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THE RELATIONSHIP BETWEEN DENIAL AND BEHAVIOR  
PATTERN IN THE PATIENT EXPERIENCING  
MYOCARDIAL INFARCTION

by

Cynthia Collmann Barinsky

A thesis

submitted in partial fulfillment  
of the requirements for the degree of  
Master of Science, Major in Nursing  
South Dakota State University

1984

THE RELATIONSHIP BETWEEN DENIAL AND BEHAVIOR  
PATTERN IN THE PATIENT EXPERIENCING  
MYOCARDIAL INFARCTION

This thesis is approved as a creditable and independent investigation by a candidate for the degree Master of Science, and is acceptable for meeting the thesis requirements for this degree. Acceptance of this thesis does not imply that the conclusions reached by the candidate are necessarily the conclusions of the major department.

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## CHAPTER 1

### The Problem

#### Introduction

Denial has been recognized as a possible adaptation mechanism for patients with heart disease, stroke, brain damage, cancer, emphysema, manic-depressive psychosis, and neurologic disorders (Croog, et al., 1971 and Levine and Zigler, 1975). Croog and co-workers discovered that twenty percent of 345 men treated for three weeks after a first myocardial infarction denied they had even had a heart attack (Croog, et al., 1971).

The use of denial as an adaptation mechanism can be a critical influence in the adjustment of seriously ill patients (Duke and Kelly, 1980). Its use may be beneficial or detrimental to a patient experiencing an acute illness (Duke and Kelly, 1980). For example using denial could be beneficial for the patient if he looks at the positive side of a situation and "actively anticipates plans for recovery and discharge from the hospital" (Duke and Kelly, 1980). Denial could be detrimental to the patient's health when the patient postpones care, refuses to accept medical recommendations, or engages in activities which may exacerbate the illness (Granger, 1974). One detrimental effect of denial

non-compliance, if compliance is defined as a patient's adherence to medical advice and recommendations for changes as a result of an illness (Soloff, 1980).

Another factor that could affect adaptation in myocardial infarction patients is the presence of the Type A or Type B behavior pattern. By definition, these behavior patterns arise when conditions in the environment elicit their response (Dembroski, 1978). Therefore, the behavior patterns, Type A or Type B, can be considered as part of an individual's adaptation response to a myocardial infarction.

The Type A behavior pattern is reflected by personality traits such as "ambition, competitiveness, and impatience; specific behaviors such as emphasis and quickness of speech, muscle tension and alertness; and emotional reactions such as irritation, feelings of anger and hostility" (Scherwitz, et al., 1978). On the other hand, the Type B behavior pattern is considered a more moderate emotional response than the Type A behavior pattern and reflects characteristics such as patience, relaxation, and emotional acceptance (Scherwitz, et al., 1978).

Data of the Western Collaborative Group Study (WCGS), a longitudinal nine-year study, indicated that fifty percent of 3,154 men, age 39 to 59, reflected the characteristics of the Type A behavior pattern (Brand, 1978 and Rosenthal, et al., 1964). The study also indicated that the men who reflected the Type A behavior pattern developed heart disease or

myocardial infarction at a rate of two to one compared to those men who reflected the Type B behavior pattern (Brand, 1978 and Rosenman, et al., 1964).

Regardless of the risk for myocardial infarction implicit within Type A behavior pattern, the characteristics of both Type A behavior pattern and Type B behavior pattern may affect an individual's adaptation to myocardial infarction. A study to determine whether there is a relationship between the use of denial as an adaptation mechanism and the type of behavior pattern reflected by the male patient experiencing myocardial infarction appears an appropriate area for study.

#### Statement of the Problem

The problem under investigation in this study is: What is the relationship between the use of denial as a form of adaptation and the type of behavior pattern reflected in male patients within two weeks of admission to a coronary care unit with a diagnosis of myocardial infarction?

#### Significance of the Study

Research indicates that the use of denial as a form of adaptation by myocardial infarction patients tends to decrease mortality in the immediate, forty-eight hour post-infarction period (Hackett, et al., 1968), but decreases compliance in the post-hospitalization period (Croog, et al., 1971 and Soloff, 1980).

Therefore, cardiovascular nurses could assume that assessment of the use of denial might be important for increasing patient compliance towards cardiac rehabilitation in the myocardial infarction patient. If nurses can determine that the use of denial is associated with a particular behavior pattern, such as the Type A behavior pattern who are at high risk for myocardial infarction, nurses can develop plans of care with those individuals which would increase compliance in post-hospitalization.

#### Objectives of the Study

The objectives of this study are the following:

1. To determine the frequency of denial used by the male patient experiencing myocardial infarction according to the response to the Hackett-Cassem Denial Scale.
2. To determine whether the Type A behavior pattern or the Type B behavior pattern is reflected by the male patient experiencing myocardial infarction according to the response to the Jenkins Activity Survey.
3. To determine if there is a relationship between the use of denial as a form of adaptation and the type of behavior pattern reflected by the male patient experiencing myocardial infarction.

#### Definition of Terms

These terms are defined as follows in this study.

1. Behavior Pattern: The presence of particular personality traits in response to a myocardial infarction determined in this study by responses to the Jenkins Activity Survey, may be classified as:

A. Type A: An action-emotion complex characterized

by ambition, competition, impatience, and aggression (Friedman and Rosenman, 1974). For purposes of this study, this type of behavior pattern will be determined by a positive standard score from the summation of the weighted answers to questions: 3, 5-7, 9-11, 16-19, 21, 25, 28, 30, 32, 35, 37, 40, 43, and 46 from the Type A scale of the Jenkins Activity Survey.

B. Type B: An emotional complex the opposite of the Type A behavior pattern which is characterized by lack of time urgency, lack of competitive drive or free-floating hostility (Friedman and Rosenman, 1974). For purposes of this study, this type of behavior pattern will be determined by a negative standard score from the summation of the same questions from the Type A scale of the Jenkins Activity Survey as those given to obtain the Type A behavior pattern.

2. Compliance: Adherence to medical advice concerning post-hospitalization cardiac rehabilitation following myocardial infarction.

3. Denial as a Form of Adaptation: The ability of man to cope with internal or external environmental changes (Roy, 1970). This study will focus on denial as a form of adaptation.

A. Denial: Adaptation to an event by the rejection, either conscious or unconscious, of part or all of the total available meaning of an event (Hackett and Cassem, 1974 and Hackett, et al., 1968). For purposes of this study,

denial will be determined by a score of nineteen or above on the Hackett-Cassem Denial Scale (Soloff and Bartell, 1979, Soloff, 1980 and Froese, et al., 1974). In this study, subjects classified as using denial may be referred to as deniers.

B. Non-Denial: Adaptation to an event by the acceptance either conscious or unconscious, of part or all of the total meaning of an event. In this study, non-denial will be determined by a score of eighteen or below on the Hackett-Cassem Denial Scale (Soloff and Bartell, 1979, Soloff, 1980 and Froese, et al., 1974). In this study, subjects classified as not using denial may be referred to as non-deniers.

4. Myocardial Infarction: A medical condition diagnosed by a medical doctor because of uncomfortable pressure, fullness, squeezing or pain in the chest; pain that spreads to the shoulders, neck or arms; pain, dizziness, fainting, sweating, nausea, or shortness of breath (American Heart Association, 1982); the presence of Q or T waves on an EKG; and/or significant cardiac enzyme elevation (Tjoe and Luria, 1972). The subjects in this study will be diagnosed from three of the five possible signs and symptoms of myocardial infarction. An uncomplicated myocardial infarction refers to a case that does not reflect evidence of acute congestive heart failure or cardiogenic shock (Gentry, et al., 1972). All of the male subjects in this study will meet this criteria.



### Organization of Thesis

The remainder of this thesis will be organized as follows:

1. Chapter 2 presents a review of selected literature pertinent to this study.
2. Chapter 3 will include the conceptual framework for this study and the hypothesis derived from that conceptual framework.
3. Chapter 4 will present the research design and methodology.
4. Chapter 5 will report the analysis of the data.
5. Chapter 6 will include a summary of the thesis, major findings and conclusions, implications of the findings, limitations of the study and recommendations for further research.

## CHAPTER 2

### Review of Literature

The review of literature will be presented in two sections. The first section will focus on research related to the concept of denial. Denial, as a form of adaptation, will be discussed including incidence of denial, implications of denial for the myocardial infarction patient, and the relationship of denial to compliance. The second section will present a review of research findings related to the types of behavior patterns reflected by myocardial infarction patients. It will include the definitions of the behavior pattern, their incidence in the myocardial infarction patient, the implications of each type of behavior pattern, and the relationship of each behavior pattern to denial.

#### Denial

Various authors agree that denial is purposeful and can "alter the significance of an event," (Sullivan and Hackett, 1973 and Weisman and Hackett, 1976). One author contends that denial is used to brush aside evidence of illness in favor of a statement of well-being and leads to maintenance of health (Kendig, 1963).

Hackett and Cassem, in their studies of denial in the coronary care unit, defined the term as "the conscious or unconscious repudiation of part or all of the total available

meaning of an event to allay fear, anxiety, or other unpleasant affects," (Hackett and Cassem, 1974 and Hackett, et al., 1978). They categorized patients who used denial as major deniers, partial deniers, and minimal deniers. Major deniers were "persons who stated unequivocally that they felt no fear at any time throughout their hospital stay." Partial deniers initially denied being frightened, but than later admitted some fear. Minimal deniers "either complained of anxiety or readily admitted being frightened," (Hackett and Cassem, 1974). From this study of eighty-nine coronary patients, the Hackett-Cassem Denial Scale and its interview were developed. Later studies using the Hackett-Cassem Denial Scale dichotomized denial for conceptual clarity and statistical power. Patients were labeled as deniers or non-deniers according to an arbitrarily chosen median cut-off point (Froese, et al., 1974, Soloff and Bartell, 1979 and Soloff, 1980).

