

THE ILLNESS EXPERIENCE OF PATIENTS FOLLOWING A MYOCARDIAL
INFARCTION: IMPLICATIONS FOR PATIENT EDUCATION

By

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Abstract

THE ILLNESS EXPERIENCE OF PATIENTS FOLLOWING A MYOCARDIAL INFARCTION: IMPLICATIONS FOR PATIENT EDUCATION

This study used the research method of phenomenology to elicit the patient's perspective of the illness experience following a myocardial infarction (MI). The purpose of studying this experience was to gain an understanding of what it meant to men and women to have a MI, what the learning needs were following a MI, and how these learning needs were met. It was proposed that patients would view the illness experience differently from health professionals, thus the patients would identify different learning needs. Anderson's (1985) adaptation of Kleinman's health care system framework was used to conceptualize this problem.

Three males and two females, ranging in age from 42 to 77 years, participated in the study. Data were collected through 11 in-depth interviews. From analysis of this data significant statements were extracted to provide a description of the phenomenon under study.

The findings of this study suggest that health professionals and patients do view the MI experience from different perspectives. The emphasis of the patients on understanding the MI experience from the reality of their world is reflected in their attempts to rationalize the occurrence of the MI and their desires to know more about

their own MI, prognosis, and treatment. In order to plan patient education that will assist post-MI patients in their recovery health professionals must assess patients individually for their: (1) beliefs regarding risk factors and causes of MI; (2) desire for information; (3) preference for method of instruction; and, (4) preference for timing of education.

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Chapter 1

Introduction

Background to the Problem

"Chronic illness is a twentieth-century phenomenon" (Dimond, 1983, p.636). Heart disease is one of the most commonly occurring chronic illnesses. In Canada, one of every four deaths in 1982 was caused by heart disease and in 1982-1983 over 250,000 patients were discharged from hospital after being treated for heart disease (Minister of Supply & Services, 1987). Included in the growing number of people being treated for heart disease are the survivors of myocardial infarctions (MIs).

The occurrence of a MI often marks the sudden recognition of the presence of coronary artery disease. Coronary artery disease, like other chronic illnesses, requires individuals to make lifestyle changes in order to adapt. According to Dimond (1983) there are four major factors to consider when looking at social adaptation of the chronically ill: "(1) [the] nature of the illness; (2) [the] definitions and the meaning of the illness; (3) [the] responses to chronic illness; and (4) the environment and illness" (p.637).

The meaning of an illness to a patient is one factor that is often overlooked by health professionals. Dimond (1983)

contends that "most of the factors that determine the meaning of illness [for the ill person] are related in some way to the sociocultural world of the ill person" (p.641). Nurses, like other health professionals, however, frequently define illness in terms of the ill person's physiological deviations from normal, rather than from the ill person's sociocultural world.

This lack of attention to the perspective of the ill person is evident in the type of patient education programs that nurses, dietitians, physicians and other health professionals have developed in an attempt to promote lifestyle changes in cardiac patients. Most of the current 'Cardiac Patient Education Programs' are structured around the pathophysiology and the prevention of coronary artery disease. The information given to patients usually includes: (1) anatomy and physiology of the heart; (2) risk factors for coronary artery disease; (3) signs and symptoms of heart attack; (4) activity restrictions and rehabilitation; (5) cardiac diet instruction; and (6) use of medications (Wenger, 1979).

A multitude of studies have been done to evaluate cardiac patient education programs with a majority of these studies having found that cardiac education programs do contribute to an increase in patients' knowledge (Garding, Kerr, & Bay, 1988; Gregor, 1981; Hentinen, 1986; Linde & Janz, 1979; Mills, Barnes, Rodell, & Terry, 1985; Owens, McCann, & Hutelmyer,

1978; Pozen, Stechmiller, Harris, Smith, Fried, & Voigt, 1977; Raleigh & Odtokan, 1987; Steele & Ruzicki, 1987). A few studies have shown patients' knowledge gain to be limited (Scalzi, Burke, & Greenland, 1980; Sivarajan, Newton, Almes, Kempf, Mansfield, & Bruce, 1983; White, Lemon, & Albanese, 1980). The limited gain in two of these studies was partially attributed to the stress of acute illness affecting the patients' ability to learn at that time (Scalzi et al., 1980; White et al., 1980). The focus of these studies was to evaluate knowledge gain, however, and not to evaluate the usefulness of that knowledge in helping patients with cardiac disease define and live with their illness.

Although research results have demonstrated patients' readiness for new information and their ability to learn content, there is no evidence that this learning influences patients' health behavior (Runions, 1988). Sivarajan et al. (1983) found that, when overall behavioral changes were examined, their risk-factor teaching and counseling program demonstrated only limited effectiveness. As well, there is evidence that patients and health professionals view the cardiac patient's learning needs (Karlick & Yarcheski, 1987; Pfisterer, 1975) and the causal attributes (Fielding, 1987; Rudy, 1980) of cardiac disease differently. Given these two factors: (1) the lack of evidence that learning does influence patients' health behaviors; and the fact that (2) the

patient's perspective may differ from that of the professional, leads one to ask, as did Runions (1988): "Are nurses responding to learning needs and desires [of patients] or projecting their own learning interests on the patients?" (p.261).

The response of nurses to patients' learning needs is significant because nursing plays a major role in cardiac rehabilitation. One of the focuses of cardiac nursing is the analysis of "the subjective experience of cardiac illness: its meaning, impact, and effect on basic needs; the responses of individuals to its impact; individual variables (maturational, situational, sociocultural) shaping the perceptions and definitions of illness and the changes, losses, or gains that result" (Jillings, 1988, p.46). It becomes imperative then that nurses undertake research that will enable them to better understand cardiac illnesses, such as MI, from the perspective of their patients.

