Collection Tool..... | 134 |
| Appendix VII - Sample Interview Guide..... | 135 |
| Appendix VIII - Relationship of Findings to Phases and Common Reference Points..... | 136 |

LIST OF TABLES

| | <u>Page</u> |
|--|-------------|
| Table 1 Characteristics of Subjects..... | 35 |
| Table 2 Phases and Common Reference Points..... | 37 |

ACKNOWLEDGEMENTS

I would like to extend a special thanks to all of the participants who so willingly shared their personal experiences. Their input was invaluable as it provided considerable depth and humanity to the data collected.

The willingness of my Thesis Committee (Mrs. Carol Jillings and Miss Margaret Klinger) in providing such helpful guidance and encouragement, despite their other commitments, was greatly appreciated.

Lastly, I would like to express my sincere appreciation to my parents, family and friends who never ceased to offer support and encouragement during this research project.

CHAPTER ONE

INTRODUCTION

Background to the Study

Coronary artery disease (CAD) is a significant form of chronic illness and represents one of the leading causes of mortality in Canada (Canada, 1983). Angina pectoris is a symptom of this chronic disease process. A diagnosis of angina pectoris serves as an indicator of a chronic health problem requiring specific medical therapies and life-style alterations to reduce the risk of incurring a myocardial infarction (MI).

It has been found that risk factors such as heredity, diet, sedentary life-style, cigarette smoking, hypertension, personality type and stress may contribute to the angina patient's potential to develop an MI (Fardy, Bennett, Reitz, & Williams, 1980). Knowledge of the implications of having angina then, in terms of its life-threatening connotation, may result in a disturbing emotional experience influencing the ability to cope in both home and work environments.

The psychological implications related to having angina are not specifically addressed in the literature. There is however an abundance of literature concerning the psychological responses of MI patients. For example, common emotional reactions to MI such as anxiety, denial and depression have been identified (Cay, 1982; Granger, 1974; Hackett &

Cassem, 1982; Scalzi, 1973). Granger (1974) further explains that difficulty in adjusting to MI can occur if these responses become too prolonged, too severe, or occur at an inappropriate stage during the recovery period.

Strauss et al. (1984) identify major adjustment areas related to chronic illness in general. Some of these areas include: controlling physical symptoms; implementing prescribed regimens; coping with change in the course of the disease; and dealing with attendant psychological, marital and familial concerns. Coping with the many dimensions of a chronic illness such as CAD and its related syndrome, angina may therefore influence the consequences of the management of symptoms and social relationships.

Although a literature review revealed studies which mainly described the experiences of individuals with CAD and MI, research to date has not investigated individuals specifically diagnosed with angina pectoris. This suggests that a study of the illness experience of individuals with angina pectoris should start with the most obvious data source--the angina patients themselves. Knowledge of how these individuals experience and deal with their angina will assist nurses and other health care professionals working with angina patients to predict and prevent problems related to coping with angina, and to plan more effective care regarding specific adjustment areas.

Statement of the Problem

The problem investigated in this study was: How do individuals diagnosed with angina pectoris experience and cope with their illness?

1. What are the experiences of individuals with angina following diagnosis?
2. How do individuals with angina cope with their illness following diagnosis?

Conceptual Framework

Strauss et al. describe a framework for understanding the difficulties faced by the chronically ill and how they cope with these difficulties. The framework emphasizes the social and psychological aspects of living with chronic illness, as opposed to viewing illness strictly in medical terms. In order to understand the daily experiences of chronically ill persons, especially those living at home, this framework suggests ways to think systematically about the experiences of the chronically ill. These authors claim that any disease is regarded as potentially evoking multiple problems of daily living. These problems may be related to:

- "1. the prevention of medical crises and their management once they occur;
2. the control of symptoms;
3. the carrying out of prescribed regimens and the management of problems attendant on carrying out the regimens;
4. the prevention of, or living with, social isolation caused by lessened contact with others;
5. the adjustment to changes in the course of the disease, whether it moves downward or has remissions;

6. the attempts at normalizing both interaction with others and style of life;
7. funding--finding the necessary money--to pay for treatments or to survive despite partial or complete loss of employment;
8. confronting attendant psychological marital and family problems" (Strauss et al., 1984, p. 16).

Patients must establish basic coping strategies when dealing with these key problems. Often the strategies require the assistance of family, friends and others who serve as various agents by rescuing, protecting, assisting and controlling individuals during the course of their illness. In addition, the strategies require certain kinds of organizational or family arrangements for coping with the key problems (Strauss et al., 1984). For example, the parents of a diabetic child may teach friends and neighbours to be alert for signs of an oncoming coma. The man with a cardiac condition may make an agreement with his wife that if she recognizes signs of fatigue in him, she will warn him. Otherwise, he may run out of energy or develop chest pain. In addition to much trust and considerable interactional skill, the establishment and maintenance of such arrangements may require certain medical, financial and familial resources. If these resources and abilities are deficient, significant consequences, which relate to the unsuccessful efforts organized to manage the key problem, may result.

In summary, the major components of Strauss' framework which are necessary for understanding the experiences of chronically ill

individuals include: key problems; basic strategies; and organizational and family arrangements and their consequences. In describing Strauss' framework it is also important to emphasize the part the individual's perception of events plays in the experience of chronic illness. Because this framework looks at the social and psychological problems faced by the chronically ill and their families, it may be adapted as a useful guide for studying individuals with angina pectoris as they experience their illness (Appendix I). By identifying some of the key problems and adjustment areas encountered by angina patients and by describing the coping strategies they use, an increased understanding of their experience may ensue.

Definition of Terms

In this study, the following definitions applied:

1. Coronary artery disease (CAD) - a disease process resulting from partial or complete occlusion of one or more coronary arteries causing impairment of blood supply to the heart (Gazes, 1983).
2. Myocardial Infarction (MI) - a coronary occlusion, with resulting infarction of myocardial tissue, which is usually due to CAD (Gazes, 1983).
3. Angina Pectoris - a syndrome of CAD which is often manifested by paroxysms of pain in the anterior chest related to a disproportion between myocardial oxygen requirement and oxygen supply (Gazes, 1983).

4. Social and psychological problems - the nonmedical concerns encountered by angina patients as they live their lives in the face of their chronic illness (Strauss et al., 1984).
5. Adjustment areas - the life-style changes (prescribed and non-prescribed) which are necessary for angina patients to make in relation to living with their illness.
6. Coping - the manner in which adjustments are made in response to diagnosis and management of one's illness.

Purpose of the Study

The purpose of this study was to describe and explain how angina patients experience and cope with their illness.

Assumptions

The researcher approached this study with the following assumptions:

1. A new diagnosis of angina pectoris has meaning for the adult and this meaning has an effect on the person's life.
2. Individuals are willing and able to communicate this meaning to others.
3. Individuals may or may not become involved with making changes to their life-style following a diagnosis of angina pectoris.
4. Adjusting to these changes may have a significant impact on the individual's way of life.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

When surveying the literature related to the study questions, three major areas were selected for review due to their relevance in explaining and describing the experiences of individuals coping with angina. These areas are: (1) the coping process; (2) coping with chronic illness; and (3) coping with coronary artery disease (CAD) and its related syndromes, myocardial infarction (MI) and angina pectoris.

The Coping Process

Meaning of Coping

Coping has been defined in various ways by different authors. One psychologist, Richard Lazarus, describes coping as "strategies for dealing with threat or harm" (Lazarus, 1966, p. 151). Lazarus and Launier (1978) further explain these strategies as action-oriented and intrapsychic efforts expended by individuals to manage environmental and internal demands which overtax their resources. These authors also identify four modes of coping which a person may use for altering a troubled person-environment relationship or for controlling the emotion related to the situation. These modes include: (1) information seeking; (2) direct action such as fight or flight; (3) inhibition from

actions which may be impulsive, dangerous or embarrassing; and (4) intrapsychic modes where attempts are made to ignore or withdraw attention from the threat, minimize it and seek relief in fantasy. Lazarus and Launier (1978) imply that the use of these modes varies according to the situation and is influenced by such factors as degree of uncertainty, degree of threat, presence of conflict and degree of helplessness.

Murphy (1962) views coping more broadly. She emphasizes the problem-solving aspect of coping where efforts are aimed at mastering new situations or problems in order to meet life demands and goals. This view of coping is more general as it includes both threatening situations as well as those in which coping is synonymous with problem-solving. Murphy seems to view coping as a challenge. She refers to mastery as the aim of coping in meeting problems and difficulties, while Lazarus is mainly concerned with the process of coping with threat.

Lipowski (1970) takes advantage of both views when conceptualizing coping in relation to physical illness. He sees the sick person not only dealing with situations that provide conflict and threat, but also as adjusting to the tasks and challenges of his life through application of psychological resources. This view of coping seems to have relevance for angina patients who must deal with such threats as chest pain, decreased energy levels, and possible progression of their disease. They must also adapt to tasks and challenges related to living with their illness such as risk modification and job maintenance.

Coping Styles and Strategies

According to Lazarus (1966), coping behaviours are possible ways of dealing with conditions of harm or threat. They are characterized by one's coping style as well as the coping strategies used (Lipowski, 1970).

Lipowski (1970) describes coping style as an individual's characteristic way of perceiving, thinking, problem-solving and acting when organic disease develops. He goes on to explain that coping strategies are developed from both an individual's coping style as well as the situational variables. Previously established strategies which have served similar functions in earlier stressful situations are likely to be used first. When these are not sufficient, new strategies are developed. According to Hamburg and Adams (1967), such strategies, if effective, are likely to broaden an individual's problem-solving capability.

Lipowski (1970) distinguishes between two types of coping styles: cognitive and behavioural. Under "cognitive coping styles," he describes two different ways of cognitive functioning in relation to physical illness. They are: (1) minimization and (2) vigilant focusing. Minimization refers to a tendency to ignore, deny or rationalize the personal significance of one's illness and its consequences, regardless of the nature and severity of the illness. Vigilant focusing, on the other hand, refers to persistent efforts to reduce uncertainty concerning one's illness by seeking all relevant

information and constantly trying to make sense out of the illness experience.

Lipowski (1970) describes "behavioural coping styles" as predominant action tendencies which different individuals exhibit in response to illness. These include: (1) tackling, where active measures are sought in response to challenges and tasks posed by an illness; (2) capitulating, characterized by passiveness toward combating illness and achieving maximum recovery; and (3) avoiding, where active attempts are made to escape from the demands of one's illness.

Dimensions of Coping

Lipowski (1969) describes coping in response to physical illness in terms of three dimensions: (1) the intrapsychic; (2) behavioural; and (3) social.

The Intrapsychic Dimension

This aspect of coping refers to the perceptual, cognitive and emotional components of one's total response to illness. Individuals often initially respond to their disease with the perception of bodily change (perceptual component). They may habitually overreact to pain or disregard or even deny its significance. Evaluation of this perception (cognitive component) can differ from one individual to another, as influenced by personality type, knowledge level, cultural background, current emotional state and so forth.

Olin and Hackett's (1964) study illustrates how MI patients may vary in the way they evaluate serious symptoms of disease. For example, their study revealed that the subjects who correctly suspected a heart attack delayed seeking medical help for their chest pain, on average, 10.3 hours, which was twice that of those patients who did not suspect a heart attack.

Once illness is medically confirmed, individuals may respond with a whole spectrum of emotions (emotional component) such as anxiety, depression and grief. These emotional reactions may become pathological due to their intensity and inappropriateness to the situation (Lipowski, 1969).

The Behavioural Dimension

This aspect of coping response to disease refers to actual coping behaviours (Lipowski, 1969). Coping behaviours may be adaptive or maladaptive (Lazarus, 1966, 1968; Lipowski, 1969). Adaptive coping in response to illness is most desirable and may include such behaviours as seeking expert advice, cooperating with therapeutic regimes and developing alternate sources of satisfaction. Maladaptive coping, on the other hand, may include such behaviours as withdrawal, passive surrender to illness, over-dependence on others, self-destructive behaviours and so on. Other events occurring in a person's life, such as the problems and concerns he is having to deal with and the emotions he is experiencing, may also be associated with less effective coping (Lazarus, 1974).

Coping behaviours may be influenced by: (1) intrapersonal factors such as a person's age, personality and intelligence; (2) disease-related factors such as the nature, duration and rate of the pathological process; and (3) environmental factors such as the quality of current interpersonal relationships as well as physical milieu (Lipowski, 1969, 1970). The relative importance of these factors will undoubtedly vary from case to case and therefore must be evaluated in each patient.

The Social Dimension

This aspect of coping response to illness concerns the patient's interactions with others and in particular his family and health professionals (Lipowski, 1969). The ease with which a person accepts himself as being ill depends on the kind, severity, and duration of disease as well as on psychological and sociocultural factors. For example, the angina patient who views illness as a weakness and as a loss of independence, may have a difficult time accepting his illness. Being ill may also involve social consequences. Disapproval by others may be seen if one's sick role is thought to be exaggerated or prolonged. On the other hand, the sick role may be encouraged by some family members who wish to play a stronger, supporting and controlling role.

The Meaning of Illness

Central to an individual's coping response to illness is the meaning which he attaches to it. It is believed that the personal meaning or appraisal of all the information received by the patient in relation to his illness is directly related to his coping response (Hamburg & Adams, 1967; Lazarus, 1968; Lipowski, 1969, 1970; Miller, 1983). In her study measuring coping responses of medical/surgical patients, Graydon (1984) found that patient coping was not influenced by an objective assessment of the severity of the medical diagnosis but rather by the patient's personal appraisal of his illness.

Lipowski (1969) states that the personal significance attached to one's illness strongly influences both the emotional and behavioural aspects of his coping response. An attempt to understand why patients feel and act in a particular manner then can involve an assessment of their subjective interpretations of the events related to their illness. Lipowski identifies four broad categories of personal meaning of events related to illness. They are: (1) threat; (2) loss; (3) gain; and (4) insignificance.

Threat

Threat implies anticipation of personal danger or harm in relation to an event whose occurrence could cause physical or mental anguish (Lazarus, 1966; Lipowski, 1969). Hamburg (1967) explains that

the salience of a given factor, such as illness, to one's motives and values and the conflict among these motives and values is vital to one's appraisal of threat. His studies of patients with severe illness all center on major transitions requiring alterations in way of life. He found that initially efforts were made to minimize events. Later, in their wish to overcome the threat of illness, these same patients became highly motivated to face the reality of their illness and deal with it constructively.

It has been suggested that one deals with the knowledge of a life-threatening illness in stages (Crate, 1965; Kubler-Ross, 1969; Pattison, 1977; Weisman, 1972). Although these authors are not in complete agreement as to the nature of the stages of life-threatening illness, there does seem to be some general consensus that the incorporation of the threatening aspects of an illness is essential to reduce anxiety following confirmation of the diagnosis. For example, angina patients may react with alarm when they begin to experience increased episodes of chest discomfort. As a result, their perception of threat may intensify as they interpret such symptoms as precursors of an ominous event such as a heart attack. The coping strategies used by such individuals, in order to reduce their anxiety related to this anticipated danger, may range from unconscious use of defense mechanisms (such as denial or danger), to intake of sedatives or alcohol, to compulsive overwork, and so on.

Loss

When associated with illness, loss may refer to deprivation of significant needs and values including self-esteem, security, and satisfaction with body parts and functions (Lipowski, 1969). The emotional response to actual or potential loss can take the form of a grief reaction (Dovenmuehle & Verwoerdt, 1962; Engel, 1964; Lindemann, 1944; Lipowski, 1969; Pranulis, 1972; Reiser, 1959). Lindemann (1944, 1961) states that grieving is a pattern of reaction to loss and that grieving reactions of hospitalized patients may be perceived as a loss of function. He offers two explanations: (1) grieving can be seen as a particular form of role transition where societal and familial role functions must be redesigned on a major scale; (2) there is a psychological reaction called forth by the anticipation of a threatening situation with the rehearsal of future-oriented coping strategies related to anxiety-arousing events. This is similar to grief. It is possible that people with angina may view their illness as a loss of potential for certain activities and role functions. In coping with the life-style alterations related to their illness, these patients must work through this loss as well as the malfunction within their bodies and the anticipatory threat of possible death (Dovenmuehle & Verwoerdt, 1962).

Gain

The concept of gain related to illness refers to a sense of relief associated with the satisfaction derived from dependence upon others, the ability to take control of others by using one's illness to arouse their guilt and/or the ensuing respite from roles and responsibilities (Lipowski 1969, 1970). For example, the angina patient who is struggling with deciding when to retire may be relieved when his doctor advises him to do so for health reasons. There are times when individuals are not consciously aware of the meaning of their illness. They may lament in good faith the fact that they are ill, yet their behaviour may indicate relief rather than loss. In general, when subjective gains related to illness outweigh the losses, patients are likely to develop emotional disturbances when their condition improves (Lipowski, 1969).

Insignificance

Insignificance means that there is a relative lack of personal importance associated with one's symptoms of illness (Lipowski, 1969). For example, initial symptoms of angina such as fatigue may be disregarded by the angina patient if they do not pose any significant threat to him.

Coping With Chronic Illness

Coping with chronic illness may be different from coping with other types of illnesses, especially those of an acute nature (Craig, & Edwards, 1983; Dimond & Jones, 1983; Miller, 1983). First of all, chronic illness differs from acute illness in a number of dimensions (Dimond & Jones, 1983). Chronic illness is permanent and irreversible, while acute illness usually leads to recovery. The acutely ill person is also permitted to depend on family and others to relieve some of his responsibilities, as it is understood that this will be only temporary. In chronic illness, dependency over a long period of time is not apt to be accepted by either the individual or others (Dimond & Jones, 1983).

Once chronic illness is confirmed by a physician, the affected individual's social and personal obligations must be redefined so that they are more in keeping with the individual's actual capabilities (Dimond & Jones, 1983). As chronic illness begins to progress, the individual may lose control of activities of daily living and bodily function. He may also forfeit his identity as a healthy person and succumb to lack of physical and social stimulation (Craig & Edwards, 1983). The impact of such losses will depend upon the individual's subjective appraisal of their meaning.