#### Incidence of Denial

Studies have reported that the use of denial as a form of adaptation is common in the myocardial infarction patient. The incidence of denial in these studies varied from twenty to seventy-one percent (Croog, 1971, Gelfand, et al., 1960, Soloff and Bartel, 1979, Soloff, 1977 and Soloff, 1980). Croog, et al. discovered that twenty percent of 345 patients who experienced their first myocardial infarction denied three weeks after admission they had had a myocardial infarction (Croog, et al., 1971). Tjoe and Luria reported

that of seventy-five patients admitted to the coronary care unit, only twenty-four percent, considered they had a heart problem even though sixty-four percent were diagnosed as having acute myocardial infarction (Tjoe and Luria, 1972). In a study of white-collar versus blue-collar workers, Hackett and Cassem found, using their scale, that twenty of eighty-seven patients with myocardial infarction were major deniers, forty-one were moderate deniers, twenty-one were mild deniers, and five were minimal deniers (Hackett and Cassem, 1976). Stern, et al. reported that in a study of sixty-eight coronary patients, eight of twenty patients with previous myocardial infarction were deniers (Stern, et al., 1977).

#### Implications of Denial for Myocardial Infarction Patients

In a study concerning delay in responding to the symptoms of an acute myocardial infarction, Hackett and Cassem reported that those patients who denied, displaced symptoms to organs other than their hearts.. They also reported that those who were major deniers required someone else to decide they needed medical help (Hackett and Cassem, 1969).

Froese, et al. studied thirty-six persons within forty-eight hours of admission to the hospital for a myocardial infarction, shortly after transfer out of the coronary care unit, and prior to discharge to determine the relationship of denial to time. Denial remained a consistent coping pattern over the time of the study with an increase in denial prior

to hospital discharge. This study also indicated that denial was not significantly related to age or sex (Froese, et al., 1974).

Hackett, et al. reported an inverse relationship between denial and mortality in a study of fifty myocardial infarction patients. Minimal deniers, who comprised only eight percent of the sample, contributed fifty percent of the mortality (Hackett, et al., 1968). A study of sixteen myocardial infarction patients by Gentry, et al. supported Hackett's findings. He reported that two subjects who died within the first six months of his study had been classified as non-deniers (Gentry, et al., 1972).

Croog, et al. studied 345 patients at three different periods following myocardial infarction: eighteen days, one month, and one year. The patients in this study were asked whether or not they believed they had had a myocardial infarction. If the patients responded with "no" or "don't know" to that question, they were labeled as deniers. There was no significant relationship between denial and age, marital status, educational level, or social class. However, there was a significant difference between deniers and non-deniers in the tendency to conform with medical advice. Deniers indicated less compliance with such advice as when to return to work, how much to work, how much to rest, and whether to stop smoking. Deniers also indicated they had no major problems in the year following their illness (Croog, et

al., 1971).

A study of eighty-seven patients by Hackett and Cassem confirmed that there was no difference in the use of denial when comparing blue-collar workers with white-collar workers. Denial in this study was also unrelated to educational levels (Hackett and Cassem, 1976).

#### Relationship of Denial to Compliance

Stern, et al. used several scales and interviews to determine the life adjustment of sixty-eight post-myocardial infarction patients. They found that "good responders," or compliers, (those who returned to work and to sexual functioning and indicated little anxiety) were deniers, while "poor responders," or non-compliers, were depressed and suffered more anxiety. The deniers returned to work earlier, had a lower percentage of hospital readmission rate, and were older than those classified poor responders. However, between the deniers and the non-deniers, there were no differences in scores on the Peel Index, the Jenkins Activity Survey, or the Rotter Scale. These scales correspondingly determined the severity of the myocardial infarction, the type of behavior pattern, and the internal versus external sense of control (Stern, et al., 1977).

Prince, et al. studied 320 men over a one-year period to determine how life stresses and the use of denial affected hospitalization for ischemic heart disease. The findings in their study indicated that subjects with low scores (0-2) or

high scores (6-8) on the survey of general health questions tended to be rehospitalized less frequently and had a lower mortality rate than those subjects with a medium score (3-5). The authors could not understand why the curve would be the same for the extreme ends. After further statistical testing, the authors hypothesized that the low scores could be attributed to denial and the high scores to compliance. They concluded that denial would decrease hospitalization risk and mortality even though, through self-report, the deniers were low compliers (Prince, et al., 1982).

Soloff conducted a study of forty-five patients who had experienced myocardial infarction, angina, or coronary artery bypass surgery. Of the forty-five subjects, twenty-three were classified as deniers and twenty-two were classified as non-deniers. A score of nineteen on the Hackett-Cassem Denial Scale was used to categorize the subjects as deniers (score of nineteen or above) or non-deniers (score of eighteen or below). There was no significant difference in the compliance scores of deniers and non-deniers. Compliance was determined by the number of points given for returning to work, perceived level of efficiency, adherence to diet, amount of exercise, cigarette smoking, and weight stability or reduction (Soloff and Bartell, 1979).

In conclusion, denial can be considered a form of adaptation to a medical condition such as myocardial infarction. Denial has been categorized as denial or non-denial based on

a research tool known as the Hackett-Cassem Denial Scale. Studies of myocardial infarction patients have reported that the incidence of denial is common, varying from twenty to seventy-one percent. The implications of the use of denial in myocardial infarction patients include: consistency in the use of denial over time; less mortality during the immediate hospitalization period; and a possibility of non-compliance with medical advice during cardiac rehabilitation after hospital discharge.

#### Behavior Pattern

This section of the review of literature will focus on the behavior patterns referred to as the Type A behavior pattern and the Type B behavior pattern.

#### Definition and Incidence of Type A and Type B Behavior Pattern

From the Western Collaborative Group Study (WCGS) of 3,524 men over a nine-year period, came a recognition of a heart disease risk factor called the Type A behavior pattern (Chesney and Rosenman, 1982 and Rosenman, et al., 1964).

The Type A behavior pattern is recognized by traits such as hard-driving ambition, competitiveness, impatience, work-devotion, time-oriented, and aggression (Waldron, 1978, Scherwitz, et al., 1978, Dembroski, 1975, Pittner and Houston, 1980 and Jenkins, et al., 1967).

Rosenman states that the Type A behavior pattern is "a particular action-emotion complex which is possessed and



exhibited by an individual who is engaged in a relatively chronic and excessive struggle...", and that the "Type A behavior pattern does not stem solely from an individual's personality but emerges when certain challenges or conditions of the milieu arise to elicit this complex of responses in susceptible individuals," (Dembroski, 1978 and Friedman and Rosenman, 1974).

The Type B behavior pattern is described by traits such as non-competitive, patient, even-tempered, physical slowness, relaxed, and emotionally-accepting (Scherwitz, et al., 1978). Smyth, et al. suggest that individuals reflecting the Type B behavior pattern are not un-ambitious or non-achievement oriented, but rather are more moderate in their behavior display than individuals reflecting the Type A behavior pattern (Smyth, 1978).

Herman, et al., in a study of 378 men to determine the characteristics of Type A and Type B behavior pattern, reported that the men reflecting Type A behavior pattern saw themselves as assertive, aggressive, outgoing, energetic, and autonomous, but were unaware of being hostile, driven, or egocentric. The men reflecting Type B behavior pattern were calm, quiet, cautious, mild, peaceable, silent, slow, and easygoing (Herman, et al., 1981).

In 1981, Chesney, et al. surveyed 384 white males using the structured interview technique to determine the number of persons reflecting Type A versus Type B behavior pattern.

They discovered 150 men reflected Type A behavior pattern, seventy reflected Type B behavior pattern, and 164 men reflected the characteristics of both (Chesney, et al., 1981).

In a study of twenty-four males experiencing myocardial infarction, fifteen reflected the Type A behavior pattern while nine reflected the Type B behavior pattern (Gentry, et al., 1981).

The incidence of Type A behavior pattern to Type B behavior pattern remains almost two to one (Chesney, et al., 1981, Gentry, et al., 1981 and Soloff and Bartel, 1979).

#### Implications of Behavior Pattern for Myocardial Infarction Patients

Several studies have indicated that persons reflecting the Type A behavior pattern are more likely to develop heart disease, suffer a second myocardial infarction after a first myocardial infarction, and show more extensive atherosclerosis than those who reflect the Type B behavior pattern. The literature refers to individuals who reflect the Type A behavior pattern as being "coronary-prone" (Pittner and Houston, 1980 and Zyzanski, 1978).

In a study of male college students in 1977, individuals reflecting Type A behavior pattern had higher systolic blood pressures and used twice the number of personal pronouns than those reflecting Type B behavior pattern. Those men reflecting Type A behavior pattern had more intense emotional and cardiovascular responses to a cold pressor test, to mental

arithmetic, to the behavior pattern structured interview, to a task requiring the generation and expression of emotions, and to a maze-learning task. The researchers suggested that "Type A behavior pattern self-involvement is associated with the intensity of emotional and cardiovascular responses," (Scherwitz, et al., 1978). The Type A behavior pattern suggests extremes of reaction, particularly in response to extreme or acute illness.

A four-year study in Canada involving 163 men related non-compliance to the Type A behavior pattern. In this study, the early non-complier (defined as non-complying within one month after a myocardial infarction) was described as having more than one myocardial infarction, reflecting Type A behavior pattern, displaying inactivity and using tobacco (Oldridge, et al., 1978).

#### Relationship of Behavior Pattern to Denial

Research focusing on differences between the Type A or Type B behavior pattern has discovered that individuals reflecting Type A behavior pattern manifest a greater cardiovascular arousal in response to a challenging demand or threat to self-esteem, but also tend to employ more suppression in adapting to threatening situations (Pittner and Houston, 1980). This suggests that individuals reflecting Type A behavior pattern may employ more denial than individuals reflecting Type B behavior pattern in coping with stress. Pittner and Houston found similar results in their study of

eighty-four college-age males (Pittner and Houston, 1980). Gentry and his co-workers found that fifteen of the twenty-four males they interviewed reflected Type A behavior pattern and nine reflected Type B behavior pattern. Furthermore, two-thirds of the individuals reflecting Type A behavior pattern were classified as deniers while only one-third of the individuals reflecting Type B behavior pattern were classified as deniers (Gentry, et al., 1981).