The impetus for this study arose from the concern that present cardiac patient education programs did not address the experience of having a MI from the patient's perspective. Anderson's (1985) adaptation of Kleinman's health care system framework was used to conceptualize the problem in this study because in it Kleinman recognizes that patients and nurses may view illness from different perspectives.

Conceptualization of the Problem

Kleinman (1978) views medical systems as both social and cultural systems. In an attempt to understand health, illness, and healing in society as a cultural system he developed the Health Care System Framework. In this framework the health care system consists of three social arenas: popular, professional, and folk. The popular arena views sickness and care in the context of the family, the social network, and the community. The non-professional healing specialists comprise the folk arena, while the professional arena includes professional scientific medicine and the professionalized indigenous healing traditions.

Each arena of the health care system has its own explanatory model. Explanatory models "contain explanations of any or all of the five issues: etiology; onset of symptoms; pathophysiology; course of sickness (severity and type of sick role); and treatment" (Kleinman, 1978, pp.87-88). Kleinman propounds that health care relationships, such as the patient-practitioner relationship, can be studied and compared as transactions between different explanatory models.

In examining the experience of sickness, Kleinman (1978) denotes a difference between the terms 'disease' and 'illness'. Disease is viewed as the malfunctioning or maladaptation of biological and/or psychological processes, while illness is viewed as the actual experience of the

disease. Because of this distinction the explanatory models of professional practitioners are frequently linked with disease and its theories of causation, much like the biomedical model. The popular arena's explanatory models are more commonly linked with the concept of illness "where sickness is most frequently articulated in a highly personal, non-technical, concrete idiom concerned with the life problems that result from sickness" (p.88).

Anderson (1985) adapts Kleinman's health care system framework and develops a theoretical framework for use in nursing practice and research.

Within this framework the nursing profession is viewed as a sociocultural system that possesses its own knowledge, beliefs, and values which may be discrepant from those of the client. Interactions between the nurse and client are transactions between explanatory models which differ in cognitive content, expectations and goals. (Anderson, 1985, p.238)

Her framework can be used by nurses for investigation of the sociocultural context in which the patient's health and illness experiences are constructed.

Nurse-patient interactions, such as those that occur with patient education, are relevant topics to be investigated using Anderson's framework. The nurse and patient possess differing explanatory models about the meaning of the illness

and its treatment. These differing explanatory models will affect what the nurse identifies as being important learning needs for the patient, and what learning needs the patient identifies as being important. Only through the study of illness within this sociocultural perspective can nurses understand what illness means to a patient and effectively identify the learning needs of the patient.

Problem Statement and Purpose

In adjusting to the chronic illness of heart disease MI patients are required to make lifestyle changes. Nurses, as health care professionals, are often involved in cardiac patient education programs that are designed to address patient learning needs and to promote these lifestyle changes. The nurse, as a professional, may define the illness in a different way from the patient, thus identifying learning needs that are different from those identified by patients. In order to be effective, however, patient education must address the learning needs of the patient.

The purpose of this study was to elicit patients' perceptions of their illness experience following a MI:

- (1) To determine what it meant to patients to have had a MI.
- (2) To determine what patients identified as learning needs following a MI.

- (3) To determine how patients met these learning needs.

Definition of Terms

For the purpose of this study the following terms were defined as:

(1) Myocardial infarction- "formation of an infarct in the heart muscle, due to interruption of the blood supply to the area" (Miller & Keane, 1972, p.618). This was a medical diagnosis determined by the patient's physician.

(2) Learning need(s)- the concern(s) identified and expressed by the patient, for which the patient required information in order to manage on a day-to-day basis following a MI.

(3) Cardiac education- the formal or informal instruction given to patients and their families to help them understand the patient's illness and manage illness problems that arose in day-to-day living.

Assumptions

In this study the following assumptions were made: (1) a patient, having experienced a MI, would be able to speak to that experience; (2) a patient, having experienced a MI for the first time, would have learning needs; and (3) the researcher would bracket all preconceived ideas regarding the learning needs of patients who had had a MI.

Limitations

The following were limitations of this study: (1) participation in this study was restricted to patients who lived within Vancouver proper in order that they would be accessible to the researcher; (2) for communication purposes participation was also restricted to patients who were fluent in English; and (3) the number of subjects was limited by the time and resources of the student researcher.

Summary

This chapter has introduced the problem and purposes addressed in this study. It is evident from the literature reviewed on cardiac patient education that knowledge gain is only one aspect of patient education. The differing perspectives of health professionals and patients regarding the illness experience and its meaning may also influence patient education and the incorporation of the knowledge gained into day-to-day life. Anderson's (1985) adaptation of Kleinman's health care system framework supports the exploration of these differing perspectives to further nursing's understanding of the patient's subjective health and illness experience.

The remainder of this thesis is organized in the following manner. In Chapter Two a more extensive review of the literature on specific aspects of cardiac patient

education is discussed. Chapter Three includes a description of the methodology of phenomenology, the theoretical sampling technique, and the process of data collection chosen to implement this study. The findings are described in Chapter Four, with a discussion of these findings presented in Chapter Five. Chapter Five concludes with the study summary and presentation of the implications for nursing practice, education, and research.

Chapter 2

Review of the Literature

Introduction

Although there have been numerous studies done evaluating the effectiveness of cardiac education programs in increasing patients' knowledge about cardiac disease there is limited research available on the meaning of the illness to the patient and how this affects the cardiac patient's learning needs. In this chapter supportive literature on the psychosocial outcomes of cardiac disease; cardiac patients' perceptions of their learning needs and causal explanations for MI; and the differing perspectives of patients, nurses, and physicians on the learning needs of post-MI patients will be reviewed.