In other words, this initial appraisal of chronic illness is affected by the personal meaning of that illness for the individual. The individual's perception and ensuing response to symptoms of his

chronic illness are influenced by the function of the nature of the symptoms (Kasl & Cobb, 1966). In some cases, a person may experience continuous, and sometimes frightening and disturbing, symptoms. The significance attributed to these symptoms and the decision to report them depends on many factors, some of which include previous modes of dealing with illness symptoms in the past (viz., coping style), the response of others to continuous reporting of symptoms (viz., interpersonal relationships) and the knowledge that reporting such symptoms will be beneficial (viz., cognitive capacity). In other cases, individuals may control their symptoms by refraining from activities that they know will bring on symptoms (Dimond & Jones, 1983). For example, the angina patient may avoid heavy lifting in order to prevent chest pain from occurring. Some chronic conditions remain stable only when therapeutic regimens are followed. In these situations, individuals may respond to symptoms more closely by adhering to treatment regimens.

In effect, the chronically ill person must be a manager of his own care and therefore must have sufficient knowledge to make appropriate decisions related to his illness. For example, a chronically ill person might have to decide whether to continue taking prescribed medications if he continues to feel well, sees no change in symptoms from taking the medications, yet experiences uncomfortable side effects from them. Such decisions must have an appropriate balance between the benefits of risk reduction and the cost of compliant behaviour (Kasl, 1974). Some chronic illnesses may require major

changes in lifestyle (such as smoking, diet and physical activity) in addition to following a medical regimen. Even if these changes are recognized as necessary for risk reduction, they may be difficult to comply with, depending on their significance for the individual (Dimond & Jones, 1983).

Certain coping responses have been associated with chronic illness. Craig and Edwards (1983) identify four which are commonly utilized: (1) minimizing the seriousness of losses resulting from the chronic illness through use of defense mechanisms such as denial, projection and disassociation of emotions; (2) using personal and extra-personal resources, similar to vigilant focusing as described earlier; (3) setting concrete goals and expectations using realistic problem-solving skills; and (4) using hope to provide meaning to life. Miller's (1983) study of adults with chronic health problems reveals similar findings. She distinguishes between two major categories of coping strategies which the subjects used in dealing with their illness: (1) approach strategies, most common of which had to do with seeking information and enhancing spiritual life and (2) avoidance strategies, of which the most frequently used were denial, repression and suppression, minimization of illness symptoms and their consequences, and withdrawal from others.

Both Chodoff (1962), in his study of patients with multiple sclerosis, and Busse (1962), in his comments about emotional complications of chronic illness, particularly identify the use of denial as a means of fighting the conflicts associated with chronic illness. Chodoff remarks on the tendency for chronically ill persons to

become egocentric and more dependent on others. Busse further explains that the recognition of this dependency may lead to exhibitions of increased irritability and anger. Gorman and Anderson (1982) see denial as an effective coping mechanism. In their study of chronic renal disease patients, they found that the use of denial helped these patients adjust to the impact of diagnosis by allowing them time to deal with complex emotional feelings and incorporate the chronic illness into their lives.

As previously discussed, the emotional response to loss in relation to physical illness may take the form of a grief reaction. This grief reaction has also been associated with coping responses to chronic illness where individuals undergo a period of mourning before they are able to accept losses in the form of altered body image and/or loss of body function (Chodoff, 1962; Craig & Edwards, 1983). In specific, Crute identifies five stages of coping with chronic illness in keeping with the grieving process described by Engel (1964). The pattern of events include: (1) disbelief; (2) developing awareness; (3) reorganization of relationships with others; (4) resolution of the loss; and (5) identity change. Once the final stage in the process is reached, the individual is more able to live with his/her illness and in some way can cope with it by coming to terms with its limitations.

Although chronic illness is both permanent and irreversible, the rate of progression may vary, as it relates to plateaus and remissions. Chronically ill persons must learn to adjust to the limitations of their illness at its various stages by continually appraising their situation and the effectiveness of their coping.

Coping with Coronary Artery Disease

A primary aim in this section is to develop an understanding of coping strategies used by patients with CAD and its related syndromes. Reiser (1951) addresses the psychological consequences related to CAD in general. He explains that patients with CAD have to integrate the awareness of the illness into their self-concept. Their ability to objectively accept a realistic appraisal of their limitations depends on their personality structure, the specific meaning of heart disease, and the attitudes assumed by those about them. Reiser contends that reactions of depression, due to feelings of hopelessness and anxiety or guilt over needs of dependency, may represent a threat that leads to irrational denial and self-destructive behaviour.

Niven (1976) discusses potential problems associated with CAD and their management within a framework of three phases of chronic illness. These phases are: (1) the period from onset of symptoms to diagnosis during which denial of symptoms due to heart disease and rationalization concerning their etiology are prominent; (2) the period from diagnosis to stabilization of the disease process requiring compliance with necessary medical therapy and changes in life-style; and (3) the chronic adjustment period following stabilization until recovery or death. Niven describes common difficulties related to work, sexuality and avocational activities as being associated with this latter phase. These problems are often manifested by anxiety, depression, and

hypochondriacal complaints, noncompliance with treatment and withdrawal from activities (Niven, 1976).

Dovenmuehle and Verwoerd (1962) studied depressive symptomatology as it applied to patients with various forms of CAD such as arteriosclerotic heart disease, MI and cardiac heart failure. It was found that 64 percent of the subjects had depressive symptoms of a moderate or severe degree. These investigators suggest that the severity of the depressive reaction is related not only to the severity of the physical disease but also to the frequency of hospitalizations which served as a stimulus to which the subjects responded with depressive affect.

Coping with MI

The majority of studies concerning coping reactions to heart disease focus on patients who have suffered an MI. Because individuals with angina pectoris are at risk to develop MI (Levenson, Kay, Monteferrante & Herman, 1984) and may be involved with similar life-style changes (Fardy, Bennett, Reitz, & Williams, 1980), the research concerning MI patients may be applicable to individuals with angina pectoris.

In spite of differing individual reactions to MI, a consistent pattern of response has been identified (Scalzi 1973): anxiety; denial; depression; and aggressive sexual behaviour.

Anxiety

Anxiety post MI has been explained in response to fear of dependency and possible death (Cay, 1982; Cleveland & Johnson, 1962; Hackett & Cassem, 1982). Anxiety is significant as it forms the basis for other behavioural responses to MI (Scalzi, 1973). For example, how individuals perceive their MI as a threat will influence the anxiety they experience and therefore how they cope with that anxiety. They may become angry and hostile or withdraw into a state of depression. According to Cay (1982), anxiety is frequently disguised in the form of hypochondriases, overdependence and aggression.

Denial

This response is often used to alleviate the anxiety (Scalzi, 1973). Hackett and Cassem (1982) studied a group of MI patients who consistently denied that their hearts were severely damaged and that they feared death. The "major deniers" in the group refused to acknowledge any concerns, either about their disease or about their being able to return to their former way of life and work. The "partial deniers," on the other hand, tended to minimize any fear they might have experienced and rationalized symptoms of their heart attacks as indigestion, muscle strain and so forth. Denial may be prognostically favourable for acute MI patients (Hackett & Cassem, 1974; Sheehan & Hackett, 1978; Soloff & Bartel, 1979). In fact, many physicians support

denial of illness rather than encouraging their patients to immediately face the realities of their illness (Beisser, 1979).

Depression

After the shock of what has happened to the MI patient begins to subside, reality sets in. It becomes more difficult to use denial as the MI patient begins to think about how his way of life will have to change (Scalzi, 1973). Holding on to the things that the MI patient knows will soon have to be changed or given up will cause depression to develop. Depression may also result from feeling anger and guilt for having maintained certain life-style habits that may have caused the heart attack (Scalzi, 1973). Hackett and Cassem (1982) claim that depression, following an MI, results from a sense of weakness and vulnerability leading to concern about ability to function in previous roles. It may be reflected in terms of an over concern with physical symptoms and medications (Cay, 1982).

Aggressive Sexual Behaviour

This is a common behavioural response in male patients following an MI (Rosen & Bibring, 1966; Scalzi, 1973). Inappropriate sexual behaviour results from anxiety which, as a consequence, causes the patient to regress to a more sexually immature developmental level (Scalzi, 1973). Such behaviour tends to counteract the anxiety that results from threats to virility and self-image.

Relationship to Angina Patients

A pattern of behavioural response similar to MI patients may also possibly be experienced by individuals following their diagnosis of angina. For example, angina patients who initially minimize the seriousness of their illness may be using this form of denial as a means of dealing with life-threatening anxieties. Depression may set in once these patients realize the extent to which their way of life must be altered. Male angina patients in particular, may exhibit inappropriate sexual behaviours as a way of handling anxieties concerning their masculinity and self-concept.

Although anxiety, denial, depression and aggressive sexual behaviour are normal reactions to MI and perhaps angina, they can become maladaptive if they are too prolonged, too severe or occur at an inappropriate stage during the recovery period (Granger, 1974; Scalzi 1973). For example, the angina patient who continues to deny the seriousness of his heart disease may discontinue his medications or engage in excessive physical activity despite the presence of symptoms. Such coping responses would be inappropriate and therefore may be seen as maladaptive.

Even patient attitude can affect coping during recovery from a heart attack. In a recent study of patients following their first heart attack, researchers found a positive correlation between the heart attack victims' frame of mind and their speed of recovery (Bainerman, 1985). Subjects who attributed the occurrence of the MI and the success

in coping with it to externally determined factors such as fate or social pressure, planned and practised less changes, relied less on help from spouses and physicians and returned to work and other functioning at a significantly slower rate when compared to the rest of the sample. On the other hand, patients who related the MI to internal factors such as previous behaviour, planned and carried out adaptive coping strategies (reduced work pressures and daily physical exercise) and made greater use of family and physicians' help. It seems that the better a victim can evaluate the part previous behaviour played in the attack, the more effective his coping and the greater his chances are for rapid recovery.

Coping with Angina Pectoris

The only documentation on coping related specifically to angina was found in a study of denial among unstable angina patients (Levenson, Kay, Monteferrante, & Herman, 1984). The investigators concluded that denial is an independent predictor of rapid medical stabilization of angina patients admitted to a coronary care unit (CCU). Thomas and her associates however question whether supporting denial exhibited by cardiac patients tends to encourage maladaptive behaviour following discharge from the CCU (Thomas et al., 1983). They found that patients in a CCU willingly share their concerns when given the opportunity and tend to elaborate on these concerns more frequently than they deny

them. The researchers suggest that these findings may be explained by an increased public awareness of CCU's which may decrease patient's initial fears of these clinical settings.

Summary

It is evident that the ways in which people cope with the stresses and challenges of illness are influenced by multiple factors reflecting their specific dispositions, as well as by characteristics of their total situation during a given episode of illness and its different phases. The permanency of chronic illness seems to cause affected individuals to focus their attention on coping with the ensuing changes and limitations to their way of life.

Certain coping responses have been associated with various forms of chronic illness. In particular, anxiety, denial and depression have been identified in relation to MI patients. Much of the research to date related to CAD has focussed on MI patients. Much less attention has been paid to angina patients who have not yet incurred an MI. An increased understanding of how such angina patients cope with the implications related to their illness would offer a more valid basis to set priorities for both hospital and community teaching and risk-reduction programs. The actual concerns of angina patients could then be addressed in order to help them cope with the changes that occur following diagnosis.

CHAPTER THREE

METHODOLOGY

Introduction: An Overview

A qualitative methodology, using phenomenological theory, was used for this study. Phenomenology is concerned with understanding human behaviour from the individual's own frame of reference (Bogdan & Taylor, 1975) and describes experience as it is lived (Oiler, 1982). It provides the means to serve nursing's goal in understanding human behaviour in greater depth than is possible from other methods of inquiry aimed at prediction and control (Oiler, 1982; Rist, 1979).

Phenomenology views all phenomena under study as socially constructed, with importance placed on inner or subjective understanding of events, behaviours and surroundings (Rist, 1979). The investigator as well as the subject brings to the situation background information through which the situation is interpreted. Bias is not eliminated but rather is recognized and incorporated by the researcher who constructs and interprets the experience shared with the participant (Davis, 1978; Rist, 1979). To ensure that the phenomenon is being investigated as it is truly experienced, the researcher must approach the phenomenon to be explored with no preconceived categories (Omery, 1983). All data are accepted as given.

The phenomenological approach was viewed as being compatible with the framework devised by Strauss et al. (1984) in that it offers a means

of increasing understanding of the actual feelings and daily experiences of individuals diagnosed with angina. Phenomenology, used as a methodology, was conducive for identifying possible adjustment areas of angina patients and for identifying their coping strategies in living with their chronic illness. Finally, use of the phenomenological perspective was conducive for understanding the angina patient's perception of his illness and for understanding how this perception influences subsequent behaviours.

The Research Setting

The investigation was conducted in the privacy of the homes of consenting subjects who met the selection criteria.

Sample Selection

The sample for investigation was selected through consultation with four cardiologists and one general practitioner within the greater Vancouver area (Appendix II). Patients selected for the study were required to meet the following criteria: (1) the patient, male or female, was under 60 years of age; (2) the patient was able to speak and read English; (3) the patient was diagnosed with angina pectoris, but had no evidence of MI, as determined by his cardiologist; and (4) the patient was not requiring hospitalization for his cardiac symptoms.

Based on the selection criteria, a sample of six subjects was obtained within a five month period. Because of time constraints and

difficulty with subject recruitment, the criterion related to age was modified to permit older subjects to be included in the study. Recency of diagnosis also varied in the sample from two months to approximately three years. None of the subjects asked to terminate their participation and it was not necessary to omit any of them from the study.

The procedure for obtaining the sample included four steps: (1) a letter of information and consent (appendix III, IV) was given to potential subjects by their cardiologist or general practitioner during a routine visit; (2) if subjects were interested in the study, they gave permission for their physician to provide their names and telephone numbers to the investigator; (3) the investigator then contacted the potential subjects by telephone to discuss the study and to determine willingness to take part in the study; (4) if the subjects agreed to participate, a home visit was arranged. Because of difficulty in recruiting a large enough sample for the study, two of the subjects whose names were given to the researcher by their cardiologists were contacted by telephone after receiving a letter of information by mail, explaining the nature of the study (Appendix V).

Five individuals refused to participate in the study. Three of these persons felt that they could not make any significant contributions to the study. The other two people had just been diagnosed with angina pectoris and felt that they could not deal with the interviews due to their upset feelings at this time.

A verbal explanation of the study was given to each subject at the beginning of the initial home visit. Once intent to participate was

established, written consents were obtained prior to the commencement of the interviews.

Data Collection

In this investigation, data collection commenced with the interview. Participants in the study were purposefully interviewed and observed with the intent of gathering relevant data regarding their experiences coping with angina. A data collection tool was developed by the investigator to facilitate and organize the interview procedure (Appendix VI). Observable behaviours were also examined using the following categories: verbal (characteristics of speech, focus of conversation); and non-verbal (activity, eye contact, body language, appearance). Four broad open-ended questions were used to obtain data concerning the thoughts, feelings and actions of subjects in relation to their illness (Appendix VII).

This semistructured interview guide provided sufficient direction so that specific content areas could be covered, enabling comparisons to be made between interviews. At the same time, flexibility in the structure of the guide was possible allowing for shifts in sequence or topics according to the preferences and needs of the subjects.

Each interview was audiotaped. All subjects were assured that the contents of the taped interviews would be kept in strictest confidence and that their anonymity would be respected. None of the subjects objected to the taping. Each interview commenced with a few

minutes of social conversation for the purpose of developing rapport and easing any apparent anxiety.

Two interviews were conducted with each subject in the study. The second interview which followed within three to four weeks of the first was carried out in order to clarify previous responses and compare them with those of the other subjects. The researcher chose to conduct the interviews of the subjects privately in the familiar and comfortable surroundings of the subjects' own homes. Frequently, the spouses of the subjects would join in the conversation at the end of the interview. The interviews ranged in length from 30 to 60 minutes with a mean length of 45 minutes.

After conducting each interview, the researcher took note (in private) of any verbal or non-verbal behaviours of the subjects. Sections of each tape were also reviewed to obtain a general overall impression of the material. Notations were made of any ideas or recurrent themes.

The data collection period encompassed approximately five months. It took two months to recruit the first subject. Ideally, with this type of methodology, data collection ceases when consistent themes emerge following the saturation of categories developed (Glaser & Strauss, 1967; Stern, 1980). This was not possible in this study due to the time constraints of the researcher.

Data Coding and Analysis

Following the data collection phase of the investigation, the tape-recorded interviews were transcribed and the raw data were examined, sorted and coded into categories. In order to systematize the coding process, each item of data was allotted a category, cut from the transcript and placed into an envelope labelled with the corresponding category. For example, many of the subjects commented on being frustrated because of various activity restrictions related to their angina, e.g., climbing hills, shovelling snow, carrying out the garbage, mowing the lawn, and so forth. These raw data were then coded as "frustration related to physical limitations" and placed in an envelope labelled as such. Three numbers were noted on each item of raw data, indicating the particular subject, the number of the interview and the exact page number of the transcript. An extra copy was made of each transcript.

The investigator then proceeded to define and describe each category by examining the contents of each envelope. The categories were reviewed a number of times until the concepts and properties could be described in detail. Descriptions of the categories were then copied onto reference cards so that they could be more easily compared and contrasted with each other. As the process continued, more and more data were meaningfully grouped under larger abstract concepts. This overview of data coding and analysis illustrates application of the method of constant comparative analysis developed by Glaser and Strauss (1967).

Reliability and Validity Issues

To test the validity of the data gathering instrument, two cardiac participants from a local cardiac rehabilitation program were interviewed. It was found that the data gathered from this pilot study were adequate for the purpose of this study.

Diers (1979) states that there is more concern for the reliability of the data sources and/or the recorder than there is for this qualitative type of study design. To ensure reliability of the findings for this study, a data gathering tool was used and all interviews were audiotaped. Immediately following each interview, specific notations were made by the investigator concerning the subjects' observable behaviours so that accurate recall could be maintained. Despite the variability in recency of diagnosis, all of the subjects were able to provide clear descriptions of their illness experience. None of the respondents were hesitant to disclose their reactions and in fact all were willing to freely discuss their thoughts and feelings.