However, in contrast, a study of 109 patients by Dimsdale, et al. indicated that Type A behavior pattern was significantly correlated with accumulated stressful life events and current tension. Yet, denial of cardiac disease tended to have an inverse relationship with Type A behavior pattern (Dimsdale, et al., 1978). This was supported in a study by Soloff and Bartel in which they observed and surveyed fifty-four coronary patients for the type of behavior pattern and the use of denial. Findings indicated that thirty-two patients reflected Type A behavior pattern and twenty-two patients reflected Type B behavior pattern. Each patient was then given the Hackett-Cassem Denial Scale. Results demonstrated that sixty-one percent of those who used denial reflected Type B behavior pattern, while eighty-one percent of those who did not use denial reflected Type A behavior pattern (Soloff and Bartel, 1979).

A study using twins as subjects and the Jenkins Activity Survey to determine the type of behavior pattern, implied

that Type A behavior pattern did not relate to common personality concepts. Job involvement, Speed and impatience, and Hard-driving and competitive, the three components or factors in the Jenkins Activity Survey, all related to coping and defense which included denial. Job involvement related to higher coping and lower defenses, or denial. Speed and impatience related to higher defenses, or denial. The Hard-driving and competitive Jenkins Activity Survey component related to lower coping (Vickers, et al., 1981).

In conclusion, a behavior pattern occurs when an individual is aroused by a specific event such as myocardial infarction. Individuals reflecting Type A behavior pattern will exhibit driving, ambitious, time-oriented behavior while individuals reflecting Type B behavior pattern will exhibit easy-going, emotionally-accepting behavior. The incidence of the Type A behavior pattern to the Type B behavior pattern occurs at approximately two to one. The Type A behavior pattern makes individuals susceptible to myocardial infarction. From the results of several studies, reflection of Type A behavior pattern suggests that the myocardial infarction patient will be non-compliant through the use of denial.

#### Summary of Literature Review

In general, studies and the literature reviewed indicated the following:

1. Adaptation by denial may be used by patients to decrease the fear, anxiety, or other unpleasantness associated

with a myocardial infarction.

2. Myocardial infarction patients can exhibit a specific behavior pattern, Type A or Type B, in response to the stress of myocardial infarction which may enhance the adaptation of denial to the point of non-compliance with medical advice.

3. The relationship of denial and behavior pattern has not been clearly established. Some studies have indicated that individuals reflecting Type A behavior pattern use denial as an adaptation mechanism more so than individuals reflecting Type B behavior pattern, while other studies have not supported such findings.

4. Studies indicate that denial as an adaptation mechanism remains a consistent coping pattern over time with no relationship to age, sex, marital status, education level, or social status.

5. Studies testing the implications of denial have produced conflicting results. Some studies indicated that deniers complied less with medical advice while other studies indicated no significant difference in the compliance scores of deniers and non-deniers.

## CHAPTER 3

### Conceptual Framework

In addition to the review of literature, the Adaptation Model of Sister Callista Roy provides the conceptual framework which gives meaning to denial and behavior pattern included in this study. This chapter will be presented in four sections. The first section will be a description of Roy's Adaptation Model and the second section will discuss the application of the model to this study. The third section will discuss the variables for this study. The fourth section will present the hypothesis for this study.

#### Model Description

The basis of Roy's Model is adaptation. Man is viewed as an organism in constant interaction within a changing environment. That environment can be an internal state consisting of physiological structure, maturational level, and unique perceptions, or it can be an external state consisting of people, places, or objects. Either or both states can be an influencing stimulus to change the environment and require the organism to cope with or adapt to the change (Roy, Randell, et al., 1982).

Adaptation is more specifically defined by Roy as a function ( $f$ ) of the stimulus ( $S$ ) from the environment and man's own adaptation level ( $AL$ ) ( $A = fS + AL$ ). The adaptation

level is determined by the combined effects of the following three classes of stimuli: (1) Focal, that which immediately confronts the organism; (2) Contextual or background, all other environmental stimuli present; and (3) Residual, those beliefs, attitudes, traits, or experiences which may have an effect on the present situation (Roy, 1970).

Successful adaptation occurs when man can lessen the responses needed to cope with the immediate stimuli and can increase his sensitivity to respond to complementary stimuli (Roy, 1971). Roy believes that adaptation occurs within a five-phase transaction, and that two mechanisms help process those five phases.

Within the first phase, the organism, man, openly scans the environment until a "triggering event" occurs and causes a "change in level of adequacy." "Adequacy is the state of balance between the person and the environment which he constantly strives to achieve and maintain. This state of balance is experienced as a feeling of competence in relationship to stress" (Roy, Randell, et al., 1982).

The triggering event initiates phase two and the first mechanism, termed the Regulator, is activated. The Regulator "has three functions in stress: to initiate the automatic response essential to the maintenance of life; to stimulate defensive responses to physical, chemical, or infectious triggering events; and to alert the second mechanism that a triggering event has occurred" (Roy, Randell, et al., 1982).



The second mechanism is termed the Cognator; its activation signals the third phase. The Cognator is the conscious or unconscious thinking process that evaluates the Regulator signals in order to initiate a behavioral response to stress, thereby interpreting, or making sense, of the environmental experience (Roy, 1970). In other words, the Cognator processes the triggering event and selects the most appropriate coping stance. Roy contends that there are four choices available: (1) Approach/Avoidance, where behavior is motivated by immediate threat; (2) Compromise, where the usual choice is made when the triggering event is social or interpersonal; (3) Self-enhancement, when a problem-solving process seeks mastery or autonomy, and (4) Inaction, when the Cognator denies the stress from the triggering event. Inaction is the least effective coping stance (Roy, Randell, et al., 1982).

The fourth phase occurs when the Cognator develops coping strategies from the coping stances chosen in phase three. The strategies available to each stance are:

Stance

Strategy

Approach/Avoidance

Fight occurs when the person believes he is greater than the triggering event so that it must be terminated.

Flight occurs when the person believes that the triggering event is greater than he is, so he flees.

StanceStrategy

Compromise

Suppression/Repression stimulates the person to forget, but isn't totally successful because the stress recurs and must be dealt with.

Projection occurs when the person denies certain thoughts or feelings within himself, but ascribes them to others.

Substitution occurs when the Cognator allows the person to invest energy in alternate people, places, or objects than he usually would.

Self-enhancement

Confrontation occurs when the person meets the environment head on because he feels waiting would be too risky.

Manipulation occurs when the person expends much energy supplying the missing ingredients he feels are in the environment.

Negotiation occurs when the person attempts to clarify the stress and bargain with the environment usually by changing internally.

Inaction

Denial blocks messages from the Regulator thereby keeping the stress out of awareness.

Reaction Formation replaces a painful or unacceptable interaction with a favorable, opposite, interaction behavior.

Dissociation separates the person from interaction with the environment by denying the triggering event, the stress, and the Regulator's signal.

Inaction is the least effective coping strategy and provides only temporary adequacy. This strategy denies or distorts the interaction between the person and the environment (Roy, Randell, et al., 1982).

In phase five, the coping strategies are now channeled into behaviors in the physiological, psychological, and/or sociological components. The process of the behavior affects the stress, and in so doing, causes a new or adjusted triggering event and transaction begins again.

A conceptualization of the Regulator/Cognator process is shown in Figure 1 (Page 26). As the model indicates, people, places, and objects open to the environment are depicted by the circles, squares, and triangles surrounded by the broken line. Triggering Event (TE) is the occurrence of an event which activates the Regulator/Cognator process. The arrows in the model point to the directions the process may take in the five phases.

#### Application of Model to Present Study

Adaptation by use of denial and the type of behavior pattern reflected by myocardial infarction patients can be explained within the context of Roy's Adaptation Model. If it is assumed that the term behavior pattern implies a repetition of certain traits in certain instances over time, then Type A behavior pattern and Type B behavior pattern can be regarded as residual stimuli in the adaptation level of man as defined by Roy.