Outcomes Following a MI

Early studies of MI patients investigated the low return of post-MI patients to the work force (Nagle, Gangola, & Picton-Robinson, 1971; Wishnie, Hackett, & Cassem, 1971). The low rate of return to work was attributed to the lack of instruction patients received (Nagle et al., 1971) and the emotional problems they experienced, post-MI, which affected their rehabilitation (Wishnie et al., 1971).

Nagle et al. (1971) surveyed 115 male patients who had suffered a MI and found that only 49.5% had returned to work. They state that cardiac damage and non-cardiac psychological and social factors, such as anxiety and depression, were almost equally common as causes of invalidism post-MI. Wishnie et al. (1971) interviewed 24 patients convalescing from MIs and found that most of the patients suffered from anxiety, depression, physical weakness, insomnia, and boredom. Both Nagle et al. and Wishnie et al. contend that the psychosocial problems experienced by MI patients affect their recovery and these problems need to be addressed through education.

Salonen and Puska (1980) reported the findings of a community based program for rehabilitation and secondary prevention for patients with acute MI that was initiated in North Karelia in 1972 as part of a comprehensive program to control cardiovascular diseases in that region of Finland. The program included health education, vocational counseling, and psychosocial counseling as well as medical treatment. The patients entered the program while in hospital and continued it on an outpatient basis for one year. Data were collected during the five year period from 1973 to 1977. Out of the 1308 patients that survived the first six months after their acute MI, 515 visited the outpatient MI clinic and 575 took part in the rehabilitation groups. One of the main objectives

of the program was to improve the rate of return to work of patients after an acute MI. Although the results could not be attributed to the rehabilitation program alone there was a non-significant reduction of 31% in the rate of new pensions among the male patients and a significant reduction of 77% among the females.

Mayou, Williamson, and Foster (1976, 1978) studied the attitudes and outcomes of patients following MIs. In their 1976 study they interviewed 40 patients and their relatives. They found that patients and their families had a lack of understanding of medical advice and information which often was not realized until they tried to cope at home. One reason cited for the low understanding the patients and families had of the illness was that doctors may be unaware of the practical needs of the patients. In their 1978 study, in which they interviewed 100 MI patients, they found a wide variation in disability among the patients which was unrelated to their cardiac state. The patient's lack of understanding of medical advice and the cautious expectations of the patients and their families were felt to contribute to this disability.

Stern, Pascale, and Ackerman (1977) followed 68 patients for one year to study their psychosocial adjustments post-MI. Specific areas explored were work, family, sexual and social activities. The patients were assessed using a variety of

scales for depression and anxiety, before leaving the hospital and again at six weeks, three months, six months, and one year. Subjects were found to fit into three categories; depressives, deniers, and general non-depressives. Nine patients were identified as depressed and 78% of those continued to be depressed at one year. The depressives as a group were considered poor responders. They often failed to return to work and sexual functioning, and they also had a higher readmission rate to hospital. In this study deniers continued to function as good responders, as did the general non-depressed population. Rehabilitation outcomes were specifically poor for the 13 female subjects who had both high mortality and readmission rates. As well, 80% of the women showed signs of depression and anxiety. From these findings the researchers concluded that the population at risk for poor rehabilitation outcomes could be identified early in post-hospital recovery.

* Ott et al. (1983) measured the illness-related behavioral dysfunction of 258 MI patients using a questionnaire. The questionnaire measured dysfunction on both physical and psychological dimensions. The subjects were randomly assigned into three groups. Group A, the control group, received conventional medical and nursing treatment, group B1 received an additional three month exercise program, and group B2 received the exercise program plus a teaching-counseling

program about risk factors and emotional adjustments. The follow up evaluations were done three and six months after discharge from hospital. The researchers found no differences in the sickness-related behavioral dysfunction between group A and B1 but there were differences found between group B2 and both groups A and B1. The difference was statistically significant in the psychosocial dimension which included categories such as social interaction, alertness behavior, communication, and emotional behavior. The differences in this study were attributed to the teaching-counseling program and not the exercise program however, because there had been no differences between group A and B1 identified.

Burgess and Hartman (1986) "hypothesized that critical beliefs (e.g., thoughts and feelings) surround the heart attack itself and determine its meaning to the person's immediate and future life" (p.569). They randomly assigned 180 patients to either an experimental or control group. The experimental group received nursing interventions that identified the individual's beliefs and expectations that would limit or promote recovery. The specially trained nurses helped correct patient's beliefs that unjustifiably restricted patient's activities. As well, subjects were surveyed using a variety of instruments to obtain patient characteristics and differences between the two groups. In their findings 90% of the patients reported job stress, with 33% blaming their jobs

for their MI. The subjects viewed the heart attack as serious and expressed feelings of susceptibility to heart attack and relapse. The patients in the experimental group at the three month follow up reported significantly less psychological distress and dependency on family.

Boogaard (1984) compared return to physical activity, psychosocial aspects, and family interrelationships of 10 male and 10 female post-MI patients. Data were collected through semi-structured interviews and revealed several potential problem areas for women recuperating from MI: (1) women tended to resume household activities immediately after discharge from hospital; (2) women delayed returning to work and sexual activity; (3) women did not seem to enter structured cardiac rehabilitation programs; and, (4) women tended to express feelings of guilt as a result of not being able to resume normal household activities. Boogaard stressed the importance of structuring cardiac rehabilitation to the individual needs of the patient, whether male or female, and that more work is required in the area of rehabilitation of women post-MI.