Because the investigator was aware that her personal biases might affect the objectivity of the study, she attempted to utilize the thesis committee as objective resources to monitor her personal impressions. A standardized procedure was used for data collection, coding and analysis as already described. This systematic approach provided a degree of reliability to the study.

CHAPTER FOUR

FINDINGS OF THE STUDY AND DISCUSSION

Based on the methodology described in Chapter Three, data were obtained from a study sample consisting of six male subjects ranging in age from 42 to 72 years with a mean age of 59.2 years. Of the six subjects, three were working, two were retired and one was unemployed and receiving welfare assistance. Five of the subjects were married and living with their spouses. Two of these subjects each had a child residing at home. One of the subjects was divorced and living alone. Characteristics of the subjects, specific to age, marital and work status and recency of diagnosis are shown in Table 1.

Table 1

Characteristics of Subjects

| Subject | Age | Marital Status | Work Status | Recency of Diagnosis in Months |
|---------|-----|----------------|-------------|-----------------------------------|
| 1 | 56 | M | E | 9 |
| 2 | 60 | M | E | 9 |
| 3 | 62 | M | R | 34 |
| 4 | 63 | M | E | 10 |
| 5 | 72 | M | R | 2 |
| 6 | 42 | D | U | 5 |

Note: M = married; D = divorced; E = employed; R = retired;
u = unemployed.

Although participants attached different meanings to certain aspects of their illness experience, all subjects described similar frames of reference which highlighted their response to angina. These reference points provided the investigator with a means to analyze and understand the data. The resulting phases which served as a guiding time frame were not arbitrary but, rather, they accurately reflected the participants' experiences in coping with their illness. In other words, from the common reference points arose phases of the subjects' coping experience. Data analysis resulted in emergence of four phases of the coping experience:

1. initial coping response;
2. managing specific adjustment areas;
3. secondary coping response;
4. awareness of resulting changes.

Table II shows the common reference points for each phase of coping experience following the onset of angina symptoms. Appendix VIII demonstrates the relationship of the categories of findings to these reference points.

In this chapter, participants' descriptions of their coping experiences will be presented according to the phases and common reference points identified in Table II. The ways in which these angina patients cope with their illness and their identified concerns and adjustment areas will become evident in the following descriptive accounts. Participants' accounts will be discussed in relation to the conceptual framework and literature review. This discussion will allow a comparison to be made between personal, empirical and theoretical viewpoints.

Table 2
Phases and Common Reference Points

- I. Initial Coping Response
 - Downplaying
 - Reflecting back
- II. Managing Specific Adjustment Areas
 - Interactions with others
 - Regimen management
 - Symptom control
 - Job-related concerns
 - Attendant psychological concerns
- III. Secondary Coping Response
 - Basic strategies (for illness in general)
 - Basic strategies (for specific adjustment areas)
- IV. Awareness of Resulting Changes
 - Concrete Changes made
 - Changes experienced

I. Initial Coping Response

The phase of initial coping response followed the onset of symptoms of angina pectoris. All of the subjects generally had been experiencing angina symptoms such as fatigue on exertion and chest

pain, as part of their coronary artery disease, prior to being diagnosed. When their angina was medically confirmed, the subjects gradually began to realize that they had a "condition," as some of the subjects described it, and attempted to make sense of their illness. The common frames of reference which highlighted this phase were downplaying and reflecting back. Responses unique to specific subjects were also found.

Downplaying

All of the subjects initially downplayed any unusual symptoms they might have had even before their angina was medically confirmed. They did this as long as severe or persistent chest pain did not occur to interfere with their usual activities. One subject commented.

If my heart was really that bad, I wouldn't be able to run and play as hard as I am. So then you put it out of your mind even though there is still some pain there.

Many of the subjects would almost forget about the pain after it subsided. One man explained.

Actually I didn't do anything about it because it didn't dawn on me exactly what it meant. All I knew I had a pain and once I was over the pain, I more or less put it out of my mind.

Two of the subjects suspected that the pain they experienced was related to their heart yet they continued to downplay its significance. One of them commented.

Well I had an inkling of what the pain was but I didn't want to say anything. I thought it was maybe just one of those things because it went away as quickly as it came.

This downplaying of symptoms and delay in seeking medical attention may be viewed as a similar coping behaviour found among M.I. patients when confronted with symptoms that they sometimes even suspect as cardiac (Olin & Hackett, 1964).

One subject tended to ignore his symptoms both prior to and following diagnosis, thinking "they would pass" or that he could "shake them off."

Two of the participants initially rationalized their symptoms as being due to overwork. Another misinterpreted his chest pain as part of his weight problem. He stated. "I was thinking it was my weight because I was so desperately trying to lose weight."

Still another subject attributed his symptoms to being "normal" for him. He stated.

My activities were becoming more and more restricted and I was out of breath and so on but I just thought it was me again. Didn't think it was anything related to the heart. Nothing serious.

The behaviours identified as downplaying in this phase may be likened to a kind of cognitive coping style which Lipowski (1970) terms minimization. According to this type of cognitive functioning, it may be possible to view the subjects exhibiting responses indicating a tendency to ignore, deny, misinterpret or rationalize the personal

significance of their illness and its symptoms. It appeared that this minimization persisted only until symptoms became severe and frequent enough to interfere with everyday activities. When the subjects realized that their activities were becoming restricted, the reality of their illness began to set in. One subject put it in this way.

Well, I didn't believe them until I couldn't do the things I wanted to. Then I realized I had a problem.

Reflecting Back

All six subjects provided a vivid description of the circumstances surrounding their diagnosis as an initial response during the first interview. They moved from a past to present time frame and were able to recall, in detail, the onset of their symptoms and their reactions to them. The subject who had had angina for approximately three years did not elaborate as much as the others in this area.

Most of the subjects commented on how they initially sought medical attention when their chest pain became severe or persistent. One man described his first experience with chest pain in the following manner.

The first time that I experienced it, it was so painful in the center of my chest, my whole shoulder and arm, I could feel it right down to my wrist. And as a matter of fact I went to the hospital emergency to have it looked at. I knew there was something seriously wrong.

Another man explained.

I got the flu and then I was in bed one night and the pain didn't go away and I thought this was not normal. I'm not doing anything and there is nothing stressful. . . . It wouldn't go away so that is when I ended up in hospital.

Following diagnosis, two of the participants were then able to attribute previous physical symptoms to their angina. One of them commented.

When I look back, I think that's when I did start complaining about this pain. I can go back about ten years or more.

Many of the participants reflected back to their previous physical capabilities, comparing them to what they were presently doing. This seemed to provide them with a type of yardstick for measuring the severity of their illness. One man related it in this way.

Now the only thing that I found is the physical. That's a whole new ball game. There's no way I could do what I did before say especially in the last year. . . . I've been golfing for 15 years and now I'm bushed when I've finished 18 holes. I used to play 36 holes a day.

Once the participants realized they were experiencing changes in their bodily functioning related to feelings of discomfort, they seemed to attempt to attach meaning to these cues. They did this by reviewing the onset of their angina symptoms and by making comparisons to previous physical capabilities.

Such behaviours may be comparable to another mode of cognitive

functioning, related to bodily disease or injury, described by Lipowski (1970) as vigilant focusing. In their attempts to make sense from their symptoms, many of the subjects seemed to exhibit persistent efforts to reflect upon any relevant information from their past which might help them understand the onset and progression of their illness.

Lipowski (1970) claims that an individual usually displays either vigilant focusing or minimization as a preferential mode of coping style in response to illness. Although the actual extent of each coping style may vary from individual to individual and at different stages in an illness in the same person, Lipowski states that individuals, depending on their personality type, characteristically display only one preferred style regardless of the nature and severity of their illness. In this study, the angina patients investigated seemed to display both forms of cognitive coping style at different times. They initially appeared to downplay the seriousness of their illness (minimization) until they became aware that the changes in their body functioning were significantly affecting their usual activities. This realization seemed to trigger attempts to reduce uncertainty about the subjects' illness (vigilant focusing) leading them to seek information explaining the changes in bodily functioning which were interfering with their physical capabilities.

Responses Unique to Specific Individuals

Although some of the initial coping responses identified were unique to only one subject, they still represented significant data of

relevance for the study. For example, one of the participants explained that he experienced a feeling of relief when his symptoms were diagnosed as angina. For the past 10 to 15 years, he had experienced unusual pains and fatigue for which no doctors had offered any concrete explanation. Therefore, he felt an enormous sense of relief when he finally discovered what was wrong with him. He explained. "It was almost a relief to me--to be relieved of that anxiety to find out what it was."

The oldest subject of 72 years had always believed that his heart was "in better condition than normal" and that he was going "to live to be 110." He then expressed how surprised he was on hearing that he had angina. "It came as a bit of a surprise that there was something wrong with my heart, me of all people."

A unique response following diagnosis was expressed by still another subject. He felt a sense of regret over certain life-style habits, believing that they had strongly contributed to him developing angina.

Maybe carrying around this extra weight, the heart was doing extra work. . . . When I quit smoking eight years ago, that's when I put the weight on. . . . Oh yes. I regretted the 30 odd years I smoked cigarettes too. Right then I regretted it. You see I found out I had angina, if I could turn the clock back, I would never do that again.

The common and unique responses identified in relation to the subjects' onset of angina may be seen as rather complex. The participants not only responded emotionally with new thoughts and

feelings but they also had to work through a process of realizing the significance of their condition and then interpreting its severity and potential impact on their way of life. These responses may be similar, in part, to the grieving pattern of reaction to loss which Lindemann (1944, 1961) describes in relation to hospitalized patients. Lindemann explains that there may be a psychological reaction called forth by the anticipation of a threatening situation related to one's illness.

The psychological responses demonstrated by the subjects may have evolved as part of a process of interpreting their illness as a loss of potential for certain life-style activities and role functions. The coping responses displayed by these participants may represent their way of working through such losses as well as the changes in their body functioning related to their angina.

II. Managing Specific Adjustment Areas

After being diagnosed with angina, the subjects began to realize the meaning and significance of their new illness. They were then faced with a need to adjust to certain demands and limitations on activity related to living with angina. Within this phase, the subjects identified five major areas of adjustment. These adjustment areas included: (1) interactions with others; (2) managing regimens; (3) symptom control; (4) managing job-related concerns; and (5) managing attendant psychological concerns.

Interactions with Others

This common reference point related to the subjects' interactions with health professionals and family members as well as their preference for discussing their illness with others.

Health Professionals

Having sought out medical care in response to their symptoms, the subjects came in contact with various health professionals. Most of the participants' interactions appeared to be with physicians.

Two of the subjects stated that they were generally satisfied with the treatment they received. One attributed this satisfaction to the approach he used with his physician. He remarked.

I generally have a few questions to ask and it appears to me that doctors don't want to burden people with information that might not be welcome and as I pointedly ask about, for example, what I do about all this fat and what alternative treatment might there be and how long might this treatment last? I ask these questions pointedly and they are good at answering them.

Another subject was less satisfied, especially with the manner his doctor used to inform him about his angina. He explained.

I think the first doctor could have told me in a different way. . . . He might have said to me, well you have got to lose weight and you should exercise and don't have any caffeine but he didn't have to say--the way he put it was that I had angina and if these medications didn't cure me, the next step would be an operation. I thought maybe he could have handled it differently but maybe he's right in scaring me into losing weight.

As a result however, this subject did become motivated to make some important life-style changes related to his illness. He made changes to his diet, lost weight, attempted to reduce his exposure to stress and maintained regular attendance in a structured exercise program.

The same subject who had expressed relief on finally learning that his symptoms could be attributed to a concrete problem such as angina, was also angry because of the way he had been treated by his physician. He explained.

You can imagine my reaction when I heard I had angina. It wasn't the fact that I had angina. Doctor, why didn't he treat it properly? . . . When I went to the doctor complaining about my arm, the minute I told him that I was doing extraordinary physical work, he says, that's what it is, it's your muscles. But you take a good doctor I think at that time would have told me there's something wrong.

Most of the subjects stated that they gained most of their knowledge related to their illness independently. One man explained, in a voice filled with emotion.

When I got angina, I didn't even know what the word meant. I didn't have a clue. So I really had to learn myself because the doctor (in the hospital) didn't tell me anything and I went checking with everybody under the sun here and there and got all the bloody books.

This same man further explained how he had wanted more information about his prognosis as well as the longterm effects of his illness. Knowing such future implications seemed more important to this man at 42 years of age as compared to the more senior subjects.

This subject was especially upset when he received no warning or preparation for an angiogram which was scheduled for him while in hospital.

The degradation when I had my angiogram done. I had a lady come to me to shave all my pubic hair off before I had the angiogram done. Now I've never had that happen to me in my life. . . . This lady requested that I remove articles around my penis so that I could be shaved. I was totally humiliated because it was a very spontaneous thing. Just walk in. Let me see your armband. Okay, I am here to shave you. Shave me for what?

A major complaint from the subjects was that they did not receive sufficient specific information and guidance related to diet restrictions and menus, weight control and exercise regimes. One of the subjects described his concerns in this way.

They never gave me a diet. They just assumed I knew what to do. . . . I never got anything in writing. They just said keep your weight down which is fine. It's hard to do when you've just given up smoking . . . and I don't know how far to go with exercise or when to do it and when not to do it. Which exercise is okay and which is not? If you are going to have a drink, what size drink do you have?

This subject seemed to want more individualized diet counselling. For example, he wanted to know more about alternative diet plans which he could more easily follow. He explained.

At this point, we know that if you want to lose weight, you can have your boiled egg in the morning and with your melba toast and your cottage cheese, lettuce and tomatoes at lunch. This is fine but I mean I don't buy that and I think it should have been something a little better.

In their interactions with health professionals, it seems that many of the subjects were dissatisfied with the treatment they received. The most common complaint seemed to be the lack of specific direction and written instructions related to certain types of life-style changes, namely diet, exercise and weight control.

Strauss et al. (1984) refer to physicians and other health professionals acting as assisting or control agents when dealing with individuals with chronic illness. Strauss and his colleagues further explain that health professionals often persuade or dissuade what they deem necessary for their clients' benefit. Although some physicians may not always be viewed as being tactful, their use of threat and intimidation may sometimes bring results. This appeared to be the case with one of the subjects who was "scared into" making some important life-style changes as already described.

Family

Interactions with family members mainly involved spouses. Three out of the five subjects who were married and living with their spouses appeared to depend on their wives a great deal for support and assistance in managing their illness. One of these subjects commented on his wife's involvement.

She keeps a good eye on me. She is fully aware of what I should and shouldn't do. She's the one that prompts me quite a bit.

The spouses especially played a major role in monitoring their husbands' diets. One subject explained.

Well the thing is the wife, she is the one that is always watching my diet, watching the things I eat and watching what I do probably more than I do. She's the one that prompts me quite a bit. . . . She bugs the hell out of me but I've got to listen to her because I know she's right.

The 72 year old's spouse seemed much less involved with monitoring her husband's activities. She had recently undergone an operation and thus "had problems of her own" as her husband put it. However, the fact that she did display confidence related to her husband's ability "to come through it all right" appeared to encourage him.

Another participant who had been free from angina symptoms for several months explained how he thought his wife had "completely forgotton about what had happened." She had continued to make the same high caloric foods as before. Such behaviour exhibited by this spouse may be interpreted as a lack of knowledge in relation to her husbands' illness. Although she was aware that her husband had angina, she may not have realized the significance of making diet changes as a means of risk modification.

According to Strauss et al. (1984), persons who choose to adhere to prescribed regimens while managing their illness require some personal and often familial organization of effort. Most of the spouses seemed to be playing a major role in managing their husbands' illness. Strauss and his colleagues might refer to such people as

control agents. The spouses especially assisted their husbands to adhere to their diet regimens by employing such tactics as reminding of diet restrictions and manipulating food menus. As mentioned, two of the subjects' spouses were less involved in this area. As a result, their husbands were finding it more difficult to follow their diet and lose weight. It seemed that these latter subjects were relying mainly on their own efforts to make many of the life-style changes related to their illness.

Others

The subjects investigated had definite thoughts and feelings about whether they were comfortable discussing their illness with others. Half of the subjects had informed certain friends and colleagues about their angina. They claimed that they were not treated any differently by those who were aware of their illness except perhaps that a little more consideration had been shown to them which they appreciated. One participant elaborated.

We're in a very small company and there might be times when you are required to lift something, equipment or whatever. And so, they (his colleagues) are very good because they'll say 'cool it, I'll do this.'

Another subject, in explaining how he didn't hesitate to tell others, commented.

They all know at work, you know. They all make fun of me popping my pills three times a day or whatever but it doesn't bother me.

This 60 year old man had willingly retired because of his angina and was in the process of applying for a disability pension. Having others at work know about his angina therefore seemed appropriate.

In contrast, another subject had told everybody except those at work. He explained how he had indirectly informed his colleagues of his condition.

I told them I go to the Y three times a week. I told them I couldn't work 12 hours a day anymore. And I let them draw their own conclusions.

In questioning the subject further, it was discovered that he felt if people at work definitely knew about his angina, his job security might be jeopardized. The fact that this subject was attempting to keep his illness from his colleagues may be viewed as his way of adjusting to a major challenge, namely that of his job maintenance. This situation may also be seen as one example where active measures are sought in response to the challenges and tasks posed by an illness (Lipowski, 1970).

The other half of the subjects preferred that no one outside their immediate family know about their angina. One was quite adamant about it. He described his angina as a "personal thing," saying:

Talking with other people doesn't satisfy me. I can talk with my wife. We can discuss it. That gives me more satisfaction.

In fact only one person besides his wife and daughter was aware of his condition and that was because he also had angina. Although the

two men never discussed their illnesses, the subject did pass on advice to his friend regarding risk modification and life-style management. He explained.