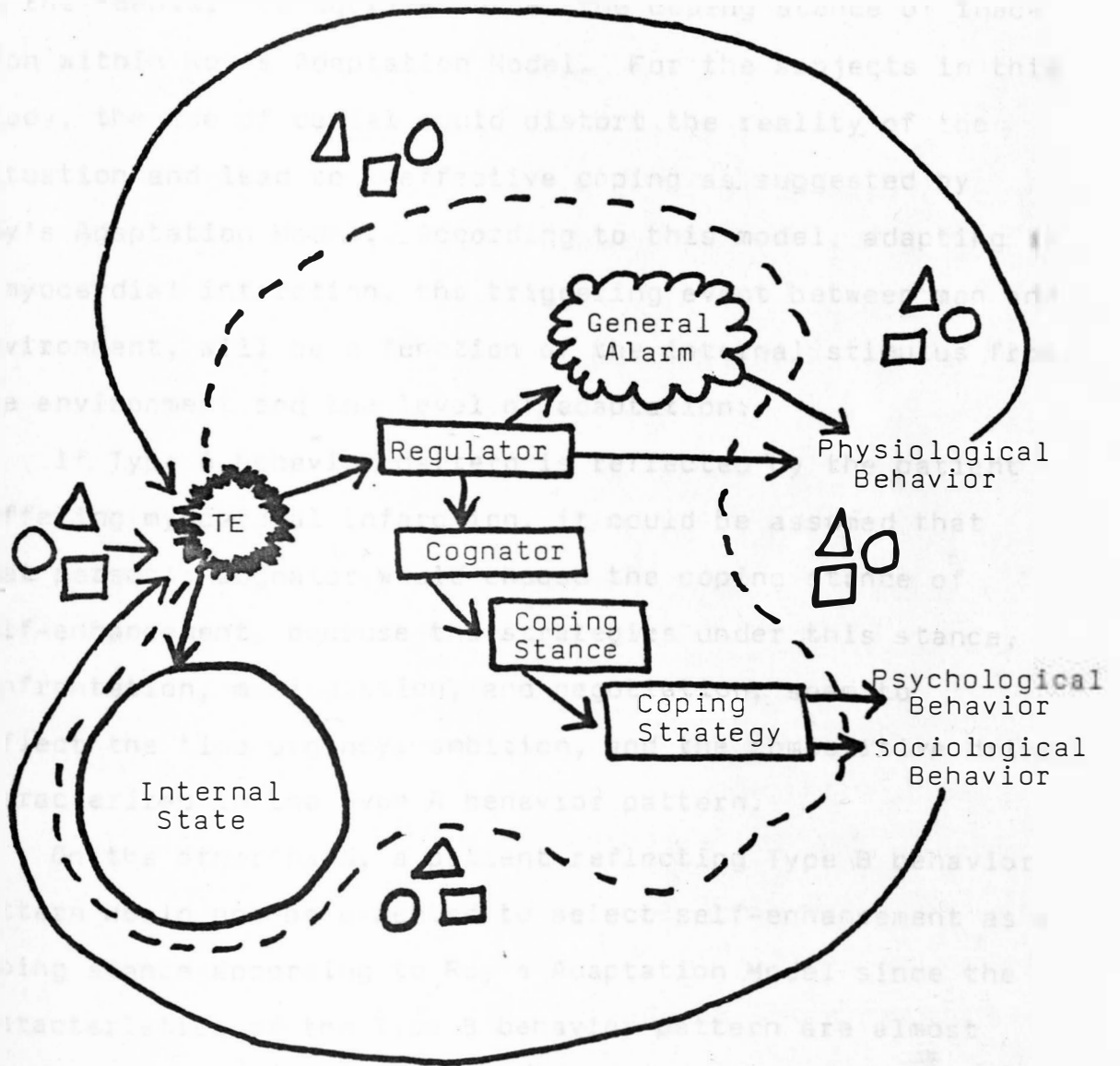


Figure 1

The Regulator/Cognator Process

Denial, in this study, can be conceived as being similar to the "denial" categorized under the coping stance of Inaction within Roy's Adaptation Model. For the subjects in this study, the use of denial could distort the reality of the situation and lead to ineffective coping as suggested by Roy's Adaptation Model. According to this model, adapting to a myocardial infarction, the triggering event between man and environment, will be a function of the internal stimulus from the environment and the level of adaptation.

If Type A behavior pattern is reflected by the patient suffering myocardial infarction, it could be assumed that that person's Cognator would choose the coping stance of Self-enhancement, because the strategies under this stance, confrontation, manipulation, and negotiation, seem to reflect the time urgency, ambition, and the competitive drive characterized in the Type A behavior pattern.

On the other hand, a patient reflecting Type B behavior pattern would not be expected to select self-enhancement as a coping stance according to Roy's Adaptation Model since the characteristics of the Type B behavior pattern are almost opposite that of the Type A behavior pattern. Furthermore, since the definition of Type B behavior pattern is not as concrete as Type A behavior pattern, a patient reflecting this behavior pattern could be assumed to select any of the other three coping stances (Approach/Avoidance, Compromise, or Inaction) more often than would a patient reflecting Type

A behavior pattern. It could also be assumed that the patient reflecting Type B behavior pattern would select denial, a strategy under Inaction, more often than would a patient reflecting Type A behavior pattern.

In conclusion, Roy's Adaptation Model appears to explain the use of denial as a form of adaptation in the patient experiencing myocardial infarction. It also appears to explain why the type of behavior pattern of the patient experiencing myocardial infarction will be a factor in the adaptation of that patient. This model could explain the relationship between the use of denial and the type of behavior pattern present in the myocardial infarction patient under investigation in this study.

### Variables

The dependent variable in this study was the presence or absence of denial as reflected by male patients experiencing myocardial infarction.

The independent variable in this study was the type of behavior pattern, either Type A or Type B, reflected by the male patient experiencing myocardial infarction.

### Hypothesis of the Study

Based on the conceptual framework of this study, the following research hypothesis was tested for significance at the .05 level. Male patients experiencing myocardial infarction who reflect the Type B behavior pattern are more likely

to use denial as a form of adaptation than male patients experiencing myocardial infarction who reflect the Type A behavior pattern.

CHAPTER 4  
Methodology

This chapter will discuss the type of research approach used, the sample, the research tools used, the method of collecting data, and the method of data analysis.

Approach

To determine if there is a relationship between the use of denial as a form of adaptation and the type of behavior pattern reflected in a myocardial infarction patient, a survey approach was used utilizing two instruments developed by other researchers.

Sample

The accessible population for this study consisted of males who were admitted to one of two Midwestern community hospitals. The first hospital was a twenty-five bed post-critical care unit with a 450-bed capacity. The second hospital was a thirty-two bed post-coronary care unit with a 338-bed capacity.

The non-random sample consisted of twenty-one men, age 37-74, who were admitted to the hospital with a diagnosis of myocardial infarction during a four-month period in February, March, April, and May of 1983.



### Research Tools

The following scales were used to study the use of denial as a form of adaptation and the type of behavior pattern reflected by the male patient experiencing myocardial infarction. The Hackett-Cassem Denial Scale was used to determine denial or non-denial based on a sum obtained from this scale by interview. The Jenkins Activity Survey was used to determine the type of behavior pattern based on a score obtained from the Type A scale of this questionnaire.

Denial: Hackett-Cassem Denial Scale. The tool used to determine the use of denial as a form of adaptation was the Hackett-Cassem Denial Scale (Appendix A). It was a thirty-one question scale with a potential range of scores from zero to sixty-four. Each answer was rated zero to three. Higher scores, obtained by summing all thirty-one answers, indicated greater denial. It took approximately twenty minutes to complete by interview (Hackett and Cassem, 1974).

The responses to questions on the Hackett-Cassem Denial Scale originated from a clinical judgment of cancer patients using denial. Hackett and Cassem reported that a one-way analysis of variance in the relationship between scale scores and three clinically-judged categories of denial was  $p < 0.001$ . The authors of the scale next tested two series of ten coronary care patients and found reliability coefficients at  $r = .84$  and  $r = .89$  with  $p < 0.01$ . Four other researchers

subsequently tested two series of eighteen and twenty-nine myocardial infarction patients and discovered  $r=.71$  to  $r=.87$  at  $p \leq .025$  (Hackett and Cassem, 1974).

Froese, et al. tested sixty-five coronary care unit patients who experienced myocardial infarction and reported that the Hackett-Cassem Denial Scale was "successfully" validated at  $p < 0.001$  (Froese, et al., 1974).

Permission to use the Hackett-Cassem Denial Scale was granted from contact with the original developer of the tool, Dr. Thomas P. Hackett (Appendix B). The interview schedule recommended by Dr. Hackett (Appendix C), was tested on three subjects prior to the study to assess its reliability.

The data obtained from the Hackett-Cassem Denial Scale by interview was ordinal level. The zero to three possible weighted values for each of the thirty-one questions on the scale were summed for a zero to sixty-four possible total score of denial. Subjects were classified as deniers if they obtained a sum total of nineteen or above. Subjects were classified as non-deniers if they obtained a sum total of eighteen or below.

Behavior Pattern: Jenkins Activity Survey. The tool used to determine the type of behavior pattern was the Jenkins Activity Survey (JAS) developed in 1962 at the Harold Brunn Institute in San Francisco, California (Jenkins, et al., 1967). It consisted of fifty-two multiple choice questions that can be scored by hand or machine. The Jenkins Activity

Survey contained four scales: the Type A behavior pattern scale and three independent factors; Speed and impatience, Job involvement, and Hard-driving and competitive. The Type A scale of the Jenkins Activity Survey was the only scale used for this study.

The Jenkins Activity Survey demonstrated the same usefulness as the original structured interview of Type A behavior pattern research (Gentry, et al., 1979). In fact, the Jenkins Activity Survey achieves "face validity by including in multiple choice form many of the questions contained in the structured interview" first used to determine Type A behavior pattern (Jenkins, 1978).

A pool of questions derived from the original structured interview was given to 150 men from the Western Collaborative Group Study. Each question was analyzed for its ability to correctly discriminate between previously-determined men who reflected the Type A behavior pattern and men who reflected the Type B behavior pattern. This forty question nucleus was then given to the entire Western Collaborative Group Study population with a ninety-two percent return. The ability of the Jenkins Activity Survey to differentiate between the types of behavior pattern was analyzed again on a sample of 707 men who were equally divided into Type A and Type B behavior patterns. Those results were then cross-validated with a 984-person sample. Only those questions with significant differentiation were included in the Jenkins Activity Survey

so that a seventy-three percent agreement was achieved with the Jenkins Activity Survey Type A behavior pattern and the structured interview conducted in 1960 and 1962 (Jenkins, 1978).

A second edition of the Jenkins Activity Survey was published in 1966. The test-retest correlations over a one-year period returned a stability range of .60 to .70. A third edition was constructed and administered in 1969 from the criteria of the 1965 and 1966 scores (Jenkins, 1978).

The validity of this tool has been established for use with employed males between the ages of 25 and 65 who have at least eight years of education. Since 1970, reliability was established with at least eight studies using the Jenkins Activity Survey. Evidence was obtained in cross-cultural studies to support the association between Type A behavior pattern and coronary disease (Zyzanski, 1978).

Permission to use the Jenkins Activity Survey was granted from contact with the original developer of the tool, Dr. David Jenkins (Appendix D). There were fifty-two questions on the Jenkins Activity Survey, and the data obtained from the questionnaire (Appendix E) were ordinal and nominal level. There were three questions pertaining to demographic data. The questionnaire itself contained four scales: The Type A behavior pattern scale and three independent factors, Speed and impatience, Job involvement, and Hard-driving and competitive. Only the Type A behavior pattern scale was used

for this study. To obtain a score from the Type A behavior pattern scale, the weighted answers to twenty-one questions: 3, 5-7, 9-11, 16-19, 21, 25, 28, 30, 32, 35, 37, 40, 43, and 46 were summed for a raw score. This raw score was then converted to a standard score according to the instructions for hand scoring provided with the Jenkins Activity Survey.

Subjects were classified with the Type A behavior pattern if they obtained a positive standard score on the Type A behavior pattern scale of the Jenkins Activity Survey. Subjects were classified with the Type B behavior pattern if they obtained a negative standard score on the Type A behavior pattern scale of the survey.

Personal and Medical Information. In addition to obtaining data on the use of denial as a form of adaptation and the type of behavior pattern, personal and medical information related to age, education, occupation, and history of heart disease were obtained from each subject for the purpose of describing the sample (Appendix F).

The data were collected from the hospital chart and question fifty-one on the Jenkins Activity Survey. Each category was then grouped for ease in interpreting the data.

Age was categorized in ten year intervals from age 30 to 79.

Education was categorized according to question fifty-one of the Jenkins Activity Survey (Appendix D).