McMahon, Miller, Wikoff, Garrett, and Ringel (1986) studied the adherence of 112 post-MI patients to prescribed medical regimens in four life situations; home, work, sports/recreation, and social activity. The subjects were surveyed while in hospital as to their intent to follow the prescribed medical regimen. A follow up survey completed six to nine

months post infarction, by both subjects and family members, measured the subjects actual adherence to the prescribed regimen. Their findings showed that although MI patients had strong intentions to follow the prescribed regimen while in hospital there was a statistically significant decline in adherence behaviors measured six to nine months later. The family reports of adherence were not significantly different from the subjects.

These researchers also hypothesized that the expectations of significant others to the prescribed medical regimen would influence subject's adherence. Therefore, data were collected on the subjects' perceptions of the expectations held by significant others. Adherence in specific life situations was found to be related to the subject's beliefs about what others thought they should be doing six to nine months after discharge from hospital. These findings suggest that the actual adherence to regimens once home may be more difficult than anticipated and that the beliefs held by patients as to the expectations of others should be assessed.

The effect of a MI on a patient's family has also been investigated. Hilgenberg and Crowley (1987) interviewed 25 patients and their families at two to three months, and again at five to six months after the patient's discharge from hospital. This study focused on changes in family and social activities; communication and decision-making; diet and

exercise; protectiveness; as well as, financial and emotional changes. Changes were noted by both patients and family members in all areas investigated. The researchers reported "a general decline in social activities, together with changes in role expectations and disruption of familiar routines" (p.32). These changes were also associated with distress, since many of them had not been anticipated by the patient or the family.

The effect of uncertainty on coping and distress following a MI has also been reported in the literature. Christman, McConnell, Pfeiffer, Webster, Schmitt, and Ries (1988) used a longitudinal exploratory design to study 60 MI patients. They examined the influence of uncertainty in illness and use of coping methods on emotional distress and recovery following MI. The patients were evaluated using a variety of instruments at three different times after discharge from hospital. The analysis of the data showed "high levels of uncertainty were directly related to high levels of emotional distress during the transition from hospital to home and return to self-care following myocardial infarction" (p.80).

Webster and Christman (1988) used a descriptive survey to examine the relationships between perceived uncertainty, use of affective or emotion-oriented and problem-oriented coping methods, and emotional distress in 20 patients recovering from

a MI. Although uncertainty was not significantly related to either type of coping method, increased levels of uncertainty were significantly related to both anxiety and depression.

"Perception of one's illness as vague or unclear, exposure to varied cues about one's illness and its treatment, and the perception of insufficient information about one's diagnosis were associated with greater emotional distress" (p.389).

These researchers suggest that providing information about a patient's illness and its treatment might reduce uncertainty and thereby decrease the associated emotional distress.

As this literature demonstrates researchers have identified many areas of concern in patients' psychosocial recovery post-MI. The focus of present cardiac rehabilitation programs on the physical aspect of cardiac disease may not be meeting the needs of these patients.

Learning and Information Needs

Early work done on patient learning needs identified that patients had a desire for more information about their illness and its future effects (Dodge, 1969; Linehan, 1966). After surveying 116 patients using a verbally administered open-ended interview technique Dodge (1969) concluded "patients were particularly concerned with receiving the kinds of information which would enable them to plan realistically for their immediate and long-range lives" (p.509). Differences

between patients' cognitive needs were identified when the variables of sex, age, education, nature of involvement, and term of involvement were examined. Nature of involvement differentiated the patients as either medical or surgical and term of involvement denoted a time frame of short term, less than a month, or long term, a month or more.

Dodge (1969) found surgical patients wanted to know about their surgery and were more concerned about total time involvement, whereas, medical patients emphasized knowledge regarding their medications and self-care. In examining term of involvement it was again noted that long term patients had more questions regarding their role in self-care and the effects of medications, while short term patients emphasized the results of diagnostic and surgical care. Male patients wanted to know how their condition would effect their ability to work and earn a living, while female patients seemed more concerned with their role as the protector of the family health. Age effected the cognitive needs according to where the patient fit in the stages of adulthood, ie., early, middle, or late. As well, the level of education of the patient was viewed in this study to effect the type of information sought by the patient, with poorly educated patients wanting non-technical information, to highly educated patients wanting information that would assist them in decision-making. These early findings suggest that the

individual characteristics of both patient and illness effect the cognitive needs of the patient.

Moynihan (1984) examined the specific learning needs of post-MI patients in a small, quantitative study. Seventeen patients responded to a mailed questionnaire. The questionnaire was designed to establish what information subjects' felt was important in a range of topics considered important to cardiac rehabilitation, and when subjects' felt this information would be most beneficial to them. For the purposes of the study Moynihan divided the cardiac rehabilitation process into three phases: (1) time in CCU; (2) time from transfer from CCU until discharge from hospital; and, (3) time from discharge until patient returned to previous lifestyle.

Subjects rated all education topics as important and wished that information could be reinforced in all three phases. However, differences were noted in what types of information patients perceived as important in the different phases. In phase one patients were concerned about the CCU environment and explanations of procedures. In phase two more specific information was desired about diet, medications, risk factors, etc., while in phase three topics of importance were related to activities, emotional response, and follow-up. Although the study was viewed as delineating patients' self-perceived educational needs the education topics were those

considered by the researcher to be current and recommended components in a cardiac rehabilitation program.

Nicklin (1986) studied postdischarge concerns of cardiac patients as presented via a telephone callback system. The patients had had either a MI or cardiac surgery, and all had been exposed to patient education. This education included: "basic anatomy and physiology of the heart, atherosclerosis, angina, MI, risk factors of heart disease, activity guidelines, and diet information" (p.268). The patients were encouraged to call the on-duty nursing coordinator if problems arose post discharge. In a period of less than five months 217 telephone calls were received. Forty percent of the concerns arose within the patients' first week at home. Nicklin concluded that patients and families appeared to need more, or different, information during the rehabilitation phase of a MI or cardiac surgery.