Our friends--only one person knows that I have angina. That's it. We've asked him not to mention it. We don't mention to anybody that he's taking the same pill as I do, and I try to find out what his problems are . . . and I give him advice. I just tell him with no explanation.

This same subject explained his preference for keeping those at work from knowing about his angina.

Nobody ever suspects that I have angina. I think they are the last ones I'd tell because their imagination really runs away with them. And so I just leave it at that. Some of them wouldn't know what angina is anyway.

He further justified not telling his colleagues by explaining:

My angina hasn't affected my work. I'm still doing all the work I am supposed to. Maybe even more than I am supposed to do. . . . so thinking of work that justifies me not telling anybody. Why should I?

Another subject also insinuated that his angina was personal. He offered his rationale. "As a general rule I avoid mentioning it. I'm not one to go and tell everything, all my private business to people."

These latter two subjects explained how they generally tended to keep their personal affairs to themselves. It seemed that they were applying this same approach to their situation with angina. According to Lipowski (1970), such behavioural tendencies may be described as a person's coping style or his/her characteristic way of coping in various situations.

Two of the subjects explained that they hesitated to inform others of their angina because they were concerned that they might be treated differently as a result. They put it this way.

I'm not embarrassed because I got it but I don't want the sympathetic shot. I don't want people saying how do you feel? I don't want somebody laying a trip on me.

I wouldn't want other people to be influenced in their conduct towards me. I wouldn't want people to say, well we better give him the chair. He's got a bad heart.

Both of these subjects, who happened to be the youngest and the eldest in the sample, seemed to indicate that having others show sympathy towards them because of their illness would cause them to feel uncomfortable. This appeared to be a major reason for keeping their illness to themselves.

It is evident that the subjects under study generally varied in their preferred mode of interaction with others. Only two of the participants clearly appeared not to be bothered by having others know about their illness. The remainder of the sample were found to have some reservations in this area. The efforts of these latter subjects to maintain a level of secrecy about their illness may be likened to a basic coping strategy called normalizing (Strauss et al., 1984). This beginning attempt to make their lives as normal as possible did not seem to be compatible with any knowledge that others might have concerning their illness.

Regimen Management

A second key adjustment area encountered by all of the participants in the study was the management of certain regimens associated with their illness and the modification of risk factors which could lead to an MI. Regimen management and risk modification are so interrelated that they will be dealt with together. The subjects investigated discussed their management of three regimens in particular: (1) diet; (2) exercise; and (3) medications. Their continuous efforts to evaluate these regimens will be discussed initially.

Evaluating Regimens

Strauss et al. (1984) explain how regimens, usually suggested by physicians or other health personnel, are often evaluated by chronically ill persons on the basis of legitimacy and/or efficiency. They further explain how regimens are also judged on a social rather than medical basis. Such evaluations were noted to be made by one subject in particular in the present study. He queried why he needed to be concerned with risk modification, rationalizing:

The damage is done, it's irreversible. If I cut back on the fat, it might arrest it (the angina), but I think, like the doctor, that it is a disease. If the disease is there, there is nothing on this earth that is going to stop it. The damage is done. . . . I think maybe you can slow the process down but well, myself, I'm not going to because then you

become obsessed with it and the obsession produces stress or whatever and that throws you into another category of frustration.

He continued to rationalize about a need to alter his diet saying:

If I am hungry, I will eat. But I don't think I've ever had that much of a problem so I don't have to worry about it. The other part is that the doctor, when I first went to him, said 'Well, I am going to set up a stress program for you.' And my wife says 'Oh no, what means diet.' He hasn't done anything about it. So he's not concerned, why should I be?

This person later admitted that being put on a diet would make him anxious.

Maybe there would be some anxieties there. I wouldn't be able to eat the things we enjoy. Because we enjoy cooking and eating. Take that away from us?

In judging the legitimacy of a diet change, he concluded that he could accept being overweight, attributing the excess weight to being middle-aged.

When you start reaching a certain age you don't have any control over that. Nature takes over and it produces fat. A person could say, I have to get rid of that. I'm obsessed. I want to be thin again or muscular. I don't. I would prefer not to go on a diet.

This same subject also objected to initiating a regular exercise program, rationalizing that he had done enough exercise when he was younger.

I've done my exercise bit I think from age whatever until 44 or 45. Besides, I get enough exercise at work.

Another subject in evaluating the efficiency of his diet regimen, was skeptical about the benefits of reducing cholesterol intake. He commented.

Quite frankly I think it has become a fallacy. I think your cholesterol is built up in your body and you can't do much about it. . . . Eight years ago I went to the doctor for a physical and had my cholesterol checked out. It was too high so he says, 'cut out the fats', all of these things that I did. Didn't do any good at all. I still got it (the angina).

Obviously this man was not convinced that reducing his cholesterol intake would be worthwhile. According to Strauss et al. (1984), the lack of evidence that a regimen works to control a disease process represents a condition which is not conducive to acceptance of that regimen.

In evaluating the benefits of modifying certain risk factors, two subjects admitted to being aware of the hazardous effects of smoking. They were not ready to give up the habit however, claiming they enjoyed it too much. One of them expressed it in this way.

Well, it's just that I keep that sort of a crutch, I guess. You know, you've taken away the booze from me and taken away some of my activity so I just hang on to the cigarettes.

The other commented further, almost contradicting himself.

It hasn't scared me enough. But I know all the pitfalls and the black lungs and the rest of it. But I've smoked now for 40 years and all these super scans they have, they haven't detected anything so why worry.

Both subjects were concerned about their weight and felt that stopping smoking would lead to excessive weight gain. One explained why curbing his smoking was the lesser of his priorities.

I took a look at myself to see what I was doing wrong, you know. Eating, I felt was my biggest downfall. . . . The cigarettes aspect, okay, that takes a lot of wind away from me, but the theory of cutting out the cigarettes and putting on weight. I'm big enough now. If I cut out the cigarettes I am going to be craving candy or I am going to be going back to food. As long as I can keep it down to what I have been smoking then I feel comfortable with it.

The subject who had lived with his angina for almost three years was beginning to experience some benefits from modifying his diet and stress exposure.

Oh I definitely see value in making some changes, particularly with the diet and the tension. You really have to moderate your diet. You feel better if you do.

This man was particularly motivated to monitor his diet because of a recent onset of diabetes. Strauss et al. (1984) point out how often people suffer from more than one chronic illness. This means that they may be involved with managing two or more regimens simultaneously. Some of the regimens may be in competition with each other or may actually cause the symptoms of the other illness to occur. Fortunately this subject was not involved with competing regimens and thus did not have to be concerned with such conflicts. For example, the fat, cholesterol and calorie restrictions related to his heart disease also complemented his diabetic diet regimen.

In judging whether or not they would take up and adhere to prescribed and non-prescribed regimens, the subjects appeared to use certain evaluation criteria. Diet regimens were assessed on the basis of their efficiency and legitimacy. For example, one subject was not convinced that restricting cholesterol intake could work to control angina. Professing a continuing trust and confidence in his physician, another participant would not consider dieting or exercising if not specifically prescribed for him. Some of the subjects claimed that dieting and cessation of smoking might be too much of a sacrifice. In addition, the interrelatedness of eating and smoking habits could be problematic where stopping smoking could cause food intake to increase leading to weight gain.

These evaluations noted with regard to regimen management and risk factor modification demonstrate how the lives of the chronically ill can be complicated with restrictions and how each restriction is therefore so readily put on trial. Such evaluations which according to Strauss et al. (1984) are made continually by chronically ill persons, might also make one wonder how long regimens are actually adhered to, even in modified form.

Diet Regimens

All but one of the participants seemed to recognize the importance of weight control as part of managing his illness. This one exception, as discussed earlier, was convinced that losing weight was not a

worthwhile endeavor. As also mentioned, attempts to curtail smoking activities made weight control all the more difficult. One of the subjects who realized he was overweight, wished to know his ideal weight so that his weight-loss regimen could be more goal-directed. This is the same subject who identified a need for more specific guidelines related to his diet regimen. Strauss et al. (1984) describe how a patient may wish to adhere to a regimen but the instructions concerning it may leave him confused and unsure. It appears that although this subject wished to follow a diet in order to lose weight, he felt frustrated and uncertain about setting his own limits and goals.

The way I feel, I don't know what my weight should be. I just feel that I'm about 15 pounds overweight than I am normally. I just feel a little uncomfortable. And those 15 pounds have been put on since I quit smoking.

Two of the participants in particular mentioned how they had lost weight initially and were now becoming frustrated as they were seeing only minimal results from their efforts. One of them put it in this way.

I used to drink a lot of coke and eat a chocolate bar in the middle of the day. I don't do that anymore. When I stopped those two things, I started to lose a lot, 10 pounds, by doing that. But then I stopped losing.

Other areas of difficulty were identified in relation to the subjects' management of their diet regimens. One subject commented.

The portions are the main things. I'm always nibbling celery or carrots after supper. I'm always hungry. It's a little difficult to get used to especially when people are eating all around you.

Many found it hard to resist their spouses' culinary expertise. One participant explained.

My wife will put down all sorts of things I shouldn't eat in front of me. She is in there baking that stuff. How can I refuse? She puts cookies and squares when she packs me my lunch, sometimes I eat them, other times I'll give them away to someone else.

After analyzing these subjects' anecdotes, it seems that the efficiency of their diet regimes could be questioned. For example, the participants' attempts to limit their favourite foods, in combination with their slow weight loss, could affect their perceptions of the effectiveness of their diet regimens.

In general, the subjects' diet regimens did not appear to be difficult to follow. However, without specific guidelines and depending on the extent of changes to be made to their regular eating habits, continued adherence could be affected, particularly when the efficiency of the subjects' efforts was questionable.

Exercise Regimens

Half of the subjects in the study sample had begun to exercise on a regular basis since being diagnosed. The types of exercises engaged

in included walking and swimming. One of the subjects had followed up on a suggestion made by his physician, enrolling in a local cardiac rehabilitation exercise program. He, along with the other exercising subjects, claimed a feeling of well-being for having participated. He expressed it in this way. "Yes, I do feel better. I feel better about myself too, doing all this exercising and coming to classes."

The subject who had taken up swimming commented.

Oh no, I wouldn't miss it now (the swimming). In fact I am getting that I'd like maybe to increase it from twice a week to three times a week because I am finding such a joy out of it.

Those who were exercising regularly were either retired, unemployed or had flexible working hours as was the case with the subject who had joined the exercise class. As pointed out earlier, one of the subjects felt he had done enough exercise in his past and walked enough at work to compensate; however he later revealed some uncertainty as to what an exercise program would entail and how it would affect him. He commented.

I think in the last 10 years that we have lived here we (he and his wife) might have gone for two walks. That is about it. Whereas around the neighbourhood, I see people go religiously. If I did, I don't know what would happen. What would the doctor say? Would he tell me to walk every day a little bit, slow down or what?

Having not exercised regularly for a long time, this subject may actually have been afraid to resume regular fitness activity which

might exacerbate angina symptoms.

Another participant emphasized the fact that he recognized the importance of regular exercise but pointed out that finding the time to engage in such activities was a major problem for him.

Well, I 've heard of people going to cardiac classes at _____ once or twice a week and they run around. It's like a little club. But really, I'm not for that sort of thing because I am working. It's alright for people who've got lots of time off and can do these things. . . . If you are working all day, all week and then you come home at night and by the time you get home, digest your supper, watch the news, read the newspaper, it's too late and I get tired.

According to Strauss et al. (1984), the time and effort required to implement a regimen is a common characteristic evaluated by chronically ill persons when deciding about taking up and adhering to a particular regimen. The authors further explain that interference with important daily activities is a major consideration when making this decision.

The eldest subject, who was the most recently diagnosed in the sample, was still in the process of trying to establish a regular walking schedule. On the whole however, those who had the time to incorporate regular exercise into their daily schedules seemed to have taken up the habit more readily. They were found to continue to adhere to these regimens, perceiving good effects from their participation.

Medication Regimens

All of the subjects studied had been prescribed medications by their physicians, to be taken on a regular basis. Some of the

participants were still having their dosages regulated and were experiencing increased fatigue as a major side effect. One described his reaction as follows.

They put me on various dosages. I found that I was on 10 mg and I should have been on 60 or whatever. But the more I went on, the more tired or sleepier I got. . . . It took about a month out of my system to reset to the new drug.

Another subject assessed his reaction to his medications by making a comparison to previous energy levels. He stated.

I find that since I've been taking the medications, I am a lot more tired now than when I wasn't taking them.

One participant experienced another type of side effect, influencing his response time to different stimuli. He explained.

Being on the medication I've noticed it's really put me into a state that I have to give a second thought before I react to what I was thinking. Like if I go to do something, it almost stops you. It causes you to go a little slower.

Although most of the subjects had experienced some adverse effects at one time or another from taking their medications, these adverse effects seemed to be eventually outweighed by symptom relief. One subject explained that since having his medications adjusted, he felt more energetic to do things.

I look back on the last six months and I think I have more energy. Even though I'm doing more work maybe but I would say I've had more feeling to do things in a relaxed state than I did before. . . . I seem to have a different type of more energy if that's an explanation. . . . Even at work, I'm not as tired.

The medications were noted to curb the frequency of angina episodes according to another subject. He stated.

I noticed when I was on my holidays I had to cut them short because of the recurrent pains. I would get them four or five times every week. The medication I am on now seems to curb them better. I still get them a bit but nothing too severe.

One man explained how he generally felt better from taking his medications, commenting: "I am actually much better now than a month ago when I was just starting the medication."

Apart from some initial increase in fatigue it appeared that the subjects experienced mostly positive outcomes from maintaining their medication regimens. This may be explained by some of the conditions which Strauss et al. (1984) identify as being conducive to one's adherence to a regimen. For example, no really distressing side effects were apparent and it seemed evident that the regimen was working to control symptoms. One subject also felt that taking his medications was also helping to control the disease process. Again this is another characteristic which chronically ill persons use to evaluate regimens (Strauss et al., 1984). The subject stated.

It (the medication) is helping, it is trying to arrest it (the angina). It can't cure it though I know.

Two of the participants mentioned some of the inconveniences related to taking certain medications. They explained.

I don't know if anybody has ever mentioned it. This is all very well to say when you are getting into a stressful situation where you get these chest pains, you take your nitro and sit down and relax. Have you ever tried to sit down in the middle of town?

.

The Lasix pills, they are just a nuisance. You always have to be near a bathroom all the time. . . . Before you take it you got to think, well what am I going to do today. You know, if I am going to have ready access to a bathroom, fine. If I don't then I don't take the things. Now I am starting to taper right off.

As pointed out with exercise regimens, interference with daily activities may not be conducive to maintaining a regimen (Strauss et al., 1984). It appeared that because this latter subject's symptoms seemed to be under control, it was reason enough for him to start "tapering off" his medications. He explained his strategy in this way.

Well, I think if I watch myself and pace myself I can do without them (the medications), I hope. But if it is not working, if I start to feel real bad or the pains become really frequent, I will go back to it. I'll take it a little.

These attempts to discontinue medications may also stem from the fact that the effectiveness of the regimen may mean that it is now time to come off of it (Strauss et al., 1984). Actually this was not the first time that this subject had attempted to discontinue his medications. A few months after he was diagnosed with angina, he had stopped taking his pills abruptly. He commented.

I took the medications regularly up until about two or three months after I got out of the hospital. I would run out and I would feel a little better so I just wouldn't renew my prescriptions.

Perhaps this is another instance of minimization where the subject may be seen denying the seriousness of his illness (Lipowski, 1970).

Another subject had experimented with reducing his antihypertensive medication. Although no change was noted in the way he felt or in his blood pressure reading (taken at his exercise classes), he decided to resume the full dose, perhaps fearful of any harmful effects which might ensue. He described his rationale.

Well I thought maybe I was getting better so I cut the pills in half for awhile and came in for my blood pressure reading and there was no difference. There was a whole week with half a pill and there wasn't any difference but I went back to them.

Both subjects did not inform their physicians of their attempts to modify their medication regimens Strauss et al. (1984) explain that such concealment may be characteristic of the chronically ill. In learning their medication regimens, these individuals may have been trying to maintain as much control of a normal life and at the same time control the symptoms or disease itself. This may be seen as a further attempt at normalizing, a coping strategy which some of the subjects had previously used when they decided to keep others from knowing about their illness. Strauss et al. (1984) also state that it depends on one's trust in his physician as to whether he will consider the regimen binding or attempt to bargain with the physician for modifications.

The three regimens discussed by the participants in this study

revealed a substantial number of characteristics which Strauss et al. (1984) have identified as influencing adherence/compliance. In talking with the subjects, learning to carry out all three regimens seemed to be a manageable task, entailing elimination of specific foods and addition of certain activities and drugs. As some of these subjects had pointed, however, more specific guidelines in the area of diet and exercise might have made this learning process easier.

Symptom Control

Strauss et al. (1984) suggest that the control of symptoms may be associated with adherence to effective regimens. This relationship became evident when some of the subjects revealed that by adhering to their medication regimens, they could better control symptoms of fatigue and chest pain. Many of the participants commented on learning about their symptoms and their consequences. Strauss and his associates explain how chronically ill people attempt to learn the pattern of their symptoms: when they occur; how long they persist; whether they can be prevented, shortened or reduced in intensity. The subjects investigated seemed to follow a similar learning process, indicated by their remarks concerning symptoms of fatigue and chest pain.

Fatigue

The subjects spoke of fatigue as their most common complaint. One

explained.

I go for walks regularly now. I get tired very, very quickly. That is the thing that I really notice, that I get tired. If I go out and wash the car for instance, I am perspiring heavily by the time I'm finished.

Another subject remembered how tired he used to be earlier on in his illness.

I was just tired, excessively tired at the end of every day. Sometimes I would go to bed at seven or eight o'clock in the evening. So I could get myself in shape to get up the next morning.

Other participants referred to previous energy levels as a means of measuring the extent of their fatigue. They commented.

I don't go out as much as I used to, you know. I stay home quite a bit because I've noticed that I get too tired.

.

You know, where I used to go to bed at midnight, now I'm in bed by ten or ten-thirty.