Occupation was grouped according to the United States Census Classification of Occupational Status (Careers and Occupations, 1967) as follows: professionals; proprietors, managers, or officials (including farmers or wholesalers or retailers); clerks and kindred workers (including insurance agents); skilled workers and foremen; semi-skilled workers; unskilled workers; and a separate grouping of retired persons.

History of heart disease was categorized according to previous classifications from research on denial and behavior pattern including no heart disease or a negative heart disease history, history of high blood pressure, history of angina, history of one previous myocardial infarction, and history of two previous myocardial infarctions.

#### Method of Collecting Data

Two Midwestern hospitals were used for this study. Permission to utilize the post-critical care unit of the 450 bed Midwestern hospital was obtained from the hospital's Scientific Inquiries Committee, the Vice-President of Nursing, the Critical Care Committee, and the Medical Executive Committee. The form used to obtain patient consent (Appendix G) was developed to comply with the requirements of hospital policy and the Scientific Inquiries Committee. The Scientific Inquiries Committee also required that the medical doctors who admitted prospective subjects to the units be notified and permission obtained from them to include their patients

in the study (Appendix H).

Permission to utilize the post-coronary care unit of the 338-bed hospital was obtained through contact with the hospital's Department of Education personnel who presented the proposal to the hospital's Department of Nursing Service. Approval to allow the study was obtained with the stipulation that all forms developed for use in the other hospital would be used in this hospital and that a staff nurse would be present in the room when the interview was being conducted.

In both hospitals, individual patient permission was obtained by providing the consent form to available subjects who met the criteria of uncomplicated myocardial infarction. If willingness to participate in the study was obtained, the hospital chart was reviewed for demographic data including age, education, occupation, and history of heart disease. The same investigator then conducted the Hackett-Cassem Denial Scale interview followed by administration of the Jenkins Activity Survey questionnaire.

The total time to complete the Hackett-Cassem Denial Scale and the Jenkins Activity Survey by subjects was one to one and a half hours. The interview and questionnaire were conducted between two and four p.m. on the ninth, tenth, or eleventh day of the subject's hospitalization for the diagnosis of uncomplicated myocardial infarction. The time of day chosen for the study was stipulated by both hospitals because rules for each coronary care unit stated that two to

four p.m. was quiet time on the unit, so patients would not have visitors or family in the rooms. This time, therefore was conducive for collection of the data without interruption. The days chosen to collect data were recommended by the medical doctors contacted for permission to study their patients. It was their consensus that the patients would suffer less stress as a result of being in the study by the ninth, tenth, or eleventh day of hospitalization for uncomplicated myocardial infarction.

#### Method of Data Analysis

The data obtained from each subject was analyzed in four sections. The first section contains a description of the personal and medical information of the subjects in the study. Data collected on each subject included age, education, occupation, and history of heart disease as categorized earlier under research tools. Frequencies were obtained for each category.

The second section analyzes the data determined from the Hackett-Cassem Denial Scale by interview.

Categories of deniers and non-deniers (obtained according to research tools section) were labeled using frequencies within the personal and medical information stated earlier. This analysis completed objective one of the study to determine the incidence of denial.

The third section analyzes the data determined from the Jenkins Activity Survey questionnaire. Categories of Type A



behavior pattern or Type B behavior pattern (obtained according to research tool section) were described using frequencies within the personal and medical information stated earlier. This analysis completed objective two of the study to determine the type of behavior pattern reflected by the myocardial infarction patient.

The fourth section contains the analysis of the relationship between denial and behavior pattern. To determine the relationship between the use of denial as a form of adaptation and the type of behavior pattern reflected in the male patient experiencing myocardial infarction, chi square and 2X2 contingency table was used. Alpha was selected at .05 level of significance. This analysis completed objective three of the study to determine the relationship between denial and behavior pattern in the male patient experiencing myocardial infarction.

## CHAPTER 5

### Analysis of Data

This chapter is organized into four sections. The first section contains a general description of the sample. The second section meets objective one of the study and contains frequencies of denial and non-denial. The third section meets objective two of the study and contains frequencies of Type A behavior pattern and Type B behavior pattern. The fourth section meets objective three of the study and contains the statistical analysis of the relationship between denial and behavior pattern.

#### Description of the Sample

Twenty-one male patients experiencing myocardial infarction met the selection criteria and agreed to participate in the study. Data were collected from hospital charts to obtain personal and medical information regarding age, education, occupation, and history of heart disease.

Age. One subject from the sample of twenty-one was placed in the 30-39 year old category. Three subjects were found in the 40-49 year old age group. Five subjects were 50-59 years of age, while in both the 60-69 and the 70-79 year old age groups, six subjects were placed in each group. Twelve subjects were in the 60-79 year old age groups.

Education. No subjects had only zero to four years of education. Five subjects had five to eight years of education, while four subjects had some high school, but did not graduate. Six subjects completed high school, but had no further education. Two subjects went to a trade school or business college, and two subjects went to junior college. The two subjects who completed a four-year college education were enrolled in post-graduate study at the time of the study. Twelve subjects has a high school education or above.

Occupation. There were no professionals by occupation in this sample of midwestern males according to the United States Census Classification of Occupational Status used for this study. There were five subjects who were proprietors, managers, or officials. Two subjects of this group were farmers, one subject was a retailer, and two subjects were executives. There was one subject in the category of clerks or kindred workers. There were two subjects who were skilled workers and three subjects who were semi-skilled workers. In the unskilled workers category, there were two subjects. Eight subjects were retired. Sixty-two percent of the sample were working prior to their myocardial infarction.

History of Heart Disease. Five subjects of the sample of twenty-one males had no prior history of heart disease, while six subjects suffered only high blood pressure prior to

their myocardial infarction. Two subjects had a history of angina. Six subjects in the sample had experienced a previous myocardial infarction. Two subjects had experienced two previous myocardial infarctions.

Summary of Typical Respondent. The typical respondent was between the ages of 50 and 75, was a high school graduate, was retired, a proprietor, or manager, and had a negative history of heart disease.

Objective One: Number of Subjects Using Denial

Objective one of the study was to determine the use of denial by the male patient experiencing myocardial infarction. The responses from the Hackett-Cassem Denial Scale were summed to determine whether denial, as a form of adaptation was used. The possible scores ranged from zero to sixty-four. Denial and non-denial were established using a cut-off score of nineteen. Nineteen or above was established as the denial category and eighteen or below was the non-denial category. From the sample of twenty-one uncomplicated myocardial infarction patients, fifteen subjects, or seventy-one percent, were deniers, while six subjects, or twenty-nine percent, were non-deniers. Total summed scores in the sample ranged from a low of fourteen to a high of thirty-six. The mean was 23.24.

Frequency of the use of denial and non-denial by age. As Table 1 indicates, only one subject fell within the 30-39 year old age group and he was classified as a denier with the highest score of the sample. Three subjects fell in the 40-49 year old age group, and all three subjects were deniers. In the 50-59 year old age group, there were three deniers and two non-deniers. In the 60-69 year old age group and the 70-79 year old age group, there were four deniers and two non-deniers in each of these two groups. In the sample of twenty-one male patients experiencing myocardial infarction, denial occurred more frequently in the over sixty age categories. Eight subjects were deniers and four subjects were non-deniers.

Table 1  
Frequency of Subjects Using Denial and Non-Denial  
by Age

Age	Deniers	Non-Deniers
30-39	1	0
40-49	3	0
50-59	3	2
60-69	4	2
70-79	4	2
Totals	15	6 N=21

Frequency of the use of denial and non-denial by education. As Table 2 reflects, four deniers and one non-denier had five to eight years of education. Four subjects had some high school education; two were deniers and two were non-deniers. Six subjects completed high school; three were deniers and three were non-deniers. Of the two subjects who attended trade school or business college, both were deniers. This was also true of the two subjects who attended junior college, both were deniers. Two subjects had completed a four year college and were studying post-graduate work; both of them were deniers. All of the non-deniers in this sample had below a high school education.

Table 2

Frequency of Subjects using Denial and Non-Denial  
by Education

Education	Deniers	Non-Deniers
Zero to four years	0	0
Five to eight years	4	1
Some high school	2	2
High school graduation	3	3
Trade school or business college	2	0
Junior college	2	0
College graduation	0	0
Post-graduate work	2	0
Totals	15	6 N=21

Frequency of the use of denial and non-denial by occupation. As Table 3 reflects, there were no professionals in this sample of twenty-one midwestern males. Five subjects in the sample were proprietors, managers, or officials; all were deniers. The one subject who was a clerk or kindred worker was a denier. Two subjects were skilled workers; one was a denier and the other was a non-denier. Three subjects were semi-skilled workers and all were deniers. Of the two subjects who were unskilled workers, both were deniers. Eight subjects were retired; five were non-deniers and three were deniers.

Table 3

Frequency of Subjects using Denial and Non-Denial  
by Occupation

Occupation	Deniers	Non-Deniers
Professionals	0	0
Proprietors, managers, officials	5	0
Clerks or kindred workers	1	0
Skilled workers or foremen	1	1
Semi-skilled workers	3	0
Unskilled workers	2	0
Retired	3	5
Totals	15	6 N=21

Frequency of denial and non-denial by history of heart disease. Table 4 reflects that thirteen subjects in this sample had either no previous heart disease history or experienced only high blood pressure prior to their myocardial infarction. Of these thirteen subjects, one was a non-denier and twelve were deniers. The one subject who was the non-denier had a history of high blood pressure. One subject was placed in the history of angina category and found to be a non-denier. Five subjects had experienced one previous myocardial infarction; four were non-deniers while one was a denier. Both subjects who had suffered two previous myocardial infarctions were deniers.

Table 4

Frequency of Subjects using Denial and Non-Denial  
by History of Heart Disease

History of Heart Disease	Deniers	Non-Deniers
Negative disease history	7	0
High blood pressure history	5	1
History of angina	0	1
One myocardial infarction	1	4
Two myocardial infarctions	2	0
Totals	15	6 N=21

Objective Two: Type of Behavior Pattern

To fulfill objective two of the study, the type of behavior pattern reflected in the myocardial infarction patient



was determined from a sum of the weighted answers for the Type A behavior pattern scale on the Jenkins Activity Survey questionnaire. The total raw score was converted into a standard score using the instructions for hand scoring that accompanied the Jenkins Activity Survey. If the standard score was positive, the subject reflected Type A behavior pattern. If the standard score was negative, the subject reflected Type B behavior pattern. With this approach, ten subjects, or forty-eight percent of the sample, reflected Type A behavior pattern and eleven, or fifty-two percent of the sample, reflected Type B behavior pattern.