Liddy and Crowley (1987) studied 11 post-MI patients and their spouses to see if MI patients had the information they needed for the recovery phase at home. Their study focused on specific categories of information such as physiology, permissible activities, diet, medications, smoking, psychosocial factors, and unanswered questions. Data were collected by interviews from both the patients and their spouses two to three months following the patient's MI. Liddy and Crowley found that both groups of respondents were not

well informed in any of the designated categories. The respondents felt they would have benefited from more information and specific guidelines on how to integrate new demands into their daily routines. This study was not designed to determine the reasons for the respondents inadequate knowledge and only examined the patients' information needs in specific categories.

Phenomenological studies done with cardiac patients have shown that patients have information needs that are often not met (Dubyts, 1988; Dunn, 1985; Kent, 1985; Yamada, 1984). These studies focused on patients' experiences with MI, angina, and coronary artery bypass graft surgery. Although their focus was not on patients learning needs areas of concern were discussed in their findings, such as the problems perceived by the patients were often not the same as those depicted in patient education manuals (Yamada, 1984). To solve this problem one researcher reports patients often actively sought information from books and the media to help them cope with cardiac illness and its management (Dubyts, 1988).

Patient characteristics, such as age, sex, and education, and illness factors, such as type and duration, have been shown to influence patients' learning needs. Patients and spouses have acknowledged the desire for more information, specifically in the recovery phase at home, when cardiac

patients learning needs have been studied.

Causal Explanations

In 1980 Rudy studied patients' and spouses' causal explanations of a MI. Her sample consisted of 50 first-time MI patients and their 50 spouses or significant others. During the acute phase, and again during the convalescent phase of the illness, data were collected by interviews using a structured questionnaire. At both phases of the study, both patients and spouses reported that tension was the most frequent cause of the patient's MI. Rudy noted that in general patients who had an identifiable medical risk factor did not name, nor did their spouses name, that risk factor as an explanation for the patient's heart attack. It is therefore interesting to note that a high percentage of patients changed their smoking, diet, and exercise behavior even when they did not consider these factors as having caused their heart attack.

Fielding (1987) studied 102 MI patients and argued that poor outcomes following MIs occur because patients and health professionals view causal attributes of MI differently. In his study, the most frequently cited causative factors listed by patients were overwork, smoking, and worry, while physicians emphasized smoking, hypertension, and serum cholesterol. His study led him to conclude that the

biological focus of cardiac rehabilitation programs fails to address the specific areas of concern held by MI patients.

Murray (1989) interviewed 25 MI patients, the day of or the day before discharge from hospital, to assess the patients' perceptions of the causes of their MI and their knowledge regarding risk factors of coronary heart disease. Patients generally reported that they felt well prepared to go home but as one patient reported, not having been home how would they know if they had had enough information. In this study stress, worry, and overwork comprised 68% of the citations as to the cause of MI, while standard risk factors such as smoking, hypertension, cholesterol, etc. were cited only 60%. Thirty-six percent of the patients cited standard risk factors as the most important cause of their MI, while 48% cited stress, worry, and overwork. As reported by Murray these findings are broadly in line with the findings of Fielding (1987).

These studies have shown that patients emphasize the psychosocial aspects of their lifestyle as causal explanations for their MI. Poor outcomes, in risk factor modification post-MI, may be the result if patients and health professionals hold conflicting views as to the cause of a patient's MI.

Differing Perspectives of Patients, Nurses, and Physicians

In a 1975 study Pfisterer examined how patients, doctors, and nurses perceived the learning needs of a small sample of cardiac patients being discharged from hospital. The patients' cardiac diagnoses varied from MI to valve stenosis. Using open-ended questionnaires information was obtained from the patients, the doctors, and the nurses when the patient was discharged. As well, each patient completed a second questionnaire on the fifth day at home. Pfisterer found that with one exception agreement among doctors, nurses, and patients about the patient's learning needs never exceeded 50% and that four out of the seven patients had unmet needs for information. In the presentation of the findings Pfisterer is not explicit as to what learning needs the patients, doctors, or nurses identified or what needs the patients' felt went unmet.

Casey, O'Connell, and Price (1984) studied coronary care nurses', MI patients', and cardiologists' perceptions of what patients need to know post-MI. Twelve physicians, 33 nurses, and 30 patients completed a questionnaire in which they were asked to rate the importance of 21 topics that might be taught in a post-MI education program. All three groups rated: "knowing the signs and symptoms of a heart attack"; 'knowing how to modify or change personal risk factors'; 'knowing the names, dosages, and side effects of medications'; and,

'knowing personal risk factors'" (p.77) as important.

Although the three groups were basically congruent with the topics rated as being most important there were statistically significant differences among the groups in 10 of the 21 items. Patients were asked to complete the questionnaire while in hospital, therefore, how beneficial topics were to their rehabilitation at home could not be assessed.

Karlik and Yarcheski (1987) did a comparative study of nurses' views of cardiac patients' learning needs and cardiac patients' views of their own learning needs. They also studied nurse educators to identify a possible source of practicing nurses' beliefs regarding the learning needs of these patients. The sample consisted of 24 male and six female patients and 30 nurses: 15 post-coronary care (CCU) nurses and 15 nurse educators. The data were collected through questionnaires. They found nurses ranked the learning needs differently than the patients did. Out of eight information categories the CCU nurses ranked medication knowledge as the number one patient learning need, while the patients ranked the category of risk factor knowledge as number one. It is interesting to note that nurse educators also ranked the category of medication knowledge as the most important patient learning need.