Angina Pain

Some of the subjects also spoke of their angina pain. One of the participants mentioned how he was learning to distinguish his angina pain from other types of discomfort.

This is Tuesday and you know, I look at that and I can usually pretty well tell. If I've got aches and pains, I can say well that's from overdoing it on the weekend shovelling snow and my muscles are sore. The angina pain is different. It stays.

Another subject was often unable to attribute his chest pain to anything. He explained.

Oh they occur three or four times a week but nothing heavy. It just happens anytime at all. It can even happen when I am laying in bed.

Having had angina for almost three years, this subject did not appear too concerned about these episodes of chest pain. Perhaps this relaxed attitude was related to a tendency to continue to downplay the seriousness of his illness.

Discovering Limitations

The subjects were also involved with learning their physical limitations in relation to symptom control. One subject explained how he had to "learn the signs."

There is a message there some place within your body telling you something. . . . I know my limit. I might have pushed myself before but I can pace myself now and adjust to it.

Another participant put it this way.

I more or less just realize my limitations. When I get overly tired, I stop and go at a slower pace.

Some of the subjects had curtailed certain strenuous activities in order to prevent the onset of angina symptoms. One man explained.

I don't do any strenuous exercise or aerobics or anything of that nature. May be I should but I don't want to fool around with it in case something goes wrong.

Another participant commented on how he had eliminated many of his previous recreational pursuits.

I used to play softball with the younger members of the staff and I don't do that now. I used to do a bit of skiing, I've stopped that a couple of years ago. I was too tired when I got through with it. That was it for a couple of days. It just drained me completely so I more or less stopped.

The latter subject further explained how he had learned to accept his limitations.

You get to learn to do this automatically. If I become over fatigued before it used to bother me quite a bit. Now it doesn't. I say, okay, I've reached my limit so back off for a while. I've more or less learned to accept it that way. I don't get upset about it.

All of the subjects seemed to be involved with what Strauss et al. (1984) claim is part of learning about symptom control. These authors explain that the sick person must discover his limits, that is, how far he can carry on despite symptoms. Some of the participants had learned to do things in different ways. One subject explained how he had to readjust his way of performing one household chore.

I don't have to tell myself or force myself. Commonsense tells me. If it is going to snow and it is going to snow all day, I don't wait until there is six inches of snow out there. I shovel it away at two inches. It's a lot easier.

Such readjustments seem to be a result of discovering one's limitations and are similar to what Strauss et al. (1984) refer to as redesigning life-styles in order to control illness symptoms. Avoiding

certain strenuous activities as pointed out with the other subjects, may also be viewed in this way.

One man in particular was often testing his limitations in order to determine the extent of his capabilities. He remarked.

Yes I'm a person that I don't learn unless I get bitten, unless I get burned. Not that I know it all. It's just that I have been a very self independent male chauvinist all my life and you've really got to lead me to the water and on the right path before I will start drinking.

These comments might suggest that perhaps this man usually confronted most situations in this manner. It may represent his style of coping or in other words his characteristic way of problem-solving in response to harm or threat (Lipowski, 1970). This subject commented further, suggesting difficulty accepting his illness.

And maybe that is just a mental trip trying to see what my limitations are. I keep doing that every day. I keep going to the end of the line until I get totally exhausted or I get pretty severe pain. . . . That's the biggest thing because I fought it. I'm still fighting it to some extent, and that's why I stress the fact that I keep trying to push myself, my limitations, hoping that I can get back to my previous physical capabilities.

By always attempting to test his limitations, this subject may actually be denying the seriousness of his illness. This sort of behaviour may represent an attempt to minimize the threatening aspects of his illness, stemming from his failure to accept its significance to his way of life (Lipowski, 1970). Scalzi (1973) explains that although denial is common for the first 24 to 48 hours post MI, it may extend

well into convalescence especially with younger patients under 40 years of age. This 42 year old subject had suddenly been confronted with a new illness impacting on his way of life. His response then may be seen as similar to the denial exhibited by younger MI patients.

It seems that most of the subjects investigated used much of their own wisdom, judgement and ingenuity to learn about symptom control. They became aware of some of the factors which triggered their symptoms and began to realize their physical limitations. Working through the significance of their illness to their way of life resulted in many of the participants having to redesign or alter certain aspects of their life-style.

Job-Related Concerns

All of the subjects who were working commented on how their angina affected their job performance as well as their ability to tolerate stress on the job and deal with financial and retirement concerns.

Effect on Job Performance

Many of the subjects described how their angina affected job activities. Two of the participants commented in the following way:

My job is one which demands a fairly high degree of concentration and you got to know what you're about. Otherwise you miss things which I have been doing to a greater or lesser degree. I get these recurrent chest pains

on the job. I feel not too bad and then I get a couple of these sharp chest pains again so that jolts me right up again.

.
It's a funny thing. Sometimes the courier work I do requires me to go somewhere and pick up maybe a ton of goods and would you believe it, on my way to picking this up I would have a little pain just thinking about doing myself damage, picking up all these boxes. When I get there I would load the boxes on with no pain.

Dealing with Stress

All subjects admitted to being exposed to stress on the job and realized that it could be harmful in terms of their heart disease. One participant felt stress was a major factor contributing to the onset of his angina. He commented.

This (stress) is probably what brought it on because it was just at that time I had tax returns and all these things to worry about.

He further explained how difficult it was to avoid stress.

Work is stressful. They say, keep away from stress but if you're going to work, especially these times, you've got stress. It's too difficult to eliminate it because in my business, bad debts are awful these days and it is stressful.

Retirement/Financial Concerns

The subject who was experiencing recurrent chest pains on the job, affecting his concentration, had decided to take early retirement at

age 60. He explained.

I would stick right through to 65 if I could but it is a bit of anxiety which has led to a loss of concentration on my job. I'm not performing my job as well as I should. I'm not as sharp as I used to be and I think it has to do with my angina. . . . Although I realize there is a bit of stress on the job, there must be and I am going to pack it up for that reason.

It seemed that this subject had come to terms with the implications of his angina in relation to his job performance. This appeared to be an area in which his limitations had been realized. He had decided to apply for a disability pension and appeared willing to live on a reduced income so that he could keep his angina in check.

So I thought I might as well leave the whole thing and cut it (the work) right out and see how I can do on my own. If I am going to get pains, I might as well get them at home in my time. It means I will be on a reduced income and I'll have to change my accommodation to suit my income. It's a factor but its no real concern.

The other three subjects who were working were also close to retirement age. Only one spoke of wanting to retire early because of his angina; however, due to financial reasons and family responsibilities, he felt committed to continue working. He explained.

Well, I'm 60 now and I've no pension so I am in the position that I've got enough to sort of go along and live more or less the life-style. Nobody knows these days. . . . I've got two boys. I'd like to see them sort of get their niche. I'd like to see them get settled before I settle down myself. Hopefully inflation won't keep on, I might retire shorter than I think.

The 42 year old subject who was presently managing financially on government assistance had to adjust to the fact that he was unable to function in his previous occupation. He remarked.

As for as my work is concerned, okay I realize that I probably can't go back and do the things I did for the last few years because of the mental pressure that it took and the physical length of time that I was on my feet working. I'm slowly losing my life-long occupation which I could have gone with to my early seventies. And then my financial loss which I was making over _____ a year. And now I'm sitting here fighting--well, I hope my cheque comes in the mail. What if it doesn't come in the mail? What do I do the next day?

It appeared to have been a major adjustment for this man to deal with the loss of financial security and become forced to depend on government assistance. Loss, when associated with illness, may refer to deprivation of significant needs and values such as self-esteem, security and satisfaction with body parts and functions (Lipowski, 1969). This subject's response to his loss of occupational identity and financial security may be similar to the grief reaction of physically ill patients described by Lindemann (1944). This subject had to work through his losses, redesigning his way of life to be compatible with his transition from the role of a paid worker to one of dependency on others.

Most of the subjects who were employed appeared to have taken steps to evaluate their angina in terms of its effect on job performance. Their illness seemed to have developed at a time in their lives when they were also being confronted with planning for their

retirement. For two of the participants, angina made retirement more of a priority. These subjects seemed to indicate that their illness could threaten their enjoyment of a stage in their life which they had always looked forward to. In contrast, two other subjects appeared content to continue to work at their occupation inspite of their angina.

Attendant Psychological Concerns

Many of the subjects revealed certain psychological concerns which evolved during the process of coping with angina. These concerns were related to various frustrations and the acceptance and future implications of their illness.

Frustration

Most of the participants experienced varying amounts of frustration due to the limitations imposed by their illness on many of their daily activities. Some of the subjects expressed frustration in relation to certain routine activities. They commented.

Frustrating, oh! I'd take the garbage cans out to the street, a matter of about 60 feet. That's just one garbage can. By the time I came back I was fagged.

.

To me its frustrating because I am always used to doing what I wanted to do whether I wanted to go out and mow the lawn, I'd do it, no restrictions. But now I have to go out and do part of it and then I sit down and wait and then go out and do some more.

This latter subject seemed particularly annoyed, realizing the effect his physical limitations had on many of the activities he used to do and enjoy. He remarked.

All it does is just make you frustrated because you can't do the things you used to. I used to go hunting. I can't do that anymore. I used to go fishing where you lift the boat into the water. Can't do that any more. And so these are the things. You get frustrated because it's your life-style and you have to compensate.

This participant also appeared angry, having had to eliminate certain habits which could place him at risk for further development of CAD.

I was frustrated because I couldn't have a smoke. Frustrated because they told me to keep my weight down.

As this subject approached retirement age, he realized he would be restricted in many of the activities which he had so looked forward to enjoying.

I mean at my age you start to think about retirement. And the only thing is, I feel that in your life you think, oh geez, I would like to do this and I would like to do that. It means that you can't do it. You know, I enjoyed getting out on the diving board there and diving and swimming and going great guns but I can't sort of go out there. I float and do whatever but you can't do the things that you used to do. It's frustrating.

It seemed that most of the subjects' frustrations stemmed from their physical limitations. One subject specifically identified frustration related to his diminished sexual performance.

And a guy, especially when you are only 42 like I am, then all of a sudden you can't perform. I think of all the things that--okay, the work isn't going to bother me and the walking isn't going to bother me but when my sexual appetite diminishes or I can't even perform a sexual act!

Scalzi(1973) describes how aggressive sexual behaviour among post MI male patients attempts to counteract anxiety that results from a threat to self-image and fears of sexual inadequacy or impotence. Although this subject was not noted to exhibit any aggressive or inappropriate sexual behaviour, the fact that he was extremely concerned about his sexual performance may be related to the type of anxiety expressed above. He described his decreased sexual abilities as "a real ego jolt especially at my age" (42 years). In addition, his sense of masculinity seemed threatened.

Other things could be much of a problem to me such as keeping my male masculinity. Just the daily encounters of say, well, I'll give you a hand. Now I can't give you a hand all of the time.

Having to depend on others also made this subject uncomfortable, again affecting his self-image and sense of masculinity. He explained: "I don't allow people to try to assist me any more than I need." Having to depend on the government for financial assistance was also difficult for him to accept. He expressed it this way.

By now becoming a permanent handicapped disability pension on the government--something that comes totally to handicapped people--as these things come to me, I have to come to grips with acceptance of these things. It seems all of a sudden I'm becoming a total burden to society.

These latter responses appear to demonstrate one way that angina, as a chronic illness, is different from other illnesses of an acute nature (Dimond & Jones, 1983; Miller, 1983). Because acute illness is usually temporary, dependency on family and others to relieve certain responsibilities is often accepted. Chronically ill persons however, are faced with a permanent irreversible illness where dependency over a long period of time is not apt to be accepted by the individual.

Acceptance

Despite the frustrations described above, most of the subjects claimed that they were begining to accept their illness. The same subject who had rationalized his way out of taking up diet and exercise regimens appeared to have a positive attitude related to living with his illness.

I can live with it. I don't find it a real shocker type of change of habits I mean just physically and psychologically at my age I should be in the area of changing my life-style.

He claimed that it didn't bother him that he couldn't engage in many of the activities he used to do, implying that at his age (56), these changes were to be expected.

Oh it doesn't bother me that I can't do some of the things I used to. I mean, like I still am able to enjoy watching basketball or football. I reflect back on what I used to do. Not that I wish I want to but there is no way and I try to tell other people the same age that you know, don't think you are that young.

Another subject also appeared to find it easier to accept his illness because of his age. He commented.

I'm not suffering from it (angina). I know that I will never go out and win any wrestling match or boxing but who would at 63?

The eldest of the subjects explicitly denied being frustrated about his illness, claiming that he could adjust his life-style accordingly.

I don't feel any sense of frustration that I should be able to do things. If I can't do it, I can't do it. In other words I can live with it. . . . I'm quite ready to face reality and if I have angina then I'll have to govern my actions accordingly.

The youngest subject, on the other hand, still appeared to be in the process of working through the impact of his illness on his way of life. He commented.

I'm only 42, you know, like I had and always have had a very good disposition I could accept things, understand things. But I just couldn't come to grips with it (the angina). . . . Not being able to do the things I used to. That's probably the biggest frustration. When you are accustomed to being an active person. Like I get up early in the morning and I do things but I found when all of a sudden when I had to slow right down to a crawl and at my age, that is probably the most frustrating thing. Accepting the fact that I can't walk from here downtown which I normally used to do. . . . So the acceptance of what is happening to me as far as the heart is concerned is still taking time.

His difficulty accepting his illness, when "only 42", may have been compounded by his financially dependent situation.

During the second interview, this subject revealed that despite the restrictions imposed on his way of life, he was beginning to understand his angina and accept its permanency. He explained.

The mental part I'm getting over that--the acceptance part. Having looked at the total medical aspect of it and getting to understand exactly what I got I realize it can't be beaten, you've got it.

He also implied that he realized he had to adjust his activities according to his limitations in order to control the disease process.

My limitations bother me but what can I do? . . . It's the monitoring it and keeping it in retrospect and if you can hold it back. From getting to where you start protecting yourself. So I have accepted that fact.

This was the same participant who had earlier explained how he often tested his limitations. Such behaviour was previously likened to a form of denial. As this subject came closer to accepting his illness it seemed easier for him to acknowledge his limitations. Perhaps as Gorman and Anderson (1982) explain, this use of denial may have helped the subject adjust to the impact of diagnosis by allowing him time to deal with many complex emotional feelings and incorporate his chronic illness into his way of life. Having done this, he seemed more able to accept his illness and its life-style implications.

Another participant also referred to the permanency of angina as being difficult to accept. He explained.

It is difficult to accept because it is so new. To get a broken arm or something, you put it in a cast and that is it. It is an everyday occurrence. But this business isn't an everyday occurrence. It is here to stay with you. . . . The hardest thing to accept is that it is a long term thing.

The man who seemed to express the most frustration related to the restrictions imposed by his illness spoke of his inability to accept his angina.

I've always been very active and I just don't--haven't been able to accept it really. I'd like to do more than I am right now. Before I could do whatever I wanted to do. Now I can't and you know, it is hard to accept.

Although this subject seemed to have realized his limitations related to angina he still appeared unable to accept their impact on his way of life.

For many of the subjects, age seemed to be an important factor influencing their ability to accept their illness. Some of the subjects who were nearing or into their retirement appeared to be more accepting of their aging process and its concomitant physical changes. Coping with angina seemed easier for them. On the other hand, two other participants who were nearing retirement age hadn't been able to adjust to the physical limitations imposed by their illness. It appeared that they were still working through this loss of altered body function (Chodoff, 1962; Crate & Edwards, 1983) and thus were not ready to face the long term implications of their illness. Again age seemed to be a major factor for the youngest subject, affecting his ability to accept his illness. It seemed that he was just beginning to show signs of coming to terms with the permanent and irreversible nature of his illness.

Future Implications

As angina pectoris is a chronic illness, it is long term by nature and thus carries with it future implications many of which are uncertain in a variety of ways (Strauss et al., 1984). Often prognosis is uncertain where one may be unsure of what is going happen and when. One subject expressed his uncertainties in this way.

I'm not sure how far I can go with it. Basically, I don't know how far I can go, if it is going to get any better or get worse.

The eldest subject also had some uncertainties regarding his prognosis yet did not appear overly concerned. He stated.

I'm not worried about it at the present time except that it could possibly get worse.

The youngest subject appeared the most concerned with regard to his future. Although he wanted to return to some form of employment and "normal" life-style, he was unsure of his future capabilities as a full time worker. He expressed his concerns in this way.

My attitude right now, as we are sitting here is I am lost. You know, first I am dealing with my heart. Deal with the medical problem first. I have accepted psychologically that I have to refrain from things but as far as the future is concerned, I am still at a total loss until I know my limitations and until I know that I am protected and that I can put in a good eight or twelve hour day which I normally have all my life.

Again this seems to be another example where angina, as an illness, implies the loss of potential for certain activities and role

functions (Lindemann, 1944; Lipowski, 1969). This subject seemed to view his illness as a loss of physical functioning and role as a wage earner. Being unsure of his future capabilities may have actually intensified his response to this loss.

In discussing their thoughts and feelings concerning their prognosis, many of the subjects also expressed doubts about the benefits of coronary bypass surgery. They seemed inclined to avoid surgery fearing that the disease process might reoccur regardless of such an intervention. They explained.

I know in some people it works and some people it doesn't. I do know that bypass surgery is not beneficial in each case. People who have, it hasn't been the end of their angina. They still get the pains.

I presume a lot of people who have it really need it desperately but I wouldn't have any surgery, any bypass surgery, unless it was really strongly recommended.

The only thing I am concerned about is after they have it, where they are going to have the same thing come back at them and they have to go through the whole thing again. I just don't want my chest cut up and do these things and then say, Oh, now I feel fine, that so many years down the pike--you've got the same problem again, you got to go back again.

One participant referred to open heart surgery as a last resort.

I always had the impression that once you started having operations on the heart you were finished. I'd be very happy if the doctor could treat it (angina) with the medication.

In general, the participants did not appear to have much faith in bypass surgery. However, because their symptoms were not severe enough

that their physicians had prescribed such surgical intervention, they may not have considered it seriously.