Frequency of types of behavior pattern by age. As Table 5 reflects, the one subject in the 30-39 year old age group reflected Type B behavior pattern. In the 40-49 year old age group, one subject reflected Type A behavior pattern while two reflected Type B behavior pattern. Three subjects in the 50-59 year old age group reflected Type A behavior pattern while another two subjects in this group reflected Type B behavior pattern. In the 60-69 year old age group, two subjects reflected Type A behavior pattern while four reflected Type B behavior pattern. The 70-79 year old age group showed the reverse. Four subjects reflected Type A behavior pattern while two reflected Type B behavior pattern.

Table 5  
 Frequency of Types of Behavior Pattern  
 by Age

Age	Type A	Type B
30-39	0	1
40-49	1	2
50-59	3	2
60-69	2	4
70-79	4	2
Totals	10	11 N=21

Frequency of types of behavior pattern by education. As Table 6 reflects, there were no subjects with zero to four years of education or any in the college degree category. In the five to eight years of education category, there were two subjects who reflected Type A behavior pattern and three subjects who reflected Type B behavior pattern. There were two subjects who reflected Type A behavior pattern who had some high school education along with two subjects in the same category who reflected Type B behavior pattern. Six subjects were divided equally between Type A behavior pattern and Type B behavior pattern in the high school graduation category; three reflected Type A behavior pattern and three reflected Type B behavior pattern. Both subjects in the trade school or business college category reflected Type A behavior pattern. The two subjects in the junior college category reflected Type B behavior pattern. In the post-graduate study category,

one subject reflected Type A behavior pattern and one subject reflected Type B behavior pattern. Fifty-seven percent of the sample had an educational background of high school or above and were evenly divided regarding the frequency of Type A behavior pattern and Type B behavior pattern.

Table 6  
Frequency of Types of Behavior Pattern  
by Education

Education	Type A	Type B	
Zero to four years	0	0	
Five to eight years	2	3	
Some high school	2	2	
High school graduation	3	3	
Trade school or business college	2	0	
Junior college	0	2	
College graduation	0	0	
Post-graduate work	1	1	
Totals	10	11	N=21

Frequency of types of behavior pattern by occupation.

Table 7 indicates that in the proprietors, managers, and officials category, three subjects reflected Type A behavior pattern and two reflected Type B behavior pattern. The one subject who was a clerk or kindred worker reflected Type A behavior pattern. Of the two subjects who were skilled workers, one reflected Type A behavior pattern and the other reflected Type B behavior pattern. Three subjects were

semi-skilled workers. One reflected Type A behavior pattern while the other two reflected Type B behavior pattern. In the unskilled workers category, two subjects reflected Type B behavior pattern. The retired subjects in the sample were evenly divided between behavior patterns; four reflected Type A behavior pattern and four reflected Type B behavior pattern.

Table 7  
Frequency of Types of Behavior Pattern  
by Occupation

Occupation	Type A	Type B
Professionals	0	0
Proprietors, managers, officials	3	2
Clerks and kindred workers	1	0
Skilled workers	1	1
Semi-skilled workers	1	2
Unskilled workers	0	2
Retired	4	4
Totals	10	11 N=21

Frequency of types of behavior pattern by history of heart disease. As Table 8 indicates, two subjects with no prior heart disease reflected Type A behavior pattern while five subjects reflected Type B behavior pattern. Six subjects had a history of high blood pressure. Three reflected Type A behavior pattern and three reflected Type B behavior pattern. There was one subject with angina who reflected Type A behavior pattern. Five subjects had experienced a

previous myocardial infarction. Three reflected Type A behavior pattern and two reflected Type B behavior pattern. Within the category of subjects with two previous myocardial infarctions, there were two subjects; one reflected Type A behavior pattern while the other one reflected Type B behavior pattern.

Table 8

Frequency of Types of Behavior Pattern  
by History of Heart Disease

Disease	Type A	Type B	
Negative heart disease history	2	5	
History of high blood pressure	3	3	
History of angina	1	0	
One myocardial infarction	3	2	
Two myocardial infarctions	1	1	
Totals	10	11	N=21

Objective Three: The Relationship Between Denial and Type of Behavior Pattern

The relationship between the use of denial as a form of adaptation and the type of behavior pattern reflected in the male patient experiencing myocardial infarction was made using Chi square and a 2X2 contingency table (Table 9). Even though expected cell frequencies in the non-denial column were less than five, Grizzle recommends using Chi square and a 2X2 contingency table in this circumstance (Grizzle, 1967). Alpha was selected at a .05 level of significance.

Table 9

Frequency of Denial and Non-Denial by Type  
of Behavior Pattern Reflected in the Male  
Patient Experiencing Myocardial  
Infarction

Behavior Pattern	Denial	Non-Denial	Total
Type A behavior pattern	6	4	10
Type B behavior pattern	9	2	11
Totals	15	6	N=21

Computation of Chi square yielded a value of  $x^2 = 1.21$  which does not meet the required level of  $x^2_{.05} = 3.85$ . Therefore, the findings fail to reject the null hypothesis.

There is no significant relationship between the use of denial as a form of adaptation and the type of behavior pattern reflected by the male patient within two weeks of admission to a coronary care unit for a diagnosis of myocardial infarction.

## CHAPTER 6

### Summary, Conclusions, Implications, and Recommendations

This chapter is organized into four sections. The first section contains a summary of the research problem, objectives, and design. The second section contains a summary of major findings and conclusions as related to the three objectives of the study. The third section contains implications derived from the research findings and conclusions. The fourth and last section contains the limitations and recommendations for further research.

#### The Research Problem, Objectives, and Design

Denial is a form of adaptation that has been reported in twenty to seventy-one percent of myocardial infarction patients. This denial may be beneficial for the patient if he actively anticipates plans for recovery and discharge from the hospital. However, this denial may be detrimental to the patient's health by leading to non-compliance with the patient refusing to accept medical recommendations regarding cardiac rehabilitation. Since non-compliance in the post-hospitalization myocardial infarction patient may hinder cardiac rehabilitation, the assessment of denial assumes major importance.

A review of the literature suggested that the type of

behavior pattern, Type A or Type B, reflected by the patient may affect the adaptation that can occur after an acute illness such as myocardial infarction.

The Adaptation Model of Sister Callista Roy provided the framework for the relationship of denial and behavior pattern found in this study. Roy contends that the adaptation that occurs (denial) is a function of the stimulus (myocardial infarction) and the adaptation level (including type of behavior pattern) of the patient.

Consequently, the objectives of this study were to:

1. Identify whether denial was used by the male patient experiencing myocardial infarction according to responses to the Hackett-Cassem Denial Scale.

2. Determine whether Type A behavior pattern or Type B behavior pattern was reflected in the male patient experiencing myocardial infarction according to responses to the Jenkins Activity Survey.

3. Determine if there was a relationship between the use of denial as a form of adaptation and the type of behavior pattern reflected in the male patient, within two weeks of admission to a coronary care unit for a diagnosis of myocardial infarction.

A survey approach using the Hackett-Cassem Denial Scale and the Jenkins Activity Survey was used. The sum of the weighted answers to the Hackett-Cassem Denial Scale was used to determine a denial score. Subjects were labeled as



deniers if they obtained a sum of nineteen or above and subjects were labeled as non-deniers if they obtained a sum of eighteen or below. The type of behavior pattern was determined from a standard score of the sum of the answers to the Type A scale of the Jenkins Activity Survey. If the standard score was positive, the subject reflected Type A behavior pattern and if the standard score was negative, the subject reflected Type B behavior pattern.

Data was collected on the ninth, tenth, or eleventh day of admission on twenty-one male patients admitted to a coronary care unit for the diagnosis of myocardial infarction.

Frequencies of denial and non-denial discovered in the twenty-one subjects were used to fulfill the first objective of the study. The deniers and non-deniers were also described according to age, education, occupation, and history of heart disease.

Frequencies of Type A behavior pattern and Type B behavior pattern were used to fulfill the second objectives of the study. The subjects reflecting Type A behavior pattern and Type B behavior pattern were also described according to age, education, occupation, and history of heart disease.

To fulfill the third objective of the study, a statistical analysis using Chi square and a 2X2 contingency table (Table 9) was calculated. Alpha was selected at a .05 level of significance.

## Major Findings and Conclusions

The major findings and conclusions of this research are discussed as they relate to the three objectives of the study.

Objective One: Major findings. Objective one of this study was to identify whether denial was used by the male patient experiencing myocardial infarction. The general findings related to this objective were:

1. The majority of the subjects used denial as a form of adaptation.
2. Denial occurred more frequently with increasing age.
3. Non-denial occurred in the subjects with less than a high school education.
4. The largest group of deniers were the proprietors, managers, and officials.
5. Subjects with either a negative history of heart disease or a history of high blood pressure were the largest group of deniers.

Objective One: Conclusions. The findings suggest that most of the Midwestern male patients of this study adapted to the event of myocardial infarction by the use of denial. This supports previous research by Hackett and Cassem, Tjoe and Luria, and Stern, et al., with the percentage of deniers discovered in this study falling at the extreme upper range of the findings from previous research.

In this study, the use of denial was particularly

evident within the higher status working class who were older, educated beyond high school, and who had no previous history of heart disease. This study contradicts the findings of Froese, et al., and Croog, et al., who reported no relationship between denial and age. This study also contradicts Croog, et al. and Hackett and Cassem who reported no relationship between denial and education or social class.

Objective Two: Major Findings. Objective two of this study was to determine whether the myocardial infarction subject reflected Type A behavior pattern or Type B behavior pattern. The general findings related to this objective were:

1. The sample of Midwestern male patients experiencing myocardial infarction was equally divided into subjects who reflected Type A behavior pattern and subjects who reflected Type B behavior pattern.