The members of the health care team perceive themselves as a support to the patient who has to make lifestyle changes

or adjustments post-MI. This may not be the perception of the patient, however. A content analysis of life adjustments post infarction done by Miller, McMahon, Garrett, and Ringel (1989) examined the issue of who MI patients viewed as being support persons during recovery. Fifty nurse/patient interactions were analyzed to identify support persons or groups, and to judge the quality of the communication as being positive, negative, or ambiguous. It was found that patients viewed themselves as their greatest positive support, with spouses, children, and other relatives viewed as providing both tangible and emotional support of a positive nature. Although the health team ranked second as support persons their support was often perceived as negative or ambiguous with almost a total absence of emotional support. This led these researchers to conclude that "if the health team, as the major provider of information, is going to facilitate patient and family adjustment post infarction, reasons need to be identified for negative quality of support, unclear messages, and absence of emotional support" (p.566).

Differing perceptions, as to the learning needs of patients post-MI and the role of health professionals in the rehabilitation process, have been identified. In order to make patient education more beneficial for post-MI patients these differing perceptions must be clarified.

Summary

A review of the literature suggests that patient outcomes following a cardiac event such as a MI are often effected by the patients' perception of the cause of the illness, the patients' recognition of their learning needs, and the presence of psychosocial problems. Learning needs are often viewed differently by nurses and patients, which may cause these needs to go unmet. As well, patients may not recognize their learning needs until they try to manage their illness at home. Although these areas of concern have been identified there has been limited research on the patients' perceptions of the illness experience following a MI. This study was undertaken to explore this issue and a description of the methodology used is presented in the next chapter.

Chapter 3

Methodology

Introduction

The qualitative methodology of phenomenology was selected to guide this study. In this chapter a description of phenomenology and the correlation between this methodology and the methods of participant selection, data collection, and data analysis are discussed. A description of the selection process and the data collection procedure will also be presented.

Methodology

The qualitative research method of phenomenology was used in this study to research the meaning of the MI experience and the affect that experience had on the day-to-day lives of patients and their learning needs. "The aim of phenomenology is to describe experience as it is lived by people" (Oiler, 1986, p.70), thus it is a method which allows the researcher to focus on the perspective of the patient (popular arena) rather than the perspective of the nurse (professional arena).

Giorgi (1975) outlined eight characteristics of the phenomenological approach: (1) "fidelity to the phenomenon as it is lived" (p.99), the phenomenon is studied in the context

of the one living through the situation. Therefore, everything the subject feels is worth mentioning is included in the data.; (2) "primacy of the life-world" (p.99), allows the emphasis to remain on the everyday world as it is lived instead of explanations or theoretical interpretations of it; (3) "descriptive approach" (p.100), the phenomenon is communicated through language thus description is the main technique of this approach; (4) "expression of situation from viewpoint of subject" (p.100), the data collected are strictly the subject's viewpoint; (5) "situation as unit of research implies structural approach" (p.100), the research situation creates a lived experience with meaning for both the subject and the researcher; (6) "[biographical] emphases" (p.101), with the use of human subjects the data collected are biographical and personal; (7) "engaged researchers" (p.101), the researcher plays an active role in the constitution of the data therefore, all presuppositions that exist must be made as explicit as possible; and (8) "search for meaning" (p.101), with this approach the measurement of the phenomenon is its meaning.

The phenomenological approach provides the researcher with a method of investigating a lived experience from the perspective of the subject. In this study the phenomenological approach was used to elicit from the subjects the meaning of the illness experience following a MI.

Validity and Reliability

The issue of validity or credibility in qualitative research rests with how faithful the researcher's description and interpretation of the experience is to the subject's actual lived experience (Sandelowski, 1986). According to Sandelowski (1986) credibility is represented when "people having that experience would immediately recognize it from those descriptions or interpretations as their own" (p. 30), and when "other researchers or readers can recognize the experience when confronted with it after having only read about it in a study" (p. 30).

Unlike quantitative research where repeatability of the data is desired, the aim of qualitative research is to remain true to the unique experience of the individual (Sandelowski, 1986). Thus, reliability in qualitative studies is not measured by the ability to replicate the findings but on the ability of others to follow the "decision trails" of the researcher and to arrive at the same or comparable conclusions (Sandelowski, 1986).

Sample Selection and Selection Criteria

In theoretical sampling the participants are selected by the researcher according to the theoretical needs and the direction of the research (Morse, 1986). This study required individuals who would be able to speak to the experience of

having had a MI therefore, a theoretical sampling technique was used to obtain the sample. A definitive sample size was not predetermined. The sample size in this study was limited to five, due to a lower than normal census of MI patients at the participating agency and the time restraint experienced by a student researcher. As well, criteria established for selection of participants had to be modified during the subject recruitment stage in order to obtain the sample.

The sample was selected using the following criteria:

(1) Originally, it was proposed that the participants were to be between the ages of 30 and 65, to involve those of working age. Studies have shown that there is a low rate of return to work in post-MI patients (Nagle et al., 1971; Wishnie et al., 1971) and it was hoped that participants would be able to speak to this problem. However, the majority of patients being admitted for MI were over 65, thus, this restriction was lifted. The criteria then changed to include patients of any age who had the physical and mental capacity to be interviewed, ie. no hearing deficits.

(2) The participants had to understand and speak English as the data were collected by this researcher through interviews which were conducted in English.

(3) The participants had to be experiencing their first MI. This excluded patients whose learning needs may have been influenced by their previous experience of the phenomenon

being studied.

(4) The participants were patients from a coronary care unit of a hospital within the city of Vancouver and they were willing to be interviewed in their homes two to four weeks following discharge from the hospital.

(5) The participants had to live within the city of Vancouver to be accessible for the researcher.