Most of the subjects did not appear to view their illness in a life-threatening context. In fact, many were not concerned about the possibility of a fatal heart attack, believing that such an event was out of their control. They explained.

There is nothing I can do. You don't even know if you are going to live tomorrow. . . . All of a sudden something could happen. Nobody knows. So we (he and his wife) just look at that. There is always some sign, I don't know, unless there is a heart attack, there is no sign. It is instant.

.
My father had died at 54 with a coronary. Just like that. So I feel you either go one way or the other.

The eldest subject in particular seemed accepting of a potential fatal course of his illness. He willingly commented on the topic.

My philosophy is when you're done, you're done. See if I kill that fly there, that's the end of him. That's the end of you. We're only another form of life, same as that. . . . Having had three score years and ten, as a satisfaction, well, I haven't been short changed. Everything from now on is gravy on top. I have been able to accept that if the time has come, okay. I've had a good time while it lasted.

At the same time this subject also seemed optimistic about his future.

So what I am leading up to now is the fact that surgery doesn't scare me and termination of life doesn't scare me except that there are certain things I want to get done first. . . . I am looking forward to seeing my great grandchildren grow up and I don't think for a minute that the problem I have with the heart is going to prevent me from getting at least another 20 years.

Another participant, in explaining some of the reasons why he had decided to retire early, may have actually been concealing a concern that his angina could cause his life to be cut short. He stated.

Well I'm going to quit my job. Life is too short. I mean, I'm not concerned that I'll die or get sick or something like that but I'm just fed up with the hassle.

These previous two anecdotes could suggest that both subjects may have been minimizing the significance of their illness by ignoring its potential fatal consequences (Hamburg, 1967; Lipowski, 1970).

Another participant appeared to have devoted little thought to the possibility of incurring an MI. He commented.

Well, I find a little pain doesn't worry me at all. . . . I still get those chest pains once in awhile and then I start to think, is this it? But normally I don't think about it.

This man did not appear threatened by his illness, perhaps because he had never experienced symptoms severe enough to cause him to anticipate any form of personal danger.

Generally speaking, most of the subjects appeared to minimize any lethal implications that their illness may have had. At this stage in their response to angina, they did not appear to perceive their illness as a potential threat to their lives. Weisman (1972) discusses adapting to a threatening illness in terms of four stages: (1) recognition of the reality of the illness; (2) denial of the illness as a threat; (3) replacement with a more acceptable meaning; (4)

reorientation to the changes. Many of the subjects in this study may be following a similar pattern of response. Confronted with the numerous adjustment areas already identified, they may not have been ready to incorporate all of the threatening aspects of their illness into their daily lives.

III. Secondary Coping Response

In order to cope with the adjustment areas identified, the subjects appeared to have developed various basic strategies. Some of these strategies seemed to be in response to the subjects' illness in general. Others were more in response to specific areas of adjustment.

Basic Strategies for Illness in General

As already noted in relation to the adjustment areas identified, some of the subjects responded with their own characteristic ways of perceiving, problem solving and acting when their angina developed. Lipowski (1970) describes such responses as an individual's coping style which in combination with the situational variables form coping strategies. Previously established strategies successfully used in earlier stressful situations are often used first before new strategies are developed. The development and use of effective strategies help broaden one's problem-solving capabilities (Hamburg, 1967). For example, one subject appeared to adapt his usual style of

problem-solving when confronted with his new illness. He explained.

I've always had the attitude that if you see a problem and it might look unsurmountable, you just study it until you find there is a way around it. Therefore, if I have trouble with the heart I'll just adapt to the situation and cope with it one way or another. And so I just applied that attitude, that approach, that there must be a way to solve it and look for a solution.

The subjects were noted to use various basic coping strategies as responses to to their illness in general. These strategies included: (1) taking control; (2) "normalizing" way of life (Straus et al., 1984); (3) downplaying; and (4) information seeking.

Taking Control

Some of the subjects appeared to feel strongly about the importance of taking control over their illness as a way of coping with it effectively and perhaps even overcoming some of its limitations. One of the participants implied that with concentrated efforts, he might even be able to overcome his angina or at least achieve maximum recovery. He commented.

I intend to build myself up and I am going to increase my activity more and more if I can without bringing on any problems. By the end of the summer I should be in real good shape because I intend to if I can. . . . This thing is not going to beat me. It may have slowed me down but it is not going to beat me.

This predominant action tendency in response to illness may be

associated with a basic style of coping behaviourly whereby the subject seeks active measures in response to the tasks and challenges of his illness (Lipowski, 1969). At this stage in his recovery, the subject appeared to be challenged to overcome the physical limitations imposed by his angina. The concentration of his efforts in this area seemed to be a crucial part of combating his illness.

Another participant who also seemed confident in his ability to control his illness demonstrated a similar coping strategy. He expressed his confidence in this way.

Discovering this problem of the heart hasn't shaken my conviction. I am quite confident that I can adjust my life.

Improvement noted in recent blood pressure readings seemed to boost this subject's morale even more. He commented. "Well, that shows that the old torso is redeemable. You can get better."

In a similar context, another participant appeared to demonstrate his idea of control over his illness by accepting responsibility for its development and management. He explained.

I can contribute a lot of the angina to myself. Yes, I let myself get into this position. I should never be this overweight. I shouldn't have done a lot of things that I did . . . The only thing I can do now is to monitor myself. you know, medically speaking they did what they can do. Now it is up to me to do what I can do.

This man's subjective interpretation of his illness may be perceived in terms of what Bainerman (1985) reported concerning a positive correlation between heart attack victims' frame of mind and

the speed of recovery. The evaluation made by this participant about the part previous behaviour might have played in development of his angina could indicate better chances for a more rapid recovery in the form of adaptive coping behaviours (Lazarus, 1966, 1968; Lipowski, 1969).

Normalizing

Some of the subjects attempted to make their way of life as normal as possible despite their angina. Their coping strategies may not only be seen as measures for symptom control and regimen management but also as attempts to maintain as normal an existence as possible (Strauss et al., 1984). The beginning of these normalizing tactics was first noted in relation to those subjects who preferred not to discuss their illness with others when it initially presented itself. Such efforts seemed to continue with some of these subjects.

Strauss et al. (1984) discuss normalizing tactics in relation to the social implications of living with chronic illness. They describe sick people "passing" or interacting as if everything were normal when their symptoms are invisible or others are unaware of their illness. A response similar to passing was identified in relation to one of the subjects. He commented on the strategies he used to engage in "normal" interactions while attending an out of town business convention.

While I was there I tried to control my symptoms without letting others know there was something wrong. I was with

the guy who is the manager of this one project, for two days. He was a fast walker, and I thought, how am I going to do this? We walked for miles in tunnels underneath the plant from one area to another and then up some stairs. I think he was getting more tired than I was. What I would do was I'd enter into conversation and that would automatically slow him down. I'd ask him a question about some part I was working on but the actual idea behind it was that I was trying to balance my movements during the day.

The youngest of the subjects took this strategy even further, concealing the fact that he was taking medication while in public. He stated.

When you go somewhere you take those bloody pills with you. So I took an empty pill bottle and put them inside so you can't see. You can't tell. So I wait until I go to the bathroom and I take them so people don't know I'm popping pills. That would bother me to take pills in front of people.

This man appeared to be attempting to maintain some semblance of normalcy as a means of dealing with feeling of dependency. It seemed that many of the subjects, in the process of coming to terms with a new level of normality, still preferred not to be regarded as ill by others.

Continuation of Downplaying

Two of the subjects appeared to continue downplaying their illness as a means of coping. In fact, one of these subjects who had lived with his illness the longest (approximately three years) seemed to exhibit this strategy most visibly. He explained why he preferred to

ignore his angina.

I don't like to think about it. To be honest with you, I just ignore it. . . . I want to do anything I can which will give me my energy back and if that means disregarding or downplaying psychological concerns, that is what I do. I just don't let anything bother me if I can help it.

He rationalized his downplaying in this way. "If I can get it out of my head maybe I can shake it all together. I think maybe it is psychosomatic, who knows?

Although this subject denied being distressed about his illness, it became clear that he actually did have concerns especially with regard to his physical capabilities. Occasionally during the interview, he actually appeared to contradict that he was downplaying his illness. He commented.

Well, I can't ignore it but let's say I am trying to downplay it. . . . Fortunately, it hasn't bothered me emotionally. I'm not really concerned about it now. As a matter of fact, all I want is to get my strength back. . . . There is no real personal concern other than a concern about my physical ability to perform or do things.

This participant continued to contradict himself. He did not seem to want to acknowledge his illness as a major threat to his level of physical endurance. This interpretation of his response was based on the following:

As an illness, it is no real concern to me. I am not worried about dying or anything like that. The only real concern is I don't want to be really incapacitated to a degree than I am. In other words, I want to be completely mobile.

It seemed that relying on medication served as a reminder that this subject had an illness. Therefore the sooner he was able to discontinue these medications, the easier it would be for him to ignore his angina. He put it in this way.

I have no real anxiety about the angina at all particularly when I see I ease off on the pills, the anxiety lessens all the time. The further I get away from these the better I feel.

This response may be explained by Strauss et al. (1984) and their comments about management of regimens. Strauss and his associates account for a person's refusal to submit to a regimen or at least minimally carry it out, in terms of denial that the illness really exists.

Another subject also appeared to interpret the seriousness of his illness lightly, especially with regard to its life-threatening implications. He rationalized.

The more rest I have, the longer I'm going to last in the long run.

Again the downplaying exhibited by both subjects may be understood as minimization, representing a form of cognitive coping style in response to physical illness (Lipowski, 1970). Minimization has also been associated specifically with chronic illness where such defense mechanisms as denial, repression and projection are often used to downplay illness symptoms and their consequences (Craig & Edwards, 1983; Miller, 1983).

Information Seeking

All of the subjects seemed to use information seeking strategies as a way of learning how to cope with their angina. Many sought out information about their illness, comparing their own symptoms to what they read in books or saw on television. Being exposed to these forms of media seemed to help them understand and accept their angina more easily. One subject commented.

I read a little bit about it, heard a little about it and what I've seen on T.V. and now I can relate to it. . . . After reading this book that confirms it. The book tells me after reading about the experiences of other people, I compared myself.

Many of the participants compared themselves to friends, family and relatives who also had heart conditions. Comments were made as follows.

You know, you are running into more and more people my age that are retired and a lot of them have either my complaint or other complaints.

.
And so I compared notes with these friends who have it, and they just told me, you're not active enough. So I started going in that pool and now when Monday or Thursday comes around I go downstairs half an hour ahead of time waiting for them to come.

.
And then to my amazement I found that my other brother who lives in Quebec has it too and he is eight years my junior. He went into the hospital and had the operation and now he is skiing and doing everything again.

These comments seem to reflect a feeling of encouragement to

carry on, with the awareness that others were adjusting to a similar plight.

While being interviewed, one subject made frequent inquiries as to how other people with angina were coping. He commented.

I just wondered what everybody else is doing? . . . How do other people go about this thing? Do they have a regime in that they do certain things?

It seemed that this subject wanted to make certain that he was doing everything possible to adjust to his illness. Perhaps comparing himself to others served as a means of setting relevant standards to follow.

Many of the participants asked numerous questions about pathophysiology, life-style and prognosis. For example:

Now the angina, could you specifically indicate what the term refers to?

.
Those pains are down here and I haven't felt any pain around the heart. The heart is in here, isn't it?

.
What's the difference between angina pains and a heart attack? Nobody has told me that.

.
Do you think you can reverse what has happened by diet and exercise?

.
I've never been told whether this thing, once you've got it under control, whether you can do the things you want to do or does it get worse?

One subject seemed interested in learning more about the part blood pressure played in his illness. He inquired.

I don't know anything about blood pressure. What is that bottom number? What is the top number? . . . Do you think I got that tightness because of high blood pressure on top of the angina?

Another participant was curious about his stress test. He remarked.

What should I expect? How long should I be on that treadmill? I'd like to know a little more about those stress tests.

Inquiries were also made with regard to regimen management. Questions regarding diet and exercise were frequently asked. For instance:

I understood once you went on a diet you were fighting cholesterol too? Is that so?

.
Is there no diet that would cause my body to use up that fat?

.
I was just wondering whether exercise would bring a real good blow on or would it strengthen things? I don't know much about it really.

Questions regarding medications and their management were also given a focus. The following represent some of the subjects' voiced concerns.

Do you ever think I'll get off of the medication?

.
When I feel sleepy all day, I wonder how good it would be to lie down? Now I don't know whether that's because I'm taking these pills or because I'm sick or what.

A few of the participants did not appear well informed about the

use of nitroglycerine. One commented.

And I didn't know about it until I went to the hospital because Dr. _____ didn't tell me how frequently you should take nitroglycerine or what the signs are. He just told me to take it if I ever felt a pain coming on. So he must have thought it wouldn't be repetitive.

In general, many of the information-seeking strategies used by the participants appeared similar to some of the coping behaviours which have been associated with chronic illness (Craig & Edwards, 1983; Miller, 1983). For example, the subjects' use of extra-personal resources may represent an effective means of seeking relevant information to relieve anxiety and restore a sense of control (Craig & Edwards, 1983). Learning about their illness and its management in this way may also prove to be more meaningful and may enhance the subjects' sense of confidence and self-esteem.

Basic Strategies For Specific Adjustment Areas

Basic strategies in a general sense have been discussed as a form of secondary coping response to angina. During the process of adjusting to their illness, many of the subjects also developed basic strategies to deal with specific areas of concern. The strategies which were identified in this study seemed to be related to: (1) coping with fatigue; (2) managing angina pain; and (3) eliminating stress at work.

Coping with Fatigue

Many of the subjects had devised various strategies to cope with the increased fatigue they experienced in relation to their angina. One subject shared the approaches he used to combat fatigue.

When I'm tired, I lay down and rest for a while. I also try to do exercises so I can get my strength back, so I won't become so tired.

Another participant dealt with fatigue in this way.

On weekends, I'll go home after doing a bit of shopping and I stretch out on the bed and have a nap.

Still another subject claimed he was able to cope with his fatigue by "catching up on his rest." For example, if he stayed up late one night, he would retire early the next evening in compensation.

These strategies used to cope with fatigue seemed to have developed as a result of learning in detail about the symptom and its consequences (Strauss et al., 1984). Knowing that fatigue could indicate that they had overtaxed their resources, the subjects attempted to acquire sufficient rest in order to prevent the occurrence of angina symptoms.

Managing Chest Pain

Many of the strategies used to cope with fatigue also appeared to contribute to curbing chest pain. More specific strategies geared to

managing chest pain seemed to involve taking nitroglycerine and/or resting. For example, one man explained the protocol he followed when self-administering nitroglycerine.

Well, now I get to the point that if I get a little exhausted then I slow right down to a crawl and naturally as I get myself more exhausted, my heart starts pumping, I get pains in my chest, the angina starts to flare up and so I have to take a nitro and slow myself right back down and take inventory as to what I'm doing and correct it.

He further explained how sometimes just "slowing down" enabled him to control his angina pains.

When I have to meet a deadline and I'm walking out to my car and I notice myself walking a little faster and the faster I walk I notice this heaviness so I slow down and take a deep breath. Relax. And so with that I feel I am controlling.

Another subject remarked how he tended to avoid taking nitroglycerine, preferring to control his pain on his own. He explained. "I try not to take nitro unless the pain is really strong. I usually try to just sit there quietly and relax."

Perhaps a major part of feeling in control of his illness stemmed from being able to control his chest pain independently.

Many of the participants' strategies related to managing their angina pain seemed preventive in nature, involving use of medications. For example, taking nitroglycerine as a precautionary measure prior to physically or mentally stressful activities was a common practice. Some of the participants commented.

If I know I am going to do something strenuous, I stop, take a pill and go on and do it. If I am going to cut the grass, I might get tired so I take the nitroglycerine. Now I can cut the grass in 30 minutes instead of 40 minutes.

I sometimes might take a nitro when I have to walk a distance and I've just finished lunch. I'll take one just as a precaution. Its not that I have chest pain. I just take one and walk that three or four blocks.

If my mother-in-law walked in unexpectedly, I would get all excited and worked up and the adrenalin would be moving. That's when I would pop a couple of nitro because I know I would get the pain. I guess what I do is try to control my excitement.

One participant explained that as he was still in the process of discovering his limitations, he would always take his medications along as a back up. He put it this way.

I'll push myself but I'll always be on guard by having my medication with me, using that as an ace in the hole.

Another man explained how he was prepared to deal with angina symptoms should they become progressively worse. He commented.

My wife would phone the doctor right away if I was experiencing a lot of chest pain. Fortunately I haven't reached that stage yet.

Such family arrangements represent another way of coping with symptom control where a supportive person from the family unit serves as a "protective agent" for the chronically ill person (Strauss et al., 1984). This nonmedical organization of effort may be useful in preventing a medical crises. It must involve danger signals being read correctly and appropriate actions being taken by the person himself and

significant others.

Even the other precautionary measures identified earlier in relation to managing fatigue and chest pain may be seen as indirect forms of organizing for potential crisis. In a direct sense however, none of the participants appeared to have made specific arrangements against the possibility of crisis occurrence. For example, emergency telephone numbers were not made readily available nor were family members prepared to perform life-saving measures. Perhaps the subjects felt in enough control of their symptoms that the experience of an actual crisis seemed far enough away that they could relax their guard. This avoidance to organize behaviour more in accordance with a crisis-prone condition may represent a mode of coping attempting to ignore or withdraw attention from a potentially fatal threat of MI (Lazarus, 1966; Lipowski, 1970). At this stage, the coping efforts exhibited by the participants seemed to be directed more towards control of such symptoms as fatigue and chest pain.

Eliminating Stress at Work

All of the subjects who were employed seemed to have made attempts to alleviate existing stress levels at the workplace. Many of these stress-reducing strategies consisted of adjusting the amount and intensity of certain activities. One participant explained how he coped with stress on the job.