2. The frequency of the type of behavior pattern reflected by the subjects of the sample was not influenced by age, education, occupation, or history of heart disease.

Objective Two: Conclusions. The findings for objective two suggest that neither Type A behavior pattern nor Type B behavior pattern predominated in the Midwestern male patient experiencing myocardial infarction. These findings do not concur with previous research which states the incidence of Type A behavior pattern to Type B behavior pattern remains

almost two to one.

Objective Three: Major Findings. Objective three of this study was to determine if a relationship existed between the use of denial as a form of adaptation and the type of behavior pattern reflected in the male patient within two weeks of admission to a coronary care unit for a diagnosis of myocardial infarction. Statistical testing using Chi square and a 2X2 contingency table (Table 9) failed to reject the null hypothesis. There was no significant relationship between denial and behavior pattern in the male patient experiencing myocardial infarction in this sample, N=21.

Objective Three: Conclusions. The findings for this objective do not statistically relate Type A behavior pattern or Type B behavior pattern to the use of denial in the male patient experiencing myocardial infarction. This finding supports the research of Vickers and coworkers. However, there appears to be a trend that Type B behavior pattern is related to the use of denial as a form of adaptation, but it is not at a significant level.

#### Implications of the Research

The occurrence of use of denial by male patients experiencing myocardial infarction in this sample of twenty-one is high, particularly since most subjects were scheduled to be discharged within one to three days of the study. The use of denial by the subjects at this time in the course of

their hospitalization may detrimentally affect their post-hospitalization cardiac rehabilitation. Consequently, the diagnosis of denial in the myocardial infarction patient prior to his discharge could lead to interventions that may enhance compliance in the post-hospitalization cardiac rehabilitation period.

The relationship between denial and behavior pattern was not statistically significant in this non-random sample of twenty-one.

#### Limitations and Recommendations

Limitations: This study had the following limitations:

1. The findings of this study are limited to the sample since the selection was not random.

2. The characteristics of the investigator could have led to unconscious communication of expectations or biased observations of responses through the interview.

3. The sample size of twenty-one diminished the probability of it being representative of the target population.

4. The characteristics of the sample may be a limitation only as they resided in one rural geographical area.

5. The method of categorization of denial and non-denial must be considered a limitation because of the dichotomous approach rather than on a continuum.

Recommendations: The author recommends the following for further research:

1. A study using a large random sample size would

establish a statistically significant relationship between denial and type of behavior pattern.

2. A study delineating the degrees of denial would increase the validity of the research tool used to determine denial in this study.

3. A study attempting to determine the relationship between denial and compliance is recommended.

4. A study utilizing samples on a regional or national level would provide a basis for broader applications of the findings.

5. A sample including female patients experiencing myocardial infarction would provide a basis for broader application of the findings.

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APPENDIX A  
HACKETT-CASSEM DENIAL SCALE

## Hackett-Cassem Denial Scale

1. Delay in consulting for symptoms of Myocardial Infarction (time from symptom onset until action is taken).  
0 (0-1 hr), 1 (1-5 hr), 2 (5-24 hr), 3 (24 hr or more)
  2. Others helped patient decide that medical care was needed.  
0 (no), 1 (maybe), 2 (definitely)
  3. Patient minimizes present symptoms (i.e., symptoms present at interview).  
0 (not at all), 1 (occasionally), 2 (frequently), 3 (always)
  4. Patient alludes to there being nothing really wrong with him and that he is ready to go home.  
0 (none), 1 (mild), 2 (moderate), 3 (extreme)
  5. Patient (past or present) displaced source of symptoms to organs other than heart.  
0 (never), 1 (occasionally), 2 (frequently), 3 (always)
  6. Patient prefers to complain of symptoms unrelated to cardiovascular system.  
0 (no), 1 (moderately), 2 (persistently)
  7. Patient complains about, criticizes, or chides physician for excessive and unnecessary restrictions in the CCU.  
0 (none), 1 (mild), 2 (moderate), 3 (extreme)
- 8-13. Did the patient admit fear at any time to one of the following:
- |                                      | <u>Yes</u> | <u>No</u> |
|--------------------------------------|------------|-----------|
| 8. Death                             | 0          | 1         |
| 9. Another MI or equivalent          | 0          | 1         |
| 10. Invalidism                       | 0          | 1         |
| 11. Monitor alarm going off          | 0          | 1         |
| 12. Static/irregularities on monitor | 0          | 1         |
| 13. At the peak of symptoms          | 0          | 1         |

14. Patient makes specific requests for reassurance (which demand answers, e.g., "I'm doing well, aren't I?").  
0 (frequently), 1 (occasionally), 2 (never)
15. Patient dreams while in hospital.  
0 (yes), 1 (no)
16. Patient repeats same story in stereotyped way.  
0 (no), 1 (yes)
17. Patient verbally denies fear of danger connected with present or past events, e.g., service, accidents, illnesses.  
0 (not at all), 1 (occasionally), 2 (frequently), 3 (always)
18. Patient describes and deals with past life stresses and tension by using denial.  
0 (none), 1 (mild), 2 (moderate), 3 (major)
19. Patient shrugs or makes dismissive gestures when speaking of distressing events.  
0 (not at all), 1 (occasionally), 2 (frequently), 3 (always)
20. Patient history or words reveal a present or past style of flirting with danger, risk-taking, etc.  
0 (never), 1 (frequently), 3 (always)
21. Patient displays at least on the surface a carefree, cheerful, jovial approach to life.  
0 (none), 1 (mild), 2 (moderate), 3 (extreme)
22. Patient's behavior in hospital is characterized by non-chalance, coolness, imperturbability.  
0 (never), 1 (frequently), 3 (always)
23. Patient resorts to cliches in describing attitudes toward life stress, debunks worry, says it gets nowhere, there is no point to it, etc.  
0 (never), 1 (once), 2 (two or more times)



24. Patient refers to self by nicknames connoting strength, indestructability, ruggedness, roughness, immunity to bad luck.  
0 (never), 1 (once), 2 (more than once)
25. Patient puts self into the hands of fate or providence (so as to exempt self from any concern for future) or considers self lucky (leads charmed life).  
0 (never), 1 (once), 2 (more than once)
26. Patient displaces fear for his own illness to family, older patients, weaker patients, women, children, etc. (e.g., "It's my wife I'm worried about, not my heart").  
0 (never), 1 (occasionally), 2 (frequently)
27. Patient projects illness or weakness to family, wife, children, others (e.g., "My wife was afraid, but I wasn't").  
0 (never), 1 (projects and worries for them), 2 (projects but does not worry)
28. Patient displaces his concern from his physical condition to a financial problem.  
0 (no), 1 (occasionally), 2 (frequently)
29. Patient, soon after being greeted, expresses concern for interviewer's health.  
0 (no), 1 (occasionally), 2 (frequently)
30. Ability to describe (physical features of) physicians and other people.  
0 (normal or good), 1 (stereotypic), 2 ("can't describe")
31. Patient avoids direct questions.  
0 (no), 1 (yes)

APPENDIX B  
PERMISSION LETTER

MASSACHUSETTS GENERAL HOSPITAL



HARVARD MEDICAL SCHOOL

THOMAS P. HACKETT, M.D.

*Eben S. Draper*  
*Professor of Psychiatry*



*Chief of Psychiatry*  
*Massachusetts General Hospital*  
*Boston, Massachusetts 02114*  
 617-726-2981

January 4, 1982

Cynthia Barinsky, R.N.  
 1845 Glendale Boulevard  
 Sioux City, IOWA 51105

Dear Ms. Barinsky:

I am sorry that you have had trouble reaching me. I have been out of town repeatedly and have only been able to open my mail for the month of December today.

In answer to your query about the denial scale, the questions are asked pretty much as they are stated in the denial scale. I enclose our paper on the development of the scale, just in case you do not have it. Your advisor is quite correct. The questions must be asked in exactly the same way and interrater reliability must be reasonably good. Because the questions are difficult to ask by different people with consistency and uniformity, we would always run an interrater reliability trial before a new investigator could be introduced into the project. You want to make sure that everybody is asking the same set of questions in exactly the same way and to do that different individuals must ask the same patient the same set of questions and see if their answers are close to identical. We were able to get good interrater reliability once the various raters had asked questions of the same patient.

Good luck with your effort and please let me know of the result.

Sincerely,

Thomas P. Hackett, M.D.

TPH:pmd

APPENDIX C  
INTERVIEW SCHEDULE

Questions to ask to fill-in  
Hackett-Cassem Denial Scale

- 1) Tell me how it happens you are in the hospital,  
After you first noticed your symptoms, how long did it  
take for you to decide you needed help?  
Who did you ask for help?  
How long was it until you contacted your doctor and got  
to the hospital?
- 3 & 4) Have your symptoms changed from the first time? Are  
they better or worse? How so? How do you feel you  
are doing now?
- 7) What do you think about the activity level in the CCU?  
Is it restrictive? Is it excessive? What did your dr  
say about it?
- 8) Did you fear at any time that you would die?
- 9) Did you fear at any time that you would have another  
heart attack?
- 10) Did you fear at any time that you would become an  
invalid?
- 11) Did you become afraid when your monitor showed irregular  
heart beats?
- 12) Did you become afraid when your monitor alarm rang?
- 13) Were you afraid when your symptoms were at their worst?
- 14) How many times have you asked someone for reassurance to  
see if you are doing okay?
- 15) Have you had any dreams while in the hospital?
- 17) How often did you experience fear of danger while in the  
service?  
How often did you experience fear of danger while being  
in an accident?  
How often did you experience fear of danger while being  
ill in the past?
- 18) How often have you used denial to deal with past life  
stresses or tensions? Mildly? Moderately? Major?
- 30) Describe your dr's physical features to me.
- 26 & 27) How has this hospitalization affected your family?  
How do you feel this heart attack will affect your  
future?