It was an assumption of this study that all patients, male or female, who had experienced a MI for the first time would have learning needs, therefore participation was not restricted by gender. This researcher acknowledges that there may be differences between genders in how individuals perceive and/or respond to an illness experience (Meininger, 1986; Sorensen, Pirie, Folsom, Luepker, Jacobs, & Gillum, 1985). However, it is believed that these differences have added breadth to the data.

Selection Procedure

Subjects were obtained from a coronary care unit of a hospital within the city of Vancouver. Permission was sought from the four cardiologists covering the coronary care unit to approach their patients for participation in this study (see Appendix A). Three of the four cardiologists consented at the time of initial contact and subject recruitment commenced. Due to a decreased census and a lack of MI admissions under

these cardiologists only two subjects were obtained in the following three month period. Therefore, the fourth cardiologist was again approached and with this added assistance three more subjects were obtained. The subject recruitment phase continued for a total of five months.

The names of potential participants were passed on to the researcher by the cardiologists themselves, or by the head nurses of the units involved. The head nurses often acted as liaisons between the researcher and the cardiologists. The researcher's initial contact with the MI patient did not occur until the cardiologist either introduced the researcher to the patient, or gave verbal permission to the researcher to approach the patient.

Patients were approached prior to their discharge from hospital and at that time the study was explained and written consent obtained (see Appendix B). The researcher then contacted the subjects by telephone approximately two weeks post discharge to arrange for the first interviews.

The patients' response to the study was generally positive. Seven patients were approached and of these seven, six consented. The one patient not wishing to participate cited a personal dislike of research as the reason for nonparticipation. One of the remaining six moved following discharge from hospital and did not contact the researcher. The sample size remained at five throughout the data

collection phase.

Patient Education Protocol

This study focused on each individual subject's experience and because it followed the phenomenological paradigm there was no effort made to control what each subject received in the area of patient education. However, since all subjects were obtained through the same institution it was thought that the information given to the patients would be relatively consistent.

The participating institution did in fact have an established protocol for the teaching of MI patients. All MI patients were to receive the publication The heart talk series heart attack (1988). This written information was to be complimented by individual instruction from the nursing staff and referral to a dietician where applicable. The nursing staff were required to complete a chart form entitled "Cardiac Patient Teaching Checklist" which outlined the basic steps in the teaching process in checklist format on the front side, and supplied the nurse with an overview of what material to cover on the reverse side. The use of these teaching tools was incorporated into the orientation program attended by all of the nursing staff working in the intensive care and the medical unit where all five subjects in this study were patients.

Data Collection Procedures

Collection of data in this study involved in-depth, taped interviews with participants in their homes. At the first interview demographic data were collected on each participant (see Appendix C). The initial interviews were guided by a set of trigger questions (see Appendix D). Subsequent interviews with each participant were guided by the analysis of the first interview and by questions that arose during the actual process of interviewing.

The participants' accounts were constructed through a series of eleven taped interviews, one coincidental meeting, and two telephone follow-ups. All five participants were interviewed twice and one participant three times. Participation of spouses had not been directly sought, nor had it been discouraged, therefore one participant's spouse actively took part in two interviews. Due to the extended subject recruitment phase both second interviews and one third interview were conducted with the first two subjects before the remaining three subjects had had their initial interviews. A telephone follow-up was also done with the first two subjects. Data collection took place over a four and a half month period.

The time spent at participants' homes during the interviewing process ranged from 45 minutes to two and a quarter hours. A total of nine hours was audiotaped with

recording times ranging from 20 to 60 minutes. The presence of the tape recorder did not appear to affect the participants. At no time did any participant request the tape stopped or erasure of any of the recording. One participant asked that the tape not be replayed in his presence because he did not wish to hear himself talking. Often participants ended the recording session but then proceeded to carry on further conversations with the researcher. Notes were made of these conversations as soon as possible following departure from the participant's home.

All first interviews were done between two weeks, two days and three weeks, five days of discharge from hospital. Four of the five were done during week three at home. One subject's first interview was delayed into week four due to readmission to hospital for treatment of chest pain. Second interviews ranged from five weeks, six days to 14 weeks, three days post discharge. Three were done around the six week mark, one at eight weeks, and one subject was delayed into week 15 because he was away on a trip.

A coincidental meeting with one participant was the impetus for a third interview. At the time of the chance meeting it appeared that the subject wished an opportunity to talk about his recent hospitalization for angioplasty. A third interview was done at approximately the nine week mark.

Telephone follow-ups were done with the first two

subjects at 21 weeks, two days and 16 weeks, four days. Although the researcher used this opportunity to address the management of lifestyle changes with each participant, the principal reason for the follow-up was to gather information on their return to work. These participants were the only two in the study who were in the work force at the time of their MI.

Ethical Considerations

Before data collection began the researcher obtained approval to conduct this study from the University of British Columbia Behavioral Sciences Screening Committee and the participating hospital's Research Committee. The potential participants were informed that their participation in this study was strictly voluntary and that there would not be any effect on the care they received if they did not wish to participate. They were also informed that the effects of participating in the study could not be predicted; however, by sharing their experience they would help nurses to better understand this experience which could improve care for MI patients in the future.

Written consent was obtained from all participants and all participants received a copy of the information-consent letter (see Appendix B). They were informed that they could withdraw from the study at any time. The participants were

aware that data would be coded to protect their anonymity and the audiotapes would be destroyed following completion of the thesis. The participants were also notified of the intention to publish the findings of this study and that they would not be identified in any publication.

Data Analysis

The audiotapes were transcribed verbatim by the researcher. The data, comprised of both transcripts and field notes, were reviewed continuously as the data collection process proceeded. The first interviews were transcribed before second interviews were conducted with each individual participant, allowing the researcher to validate the initial analysis with that participant.