I don't want to stress myself on the job all morning long working on the computer terminal so I pace myself. I'd say about every 30 or 40 minutes, I either go for coffee if it's about time I have a coffee or I go up into Engineering and just walk around and maybe I schedule items I want to research and that gives me a break. I change what I am doing but I don't actually stop working.

Another participant who worked as an accountant stopped taking extra projects home in the evenings. The subject who did courier work not only cut back on his hours but also slowed down his pace. He explained.

Work isn't as hectic as it used to be. I just slow down and don't get any more speeding tickets. If the light is red, I stop and don't go through. . . . I used to stew about sitting waiting for a call and not making any money. Now I may sit for half an hour occasionally and I say to myself, 'I'm getting a rest.'

These efforts to adjust to job-related stresses may be seen as another form of symptom control where certain activities are avoided that are known to bring on symptoms (Dimond & Jones, 1983). Having an awareness of some of the factors which contribute to the occurrence of angina symptoms, these subjects seemed to be able to make appropriate decisions related to adjusting their activity levels. Such decisions may exemplify how chronically ill persons need sufficient knowledge to function as managers of their own care in their daily lives (Dimond & Jones, 1983).

IV. Awareness of Resulting Changes

After implementing basic strategies directed towards angina in general as well as towards specific areas of symptom control, many of the subjects indicated an awareness of resulting changes which they had incorporated into their daily lives. They commented on the concrete changes they had made as well as those they had experienced both physically and psychologically.

Concrete Changes Made

Most of the life-style changes admitted to by the participants were related to regimen management and symptom control. For instance, one subject remarked on the changes he had made to his diet.

Now I watch what I consume and I exercise a little more. Although I was pretty active before, it seemed as soon as I burned up the energy I might stop and have a doughnut. I don't do that now. If I get hungry, I stay hungry for awhile until my mealtime comes. I eat nothing after supper when I used to munch away. Yes it has changed everything.

Another participant admitted to implementing a regular walking schedule. "I used to go out walking but not to the degree I'm doing now. Now I make a point of going out everyday if I can."

Two of the subjects commented that they had reduced their consumption of alcohol. One of them explained.

Well I used to drink pretty heavily because of economic times but that has totally changed from a bottle a day, to a bottle a week, down to a bottle a month. Now it is even longer than that.

One subject had stopped smoking while two others were still holding on to the habit.

Change in a general sense was described by another subject. He remarked, "I would say there has been a change in my habits or what I am doing a little bit changes whatever it is."

The fact that many of the subjects actually admitted to making certain changes to their way of life may be significant. It may serve as an indicator that these subjects were beginning to accept the permanency of their illness and its concomitant need for risk modification in terms of life-style changes. It may also show that a direct attempt had been made to redesign activities in keeping with recognized limitations.

Changes Experienced

Many of the subjects experienced changes in the way they felt physically. They also commented on psychological change since the onset of their illness.

Physical Change

Two of the subjects remarked on the change they noted concerning their energy levels. One man explained.

I don't tire as badly as I used to. For instance I can wash a whole car now and I won't be huffing and puffing.

In adjusting some of his day to day activities in keeping with his limitations, this subject was becoming more adept at symptom control. The subjects commented further on the physical changes they noted within themselves.

It seems that my angina has stabilized. It's not getting worse and if anything it is getting better because a year ago I couldn't do certain things whereas now I can. I can walk further without any signs or feel that I have symptoms of angina pain.

I'm not getting as tired and not getting chest pains as often. I get them the odd time about three or four times a week, but nothing that heavy. And only in my chest. Before it used to be in my shoulder.

Just as these subjects had reflected back to their previous capabilities when first diagnosed with angina, they were again reflecting back. This time they referred back to their previous level of physical ability at diagnosis, using it as a yardstick to measure the progression of their illness.

Psychological Change

One subject regretfully indicated that his life had generally changed since developing angina. He explained.

My wife and I go down to the sea-wall and walk but I don't do as much walking as I should. But there again we are on a hill. I've got a workshop at the back there and I putter around in that and in the summer time I vacuum the pool or swim or whatever but it just isn't the same.

It appeared that he was having difficulty coming to terms with some of the restrictions imposed on his way of life. This difficulty may resemble a psychological reaction similar to grief described by Lindemann (1944). This subject may still be in the process of working through the loss of certain activities in coping with the life-style alterations related to his illness.

Two of the participants maintained that they hadn't experienced any psychological change following the onset of their illness. One of these men in particular repeatedly denied any form of psychological reaction, admitting only to experiencing physical changes since the onset of his illness. He put it in this way.

I don't think there was any psychological reaction when I heard I had angina. . . . Like I said psychologically I haven't changed but the physical aspect I would say yes. . . Now I feel that I can still cope with it but I can't say that it has changed my way of thinking.

This subject may be using denial as a defense mechanism to minimize any psychological impact related to his angina (Lipowski, 1970; Craig & Edwards, 1983; Scalzi, 1973). On the other hand, because he had been suffering from angina symptoms for approximately the past ten years prior to being diagnosed, the relief he experienced from knowing that these symptoms could be attributed to a concrete illness may have overshadowed his acknowledgement of other emotional responses. It is also possible that he had already resolved any psychological concerns which occurred while coping with his illness.

In general, many of the subjects investigated seemed to acknowledge various changes that they had made to their way of life since the onset of their angina. To admit to such changes may indicate a form of acceptance of their illness and its integration into their daily lives. It may also be viewed as evidence of effective coping. In their discussion of adaptation to the continual changes associated with chronic illness, Craig and Edwards (1983) claim that when coping strategies are effective, individuals believe that their actions have been successful with regard to the outcome of the situation. Therefore they feel a sense of control within themselves. This feeling of positive effect may have been encountered by some of the subjects in this study, providing them with a sense of psychological integrity and attributing to their ability to cope.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND IMPLICATIONS FOR NURSING

Summary and Conclusions

The purpose of the study was to determine how angina patients experience and cope with their chronic illness following diagnosis. By eliciting these patients' viewpoints on their illness, insight was gained into some of the adjustment areas they encountered as well as the coping strategies they used.

The conceptual framework for this study was adapted from Strauss et al. (1984) (Appendix I). Their framework, focusing on the social and psychological aspects of living with chronic illness, was found to be a useful guide for identifying some of the adjustment areas encountered and coping strategies utilized by the angina patients investigated.

Qualitative methodology, using phenomenological theory, was used to determine the angina patients viewpoints of their illness experience. The study was conducted with a convenience sample of six male subjects, ranging in age from 42 to 72 years, with recency of diagnosis of angina pectoris from two to thirty-four months. None of these subjects were known to have suffered an MI. Using a semi-structured interview guide with open-ended questions, the

investigator interviewed each subject at home, on two occasions. The inter-subjective nature of the interviews allowed the researcher to understand how the subjects were experiencing their illness and how they were coping with it.

Data coding and analysis were approached using the constant comparative method developed by Glaser and Strauss (1967). Although the subjects attached different meanings to certain aspects of their illness, they commonly described similar reference points which highlighted their experiences in coping with angina. These reference points provided the investigator with a means to analyse and understand the data. The resulting phases which emerged from the common reference points formed a pattern through time. The common reference points as identified by the subjects guided how the phases were both understood and organized. As a result, the findings of the study revealed four phases of coping experience where each phase was associated with specific common reference points (Appendix VIII).

Phase I, labelled "Initial Coping Response," followed the onset of the subjects' angina symptoms. All of the subjects initially downplayed their angina symptoms prior to diagnosis. They did this as long as severe or persistent chest pain did not occur to interfere with their everyday activities. When symptoms became restrictive, they sought medical attention leading to their diagnosis of angina pectoris. Most of the subjects were able to remember many of the vivid details surrounding their diagnosis. They also reflected back to their previous capabilities prior to diagnosis as a means of measuring the

changes in body functioning which had developed since the onset of their illness.

Phase II followed diagnosis and involved the subjects' confrontation with specific adjustment areas related to living with angina. In this study five major adjustment areas were identified: (1) interaction with others; (2) regimen management; (3) symptom control; (4) job-related concerns; and (5) attendant psychological concerns.

Part of the subjects' initial adjustment to their illness involved interacting with health professionals and family members as well as dealing with others knowing about their illness. Most of the subjects' interactions with health professionals appeared to be with physicians. The comments made by the subjects generally reflected a lack of sufficient guidance from their physicians related to managing certain life-style changes, namely diet, exercise and weight control (e.g. specifically written instructions). The fact that nurses were not mentioned in these interactions could indicate that nurses are either not visible or available as patient teachers for this client group.

The subjects referred to their spouses as being supportive. In many of the accounts, it was evident that the subjects did not cope alone, but shared the responsibility for managing their illness with their spouses. This sharing was a valuable coping strategy for the participants.

Having others know about their illness appeared to be a sensitive issue for the subjects in this study. In a beginning attempt to make

their lives as normal as possible, many of the subjects preferred that others outside the family unit were not informed that they had angina. The subjects' use of this coping strategy termed normalizing by Strauss et al. (1984) did not appear compatible with any knowledge that others outside the family unit might have concerning their illness.

The participants discussed management of three regimens in particular during the course of the interviews: (1) diet; (2) exercise; and (3) medications. Before learning how to implement these regimens, the subjects first became involved with judging whether or not they would actually take up and adhere to them. They appeared to evaluate certain regimen characteristics based on the legitimacy and efficiency of each regimen.

Symptom control, another adjustment area, appeared to be strongly associated with adherence to effective regimens. For example, adhering to medication regimens meant that the subjects could better control symptoms of fatigue and chest pain. When symptoms appeared under control, this seemed reason enough for a few of the subjects to start tapering off their medications. The subjects' efforts to decrease dependence on medications were viewed as another attempt at normalizing as well as an attempt to gain control over their illness.

While learning about symptom control the subjects had to become familiar with the pattern of their symptoms and their consequences. In discovering their limitations many of the participants had to redesign everyday activities and sacrifice certain recreational pursuits in order to control their symptoms.

Those subjects who were employed seemed to be involved with making certain adjustments at work. Job performance in most cases was not affected by angina. Controlling exposure to stress on the job on the other hand, seemed to depend on the type of employment in which the subjects were engaged.

For some of the subjects, angina made retirement more of a priority. These subjects seemed to indicate that their illness could threaten enjoyment of a stage of their life which they had always looked forward to. For the other subjects, continuing to work in spite of their angina was not questioned. Financial concerns may have been a factor with these participants.

A final adjustment area was related to certain psychological concerns which evolved as the subjects coped with their illness. Despite frustrations related to various physical limitations, many of the subjects were beginning to acknowledge the permanency of their angina. Some of the participants appeared to be more accepting of their illness and its concomitant need for risk modification. Others were still having difficulty working through their loss of body functioning related to angina.

Many of the subjects tended to ignore the potential fatal consequences of their angina. It was felt that they did not perceive their illness in a life-threatening context. Instead they appeared to be concentrating their efforts on the various adjustment areas as identified. At this stage in coping with their illness these subjects may not have been ready to seriously consider its future implications.

In order to cope with their illness in general as well as specific adjustment areas, the subjects appeared to develop various basic strategies. These coping strategies were viewed as a secondary form of coping response, comprising Phase III of the findings.

Some of the participants appeared to strive to take control over their illness as an attempt to overcome certain limitations. Normalizing tactics also served as a general coping strategy where many of the subjects attempted to conceal their angina from others. This preference to maintain some semblance of normalcy may have served as a way of minimizing the subjects' illness by withdrawing attention from it.

Continuing to downplay the seriousness of their illness and its physical limitations served as a basic coping strategy for some of the participants. These efforts to minimize the impact of their illness on their daily lives may have contributed to the effectiveness of other strategies, such as taking control and normalizing.

Information-seeking efforts appeared to serve as useful coping strategies for many of the participants. Referring to various forms of media and comparing themselves to others with heart disease served to answer many of the subjects' questions as well as help them understand and accept their illness more easily. Despite these efforts, many of the participants still had uncertainties regarding the nature of their illness and its implications for everyday living.

Although the subjects had developed strategies specifically to cope with such symptoms as fatigue and chest pain, they had not made

definite arrangements to organize for potential crisis should one occur. This lack of organization against the possibility of crisis occurrence was seen as another of the subjects' attempts to downplay the seriousness of their illness.

The subjects' acknowledgement of the changes that had resulted from their coping efforts comprised Phase IV of the findings. Most of the subjects admitted to physical changes as opposed to psychological ones. Many of these physical changes involved positive outcomes related to symptom control and regimen management. To admit to such changes of positive effect was viewed as evidence of effective coping. The subjects' recognition of their successful coping efforts lead to a sense of control within themselves. These efforts could then be built on, further contributing to the subjects' ability to cope.

This study revealed that the subjects were coping with a number of adjustment areas related to their illness. Because the subjects identified certain difficulties facing them and a desire to overcome these difficulties using concrete behaviours, the study's findings have implications for nursing practice, education and research.

Implications for Nursing Practice

Understanding the viewpoints of angina patients concerning their experiences in coping with angina provides direction for effective nursing practice. The results of this study strongly suggest the importance of assessing coping in response to the impact of angina on

daily life as well as in response to specific areas of adjustment. Armed with this knowledge, nurses are better able to provide the necessary guidance and support so that individuals with angina are more able to understand and manage their illness.

Although the phases identified in this study described a common pattern of coping response, it must not be overlooked that each subject was unique in how he perceived and responded to his illness. For example, age was a predominant factor affecting the subjects' focus on certain adjustment areas. For this reason, nurses cannot assume that the illness experience of angina patients is a generalizable one. Nursing care must be individualized to deal with the uniqueness of the experience of each patient. The findings of this study then have major implications for individualized assessment of angina patients. The phases of coping response identified in the study can be used as a guide for assessing problems and concerns related to various adjustment areas and for working towards effective coping.

The reactions experienced by angina patients must be examined over a considerable length of time. It is not enough to intervene while in hospital or in the physician's office. Nurses must meet periodically with these patients through home visits or groups in the community to facilitate effective use of coping abilities and resources in the management of angina.

In many hospitals, education programs are offered to cardiac patients and their families for enhancing development of realistic expectations concerning long-term physical and psychological

adjustment. Rarely are these programs followed up after discharge. Some angina patients may have been diagnosed in their doctor's office. As a result, these patients may never have been involved in cardiac teaching programs. This study revealed that information which some angina patients receive from health professionals often leaves them with many uncertainties related to living with their illness. For this reason, community-based education programs to promote improved coping abilities to deal with necessary life-style changes following diagnosis of angina can easily be justified.

In both hospital and community patient education programs, health professionals must develop content around the clients' problems and concerns. Because angina patients reflect on past experience to make sense of their illness, teaching-learning situations should make use of this prior knowledge. Nurses must capitalize on how patients understand their illness and manage it. If this is done, clients may be better able to adhere to medical regimens because they understood them and can integrate them into their daily lives.

Teaching must be carried out in response to client learning needs. Although clients may require a basic understanding of pathophysiology, other aspects of illness should be presented in concrete ways, relative to identified areas of concern. For example, information on exercise regimens should be learned in terms of when to exercise, how often, how long, how far and what safety measures should be taken when over-exertion occurs. Information concerning diet should be in the form of written instructions and should include, among other

things, specific food menus including alternative meal plans.

Information giving, however, is not sufficient in patient education programs. Because illness involves physical as well as psychological responses, nurses must deal with clients' feelings. Facilitating group discussions so that clients can articulate and compare their emotional reactions to others is a key component of any educative strategy.

Informing clients of their progress in coping with various adjustment areas should also be incorporated into these group discussions. Since the subjects in this study coped by identifying progress with certain reference points, feedback from nurses related to these reference points could be beneficial.

In general, in-hospital and community-based education may be seen as important areas of nursing practice where nurses can make themselves more visible to angina patients, contributing to the ongoing management of their illness.

This study has major implications for both content and focus of hospital and community education for angina patients. While in hospital, angina patients should be encouraged to attend patient education sessions along with the MI patients. Adequate explanation of procedures such as angiograms and stress tests should also be offered so that patients can feel better prepared and more in control of their situation. Discharge planning is also crucial to assist angina patients in adjusting to a less secure environment at home.

After discharge from hospital, home visit(s) should be arranged to assess coping abilities and concerns and provide support and guidance

to the angina patients as necessary. When appropriate, referrals can be made to community-based cardiac education and rehabilitation programs when available.

Attendance of spouses should be encouraged in all types of programs as in this study, many of the wives were found to play a vital role in both supporting and assisting their husbands in the management of their angina.

Implications for Nursing Education

All levels of nursing education should include appropriate knowledge and skills to help students understand the impact of chronic illness on daily life. Nursing education must prepare the nurse to assess patients reactions in response to their illness and to assist patients in coping with these reactions so that they are able to deal with necessary life-style adjustments.

Nursing programs should include the concept of chronic illness in their core curricula. Included also should be content related to coping, loss and change theory and inter-personal and communication theory. When addressing CAD, instructional content should not overlook patient teaching implications for angina patients. All of this knowledge and skill will provide students with a general guide to assist chronically ill persons in coping with their illness and integrating it into their way of life.

Implications for Nursing Research

Although much research has been done on individuals with CAD and MI, few studies have focused specifically on patients diagnosed with angina pectoris. This study represents a beginning attempt to provide knowledge of common patterns of reactions that angina patients experience in response to their illness. To what extent are these phases of coping response present in the general population of angina patients? It is necessary for these responses to be examined to a greater extent with a random selection of angina patients. Further study is also required to identify the commonalities and differences between various age groups and sexes.

While this study has added to the body of coping literature in relation to angina patients, it has also raised questions about the phenomenon of coping. For example, how does one define and measure effective coping? Is effective coping directly associated with compliance/adherence to prescribed and nonprescribed regimens?

Questions may also be brought up in relation to patient teaching. First of all, does patient teaching really make a difference? Does it enhance the angina patients ability to cope with his illness? When is the most effective time to teach?

Nursing researchers must begin to study the effects of selected planned nursing interventions such as patient teaching on angina patients as they cope with living in the face of their chronic illness. This research would ultimately lead to more efficient and effective nursing care.