APPENDIX D  
PERMISSION LETTER



THE UNIVERSITY OF TEXAS MEDICAL BRANCH  
GALVESTON, TEXAS 77550

Department of Preventive Medicine and Community Health

October 7, 1982

C.M. Barinsky  
1845 Glendale Blvd.  
Sioux City, Iowa  
51105

Dear Ms. Barinsky,

This is in response to your recent inquiry about the measurement of Type A Behavior, and the use of the Jenkins Activity Survey (JAS.) Since 1979, the JAS has been distributed by the Psychological Corporation, 757 3rd. Ave., New York, New York, 10017. The Manual for the test contains a full description of the way in which it was standardized, norms for over 30 population groups, and guides for interpretation of the results. The Manual, a copy of the test questionnaire, a scoring profile form, and related materials can be purchased together as a specimen set for about \$4.50. If you request it specifically, a copy of the hand-scoring instructions will also be sent to you. The machine scoring service offered by the Psychological Corporation tends to be quite expensive unless you will be scoring a large batch of tests at one time. Discounts are available to students who are using the test in research which is not supported by grant funds.

If you would like more information regarding the specifics of obtaining copies of the test, suitability of the JAS for your study group or similar questions, you may call Ms. Amy Glass, the staff member at the Psychological Corporation who is currently handling the JAS. Her telephone number is 212-888-3183.

I wish you the best of success in your research work.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "C. David Jenkins".

C. David Jenkins, Ph.D.  
Professor of Preventive Medicine  
and Community Health

CDJ/cs

APPENDIX E  
JENKINS ACTIVITY SURVEY





27. When you are in the midst of doing a job and someone (not your boss) interrupts you, how do you usually feel inside?  
 A I feel O.K. because I work better after an occasional break.  
 B I feel only mildly annoyed.  
 C I really feel irritated because most such interruptions are unnecessary.
28. How often are there deadlines on your job?  
 A Daily or more often  
 B Weekly  
 C Monthly or less often  
 D Never
29. These deadlines usually carry  
 A minor pressure because of their routine nature.  
 B considerable pressure, since delay would upset my entire work group.  
 C Deadlines never occur on my job.
30. Do you ever set deadlines or quotas for yourself at work or at home?  
 A No  
 B Yes, but only occasionally  
 C Yes, once a week or more
31. When you have to work against a deadline, what is the quality of your work?  
 A Better  
 B Worse  
 C The same (Pressure makes no difference.)
32. At work, do you ever keep two jobs moving forward at the same time by shifting back and forth rapidly from one to the other?  
 A No, never  
 B Yes, but only in emergencies  
 C Yes, regularly
33. Are you content to remain at your present job level for the next five years?  
 A Yes  
 B No, I want to advance.  
 C Definitely no; I strive to advance and would be dissatisfied if not promoted in that length of time.
34. If you had your choice, which would you rather get?  
 A A small increase in pay without a promotion to a higher level job  
 B A promotion to a higher level job without an increase in pay
35. In the past three years, have you ever taken less than your allotted number of vacation days?  
 A Yes  
 B No  
 C My type of job does not provide regular vacations.
36. In the last three years, how has your personal yearly income changed?  
 A It has remained the same or gone down.  
 B It has gone up slightly (as the result of cost-of-living increases or automatic raises based on years of service).  
 C It has gone up considerably.
37. How often do you bring your work home with you at night, or study materials related to your job?  
 A Rarely or never  
 B Once a week or less  
 C More than once a week
38. How often do you go to your place of work when you are not expected to be there (such as nights or weekends)?  
 A It is not possible on my job.  
 B Rarely or never  
 C Occasionally (less than once a week)  
 D Once a week or more
39. When you find yourself getting tired on the job, what do you usually do?  
 A Slow down for a while until my strength comes back  
 B Keep pushing myself at the same pace in spite of the tiredness
40. When you are in a group, how often do the other people look to you for leadership?  
 A Rarely  
 B About as often as they look to others  
 C More often than they look to others
41. How often do you make yourself written lists to help you remember what needs to be done?  
 A Never  
 B Occasionally  
 C Frequently
- For questions 42-46, compare yourself with the average worker in your present occupation, and mark the most accurate description.
42. In amount of effort put forth, I give  
 A much more effort.  
 B a little more effort.  
 C a little less effort.  
 D much less effort.

APPENDIX F  
RAW DATA

## Raw Data

SUBJECT	AGE	EDUCATION	OCCUPATION	HISTORY OF HEART DISEASE	DENIAL SCORE	BEHAVIOR PATTERN SCORE
A	73	High School Graduate	Retired	Angina	17	6.3
B	64	Trade School/ Business College	Proprietor, Manager or Official	High Blood Pressure	27	21.1
C	48	Some College	Skilled Worker	High Blood Pressure	34	-11.8
D	67	Five to Eight Years	Retired	Two Myocardial Infarctions	21	-2.8
E	67	Some High School	Retired	One Myocardial Infarction	14	-16.5
F	58	High School Graduate	Proprietor, Manager or Official	Negative	20	-10.1
G	69	Five to Eight Years	Unskilled Worker	High Blood Pressure	31	-12.3
H	73	Five to Eight Years	Retired	Negative	23	-6.2
I	72	High School Graduate	Retired	One Myocardial Infarction	17	9.2
J	57	Five to Eight Years	Retired	One Myocardial Infarction	14	8.7
K	74	High School Graduate	Retired	Two Myocardial Infarctions	21	6.8
L	51	High School Graduate	Semi-Skilled Worker	Negative	22	-8.6
M	37	Post-Graduate Work	Semi-Skilled Worker	High Blood Pressure	36	-7.1
N	63	Some High School	Semi-Skilled Worker	Negative	33	11.5
O	42	Post-Graduate Work	Proprietor, Manager or Official	Negative	20	16.8
P	75	Five to Eight Years	Proprietor, Manager or Official	High Blood Pressure	23	5.6
Q	57	Trade School/ Business College	Clerk or Kindred Worker	One Myocardial Infarction	28	13.9

Raw Data  
(Continued)

SUB- JECT	AGE	EDUCATION	OCCUPATION	HISTORY OF HEART DISEASE	DENIAL SCORE	BEHAVIOR PATTERN SCORE
R	47	Some College	Unskilled Worker	Negative	22	-3.2
S	51	Some High School	Skilled Worker	High Blood Pressure	14	13.8
T	69	High School Graduate	Retired	One Myocardial Infarction	18	-12.8
U	75	Some High School	Proprietor, Manager or Official	Negative	33	-3.6

APPENDIX G  
PATIENT CONSENT FORM

CONSENT FOR PARTICIPATION IN RESEARCH STUDY

You are invited to participate in a nursing research study concerning coping with heart disease. You are under no obligation to participate and you are free to withdraw consent at any point in this nursing study. Participation or refusal to participate should have no bearing on your treatment while in the hospital.

The purpose of this nursing study is to look into the methods used by patients to cope with heart disease.

There is no source of funding for this study since it is a requirement of fulfillment of credit towards a Master of Science in Nursing degree for the nurse researcher at South Dakota State University, Brookings, South Dakota.

You have been invited to participate because you have been hospitalized for heart disease and are now in the post-coronary care unit.

Your participation in this nursing study will involve two things. The first is a fifty point questionnaire that you can read and select your best answer. The second is a twenty minute interview with the nurse researcher. (This will be taped so the nurse won't forget any of your answers, and then the tape will be destroyed).

This study should help other post-coronary care unit patients by helping nurses to better understand and support coping methods used by patients.

Participation in this nursing research should involve only the inconvenience of time for you. Your hospital routine should not be affected.

The following steps will be taken to assure you that what you write or say will be CONFIDENTIAL: no names will be used, only combinations of letters; the questionnaires and tapes will be kept only at the home of the nurse researcher and no one will be allowed to see them; information obtained will be written as group results, not individual, and the questionnaire forms and the tapes will be destroyed as soon as data for the research is obtained from them.

The information obtained during the course of this study will be included in the bound thesis of the nurse researcher. It may also, at a later date, be published in one of the major nursing journals as a contribution to nursing practice.

Again, you are free to decide whether to be in this study. You are free to withdraw from the study at any time. Participation, or non-participation, will not alter the course of treatment you receive. Your decision will not prejudice any future interactions with

Before you sign this form, please ask any questions on any aspect of this study which is unclear to you. You may take as much time as necessary to think this over.



Authorization: I, \_\_\_\_\_,  
Your Name

have read the above and decide to participate  
in the research project described previously.  
My signature indicates that I have received a  
copy of this consent form.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Nearest Living  
Relative or Spouse

\_\_\_\_\_  
Signature of Nurse Researcher

\_\_\_\_\_  
Date

APPENDIX H  
PERMISSION LETTER

Dr.

This is a personal invitation to you, to allow your post-myocardial infarction patients to participate in a nursing research study at The study, titled, "The Relationship Between Denial and Behavior Pattern in the Patient Experiencing a Myocardial Infarction" will be conducted during December, January, and February, 1982-1983.

Your patients are under no obligation to participate in this nursing research study and will only be asked to participate with your approval. Later, if you feel that a certain patient should not participate in this study, please inform the post coronary care unit staff nurses and they will not give that patient the consent form to participate in this research.

This study is being conducted to meet partial requirements for a Master of Science Degree in Nursing at South Dakota State University for Cynthia Barinsky, RN, BSN.

Patients who have consented to be in the study, will be contacted on day ten of admit for a myocardial infarction. Only men, age 25 to 65 with an uncomplicated course of myocardial infarction will be asked to participate.

Participation in this study will involve two things for your patient. The first is a 15 to 20 minute interview with the nurse researcher to ascertain the use of denial as based on the Hackett-Cassem Denial Scale. The second is filling out the standardized Jenkins Activity Survey for Type A behavior pattern.

The face sheet of the chart and the nurse's admit history will also be reviewed to obtain data concerning age, occupation, religion, educational level, time of onset of symptoms, and hospitalization time.

Risk to your patients should be minimal and only involve time. All data will be classified as group response rather than individual and only the nurse researcher will have access to all data so that the subjects of this research can be assured of confidentiality and anonymity.

This nursing research has been approved by the Vice-President of Nursing Services, the Scientific Activities Committee, the Critical Care Committee, and the Medical Executive Committee of

However, final approval for this research rests with you as the physician of post-coronary care patients.

You will be contacted by the researcher per phone within two to three days of the receipt of this letter. Any questions you may have can be answered at that time.

If you grant your approval, your patients who experience a myocardial infarction will be asked to participate in this study while they are in the post-coronary care unit at

Sincerely yours,

Cynthia Barinsky, RN, BSN  
Nurse Researcher  
255-4552