Summary

This study was designed to examine the experiences of individuals with angina as they cope with their illness. The findings of the study revealed angina patients progressing through four phases of coping experience as they adjusted to their illness and its concomitant need for risk modification. Nurses are in a critical position to assist angina patients in coping with their illness. The phases of coping experience identified in this study may serve as a useful guide to help nurses assess problems and concerns related to coping with angina so that better adjustment in daily life will ensue.

BIBLIOGRAPHY

- American Psychological Association. (1983). Publication manual of the American Psychological Association (3rd ed.). Washington, D.C.: APA.
- Bainerman, J. (Feb., 1985). Patient attitude affects heart attack recovery. The Medical Post, 48.
- Beisser, A. (1979). Denial and affirmation in illness and health. American Journal of Psychiatry, 136, 1026-1030.
- Bogdan, R., & Taylor, S. (1975). Introduction to qualitative research methods. Toronto: John Wiley & Sons.
- Busse, E. (1962). Some emotional complications of chronic illness. Gerontologist, 2, 153-156.
- Canada. (1983). Causes of death (Catalogue 84-203). Ottawa: Minister of Supply and Services Canada.
- Cay, E. (1982). Psychological problems in patients after a myocardial infarction. Advances in Cardiology, 29, 108-112.
- Chodoff, P. (1962). Understanding and management of the chronically ill patient. American Practitioner, 13 (2), 136-144.
- Cleveland, S. & Johnson, D. (1962). Personality patterns in young males with coronary disease. Psychosomatic Medicine, 24, 600-610.
- Cook, R. (1979). Psychosocial responses to myocardial infarction. Heart and Lung, 8, 130-135.
- Craig, H. & Edwards, J. (1983). Adaptation in chronic illness: an eclectic model for nurses. Journal of Advanced Nursing, 8, 397-405.
- Crate, M. (1965). Nursing functions in adaptation to chronic illness. American Journal of Nursing, 74(10), 72-76.
- Davis, A. (1978). The phenomenological approach in nursing research. In N. Chaska (Ed.). The nursing profession: views through the mist (pp. 186-197). Scarborough, Ontario: McGraw-Hill Ryerson.
- Diers, D. (1979). Research in nursing practice. Philadelphia: J.B. Lippincott Co.
- Dimond, M. & Jones, S. (1983). Chronic illness across the life span. Norwalk, Connecticut: Appleton-Century-Crofts.

- Dovermuhle, R. & Verwoerdt, A. (1962). Physical illness and depressive symptomatology. Incidence of depressive symptoms in hospitalized cardiac patients. Journal of American Geriatrics, 10, 932-947.
- Engel, G. (Sept., 1964). Grief and grieving. American Journal of Nursing, 9, 93-98.
- Fardy, P., Bennett, J., Reitz, N., & Williams, M. (1980). Cardiac rehabilitation implications for the nurse and other professionals. St. Louis: C.V. Mosby Co.
- Gazes, P. (1983). Clinical cardiology a bedside approach (2nd ed.). Chicago: Medical Publishers Inc.
- Glaser, B. & Strauss, A. (1967). The discovery of grounded theory: strategies for qualitative research. Chicago: Aldine Publishing Co.
- Gorman, D. & Anderson, J. (1982). Initial shock: impact of a life threatening disease and ways to deal with it. Social Work in Health Care, 8, 37-46.
- Granger, J. (1974). Full recovery from myocardial infarction: psychosocial factors. Heart and Lung, 4 (3), 600-610.
- Graydon, J. (1984). Measuring patient coping. Nursing Papers, 2 (16), 3-11.
- Gruen, W. (1975). Effects of brief psychotherapy during the hospitalization period on the recovery process in heart attacks. Journal of Consulting and Clinical Psychology, 43, 232-233.
- Hackett, T. & Cassem, N. (1973). Psychological adaptation to convalescence in myocardial infarction patients. In J. Naughton, H. Hellerstein & I. Mohler (Eds.), Exercise testing and exercise training in coronary heart disease (pp. 253-262). New York: Academic Press.
- Hackett, T. & Cassem, N. (1974). Development of a quantitative rating scale to assess denial. Journal of Psychosomatic Research, 18, 93-100.
- Hackett, T. & Cassem, N. (1982). Coping with cardiac disease. Advances in Cardiology, 31, 212-217.
- Hamburg, D. & Adams, J. (1967). Perspectives on coping behaviour. Archives of General Psychiatry, 17, 276-284.
- Kannel, W., McGee, D., & Gordon, T. (1976). A general cardiovascular risk profile: the framingham study. American Journal of Cardiology, 38, 41-46.

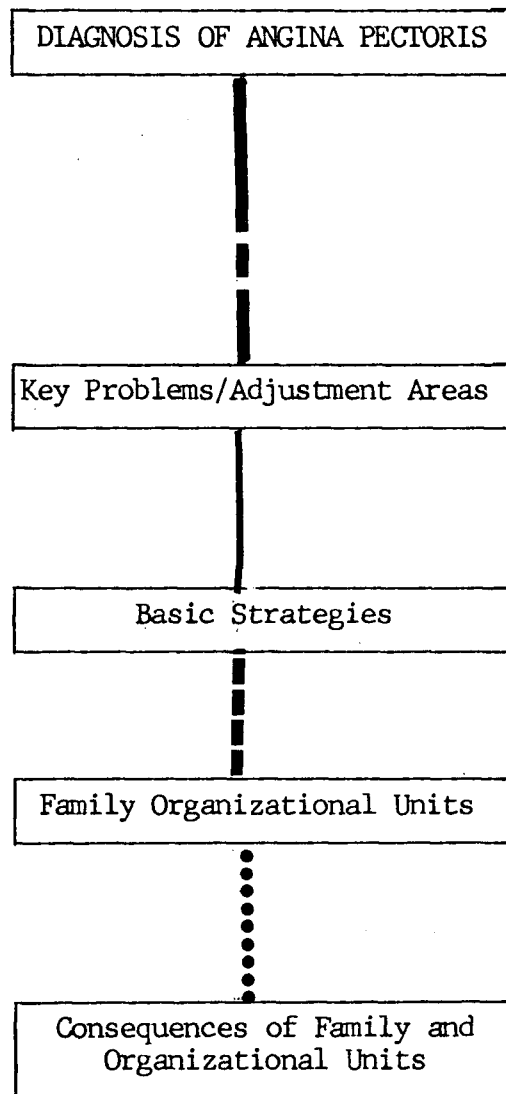
- Kannel, W. (1979). Risk factors for atherosclerotic cardiovascular disease. In P. Cohn (Ed.), Diagnosis and therapy of coronary artery disease (pp. 11-33). Boston: Little Brown and Co.
- Kasl, S. & Cobb, S. (1966). Health behaviour, illness behaviour, and sick role behaviour. Archives of Environmental Health, 12, 246-266, 531-540.
- Kasl, S. (1974). The health belief model and behavior related to chronic illness. M. Becker (Ed.), Health Education Monographs, 2, 433-453.
- Kubler-Ross, E. (1969). On death and dying. New York: MacMillan and Co.
- Lazarus, R. (1966). Psychological stress and the coping process. New York: McGraw Hill Co.
- Lazarus, R. (1968). Emotions and adaptation: conceptual and empirical relations. In W. Arnold (Ed.), Nebraska symposium on motivation (pp. 175-270). Lincoln: University of Nebraska Press.
- Lazarus, R. (1974). Cognitive and coping process in emotion. In B. Weiner (Ed.), Cognitive views of human motivation (pp. 21-32). New York: Academic Press.
- Lazarus, R. & Launier, R. (1978). Stress-related transactions between person and environment. In L. Pervin & M. Lewis (Eds.), Perspectives in international psychology (pp. 287-327). New York: Plenum Press.
- Levenson, R., Monteferrante, J., & Herman, M. (1984). Denial predicts favorable outcome in unstable angina pectoris. Psychosomatic Medicine, 46, 25-31.
- Lindemann, E. (1944). Symptomatology and management of acute grief. The American Journal of Psychiatry, 101, 141-148.
- Lindemann, E. (1961). Recent studies on preventive intervention in social and emotional crisis. In R. Ojemann (Ed.), Proceedings of the third institute on preventive psychiatry (pp. 13-41). State University of Iowa.
- Lipowski, Z. (1969). Psychosocial aspects of disease. Annals of Internal Medicine, 6, 1197-1207.
- Lipowski, Z. (1970). Physical illness, the individual and the coping process. Psychiatry In Medicine, 93, 91-101.
- McCorkle, R. & Quint-Benoliel, J. (1983). Symptom distress, current concerns and mood disturbance after diagnosis of life threatening disease. Social Science and Medicine, 17, 431-438.

- Miller, J. (1983). Coping with chronic illness, overcoming powerlessness. Philadelphia: F.A. Davis Co.
- Monat, A. & Lazarus, R. (1977). Stress and coping. New York: Columbia University Press.
- Murphy, L. (1962). The widening world of childhood: paths toward mastery. New York: Basic Books Inc. Publishers.
- Niven, R. (1976). Psychologic adjustment to coronary artery disease. Postgraduate Medicine, 60, 152-157.
- Oiler, C. (1982). The phenomenological approach in nursing research. Nursing Research, 3 (31), 178-181.
- Olin, H. & Hackett, T. (1964). The denial of chest pain in 32 patients with acute myocardial infarction. Journal of the American Medical Association, 190, 103-107.
- Omery, A. (1983). Phenomenology: a method for nursing research. Advances in Nursing Science, 5, 49-63.
- Pattison, E. (1977). The experience of dying. Englewood Cliffs, N.J.: Prentice-Hall Inc.
- Reiser, M. (1951). Emotional aspects of cardiac disease. American Journal of Psychiatry, 107, 781-785.
- Reiser, M. & Biakst, H. (1959). Psychophysiologic cardiovascular disorders. In Arieti, S. (Ed.), American Handbook of Psychiatry, 1 (pp. 659-673). New York: Basic Books Inc.
- Rist, R. (Summer, 1979). On the means of knowing: qualitative research in education. New York University Education Quarterly, 17-21.
- Rosen, I., & Bibring, G. (1966). Psychological reactions of hospitalized male patients to a heart attack. Psychosomatic Medicine, 28, 804-810.
- Scalzi, C. (1973). Nursing management of behavioural responses following an acute myocardial infarction. Heart and Lung, 2, 62-69.
- Schoenberg, B., Carr, A., Peretz, D., & Kutscher, A. (Eds.). (1970). Loss and grief--psychological management in medical practice. New York: Columbia University Press.
- Schwartz, H. & Jacobs, J. (1979). Qualitative sociology. A method to the madness. London: Collier MacMillan Publishers.

- Sheehan, D. & Hackett, T. (1978). Psychosomatic disorders. In A. Nicholi (Ed.), The harrard guide to modern psychiatry (pp. 319-356). Cambridge: MA Belknap Press.
- Soloff, P. & Bartel, A. (1979). Effects of denial on mood and performance in cardiovascular rehabilitation. Journal of Chronic Disease, 32, 307-313.
- Stern, P. (1980). Grounded theory methodology: its uses and processes. Image, 12, 20-23.
- Strauss, A., Corbin, J., Fagerhaugh, S., Glaser, B., Maines, D., Suczek, B., & Wiener, C. (1984). Chronic illness and the quality of life. (2nd ed.). St. Louis: C.V. Mosby.
- Thomas, S., Sappington, H., Gross, H., Noctor, M., Freidman, E., & Lynch, J. (1983). Denial in coronary care patients - an objective reassessment. Heart and Lung, 12, 74-80.
- Weisman, A. (1972). On death and denying. New York: Behavioral Publications.
- Wenger, N. (1973). Early ambulation after myocardial infarction. In J. Naughton, H. Hellerstein & I. Mohler (Eds.), Exercise testing and exercise training in coronary heart disease (pp. 324-328). New York: Academic Press.

APPENDICES

APPENDIX I

A Framework for Understanding the Experiences of
Chronically Ill Persons

Key: potentially cause
 call for
 lead to
 consisting of

Adapted from Strauss et al., 1984, p. 16, 17.

APPENDIX II

Physician Consent Form

I, the undersigned, give permission to Anne Kent, RN, BN (MSN student) to contact consenting angina patients whom I select from my practice for the purpose of explaining her research study entitled "Coping With Angina Pectoris Following Diagnosis."

Physician's Signature _____

Researcher's Signature _____

Dated at _____, this _____ day of _____, 1984.

APPENDIX III

Coping with Angina Pectoris Following Diagnosis

Participant Information Letter

(Distributed in Doctor's Office)

Dear Mr./Mrs./Miss/Ms.:

My name is Anne Kent. I am a student enrolled in the Master of Science in Nursing Program at the University of British Columbia. As a part of my Master's program, I am conducting a research study to learn more about the concerns and experiences of individuals diagnosed with angina. I believe that if nurses are aware of the feelings and concerns of individuals with angina, they can offer better guidance, especially in the community setting, to prepare individuals for coping with the problems related to their illness. This study is an attempt to better understand how individuals cope with angina and how they wish to be helped, in order to adjust to their illness.

The purpose of this letter is to inquire as to whether you are willing to participate in my study. Should you agree to participate, the study will involve the following:

1. My interviewing you in your home on one or two occasions to discuss your feelings and concerns regarding your angina.
2. Tape recording our discussions which will last approximately one to two hours per interview.

Other than the time required for interviewing, you will not be caused any inconvenience or potential harm should you decide to participate in the study. The benefits of your involvement in the study may be viewed as an opportunity to discuss some of your feelings and concerns related to your adjustment to your illness.

All information received will be treated as confidential and will be analyzed along with the data obtained from other angina patients. Your name and any identifying information will not be included in my notes. My notes will be identified by a code only. I alone will know your identity.

YOUR REFUSAL TO PARTICIPATE IN THIS STUDY WILL IN NO WAY JEOPARDIZE YOUR FUTURE MEDICAL CARE. IF YOU DECIDE TO PARTICIPATE IN THIS STUDY AND THEN CHANGE YOUR MIND, YOU MAY WITHDRAW WITHOUT EFFECT ON YOUR MEDICAL CARE. YOU MAY ALSO REFUSE TO ANSWER ANY QUESTIONS AT ANY TIME.

APPENDIX IV**Coping with Angina Pectoris Following Diagnosis**Participant Consent Form

I, the undersigned, understand the nature of Anne Kent's research study entitled "Coping With Angina Pectoris Following Diagnosis" and give my consent to participate.

Participant's Signature _____

Researcher's Signature _____

Dated at _____, this _____ day of _____, 1984.

APPENDIX V

Coping with Angina Pectoris Following Diagnosis

Participant Information Letter
(Mailed to potential subjects)

Dear Mr./Mrs./Miss/Ms.:

My name is Anne Kent. I am a student enrolled in the Master of Science in Nursing Program at the University of British Columbia. As a part of my Master's program, I am conducting a research study to learn more about the concerns and experiences of individuals diagnosed with angina. I believe that if nurses are aware of the feelings and concerns of individuals with angina, they can offer better guidance, especially in the community setting, to prepare individuals for coping with the problems related to their illness. This study is an attempt to better understand how individuals cope with angina and how they wish to be helped, in order to adjust to their illness.

The purpose of this letter is to inquire as to whether you are willing to participate in my study. Should you agree to participate, the study will involve the following:

1. My interviewing you in your home on one or two occasions to discuss your feelings and concerns regarding your angina.
2. Tape recording our discussions which will last approximately one hour per interview.

Other than the time required for interviewing, you will not be caused any inconvenience or potential harm should you decide to participate in the study. The benefits of your involvement in the study may be viewed as an opportunity to discuss some of your feelings and concerns related to your adjustment to your illness.

All information received will be treated as confidential and will be analyzed along with the data obtained from other angina patients. Your name and any identifying information will not be included in my notes. My notes will be identified by a code only. I alone will know your identity.

YOUR REFUSAL TO PARTICIPATE IN THIS STUDY WILL IN NO WAY JEOPARDIZE YOUR FUTURE MEDICAL CARE. IF YOU DECIDE TO PARTICIPATE IN THIS STUDY AND THEN CHANGE YOUR MIND, YOU MAY WITHDRAW WITHOUT EFFECT ON YOUR MEDICAL CARE. YOU MAY ALSO REFUSE TO ANSWER ANY QUESTIONS AT ANY TIME.

APPENDIX VI

Data Collection Tool

Demographic Data

Date _____

Name of Subject (initials) _____

Subject's Age _____

Marital Status _____

Occupation _____

Date of Angina Diagnosis _____

Additional Medical Problems _____

Cardiologist/General Practitioner _____Interview Data

Observable Behaviours:

APPENDIX VII

Sample Interview Guide

1. Tell me about your illness.
2. How did you feel after learning of your diagnosis?
3. How do you feel about your illness now?
4. What have you been doing to cope with your illness?

APPENDIX VIII

Relationship of Findings to Phases and Common Reference Points
Following Onset of Angina Pectoris

I. Initial Coping Response

1. Downplaying
2. Reflecting back
3. Responses unique to specific individuals
 - Surprise
 - Relief
 - Regret

II. Managing Specific Adjustment Areas

1. Interactions with others
 - a) health professionals
 - b) family
 - c) others
2. Regimen management
 - a) evaluating regimens
 - b) diet regimens
 - c) exercise regimens
 - d) medication regimens
3. Symptom control
 - a) fatigue
 - b) chest pain
 - c) discovering limitations
4. Job-related concerns
 - a) effect on job performance
 - b) dealing with stress
 - c) financial/retirement concerns
5. Attendant psychological concerns
 - a) frustration
 - b) acceptance
 - c) future implications
 - bypass surgery
 - life-threatening impact

III. Secondary Coping Response

1. Basic strategies for illness in general
 - a) taking control
 - b) normalizing
 - c) continuation of downplaying
 - d) information seeking
2. Basic strategies for specific adjustment areas
 - a) coping with fatigue
 - b) managing chest pain
 - c) eliminating stress at work

IV. Awareness of Resulting Changes

1. Concrete changes made
2. Changes experienced
 - a) physical change
 - b) psychological change