Following Colaizzi's (Knaack, 1984) steps of data analysis significant statements were extracted from the verbatim transcripts. These statements helped the researcher to formulate meanings that were clustered into themes which in turn provided a description of the phenomenon under study. The researcher was unable to validate the final analysis with each participant due to geographical restraints at the time of analysis. However, in each step of the analysis process the researcher returned to the data to ensure that the meanings remained faithful to the original data and that no data were ignored.

Summary

Phenomenology was the qualitative research methodology chosen to guide this study. A theoretical sample of five post-MI patients participated in the study. Participant accounts were constructed using data collected in eleven in-depth interviews, one coincidental meeting, and two telephone follow-ups. The data included field notes and verbatim transcripts of the audiotapes. The data were continuously reviewed during the data collection and analysis phases. The descriptions derived from this analysis are presented in Chapter Four.

Chapter 4

The Participants' Accounts

Introduction

The accounts of the illness experience of five MI patients will be presented in this chapter. Prior to presenting the accounts the characteristics of the participants will be described. In the telling of their stories the participants have recounted the experience from their own unique perspectives with common themes, as well as occasional contrasts, having been identified. These themes and contrasts were used as a framework to present the data in this chapter. To facilitate this presentation the illness experience accounts have been organized under the following headings: MI event; causes of MI; adjustments; concerns about damage, prognosis, and treatment; and, cardiac education, which included that done by both self and health professionals.

Characteristics of Participants

Three males and two females, ranging in age from 42 to 77 years, participated in the study. The two participants in their early forties were both male, one was divorced and the other separated, while the remaining three participants in

their seventies were all married. English was the primary language of all five subjects, with two being British born and the other three being Canadian.

All three men had high school education, with two having grade 12 and the other having grade 10. Of the two men employed at the time of their MI, one was a policeman and the other a hydraulic technician. The third male subject was retired from a management job at a welding supplies store. Both women were 75 years of age and hospital trained nurses, although neither woman had nursed professionally for many years (one for almost 50 and the other for close to 25 years), and both listed housewife as their occupation. The women were both married, with one having a working husband and the other's husband being retired.

Generally, all subjects listed very little under the heading of other health problems on the demographic sheet (see Appendix C). Although one subject listed many problems, he had very few that were actually active at the time of the study. Only one subject had a previously diagnosed heart problem, which was angina. Two of the subjects, who were in their seventies, had diabetes with one being diet controlled and the other taking oral hypoglycemics. The only other major illness listed was by one of the younger male subjects who had had a cancerous kidney removed.

All five subjects reported a family history of

cardiovascular disease including one, or more, of the following; angina, stroke, MI, or heart failure. The younger male subjects had strong family histories with both having reported their fathers having had MIs in either their late forties or early fifties. The younger male subjects were also smokers at the time of their MI. Of the remaining subjects, the older male subject reported having quit smoking 21 years ago after a 30 year history of heavy smoking, while both women reported negligible smoking histories.

During the course of data collection the subjects reported to the researcher their perceptions about the information they had received while in hospital. All five had received and taken home the publication The heart talk series heart attack. Three of the five stated they had received diet instruction from a dietician while in hospital. Only two subjects related receiving any follow-up from the nursing staff on the written material received. All reported having discussions with their cardiologists regarding their MI, but there was a variation in how informative the subjects felt these discussions had been. Further discussion of the subjects' perceptions regarding information required and received during their illness experience will be presented later in this chapter.

MI Event

Of the five participants only one had been diagnosed with a prior cardiac condition, therefore when describing the actual MI event three subjects related how they thought something other than a heart attack was occurring.

... I didn't recognize this as being a heart attack. I thought ah when it got really bad that somehow I'd managed to collapse a lung because that's what it felt like was that I was short of breath and my lungs were burning, ah that I had run a thousand miles, and ah it never even occurred to me that it was the heart...

.....

We were having a drink and a pizza with our friends who live right near us and fine and dandy until about one o'clock in the morning and that was when it started, so I then walked around the house trying to get rid of the, what I thought was indigestion and it didn't go away, it was just as bad in the morning so we phoned the doctor then.

.....

It was a tightness but it was ah gas as far as I was concerned, that I couldn't get rid of...

Two participants related that they knew they were having heart attacks. One subject whose father had had MIs said he knew what it was and that he had to get help.

... I knew what it was ... I don't know why, it's just different. We all get headaches and this and that or whatever but there was just something about that, that ya know deep down inside that uh, you're not going to be able to make this go away and ah, you got to get help ...

Even the participant who had previously been diagnosed with angina did not think at first that it was a heart attack until her symptoms worsened.

... I knew as soon as I started having the pain in my arms, which got more, and more, and more, and the pain in my chest got tighter, and tighter, and tighter, I knew pretty well. In fact I think I may even have voiced those words to my friend, uhm, so I, I was pretty certain that it was a heart attack.

All subjects related a degree of surprise, after finding out that what had occurred was a MI. Their reactions ranged from surprise to disbelief and these reactions were often shared with their families and friends. For three of the subjects their surprise was compounded by the fact that they felt they had been taking good care of themselves.

... ya in terms of people I think they find that they're surprised ... I mean I'm not like superbly fit or I wasn't before my acc., my heart attack but I use to try ya know and ah I guess you think God damn it, ya know why me?

.....

Ya, I think everybody is ah surprised, not that, I mean I was surprised too because I'm a reasonably active person and uh fairly young ...

.....

... I was in very good health and of course been rather slender and I think I do all the right things and I exercise and eat the right foods, I hope, and, and generally have taken ah care of myself.

.....
 Oh well, I was shocked of course and didn't feel well.

.....
 I didn't believe them, no I didn't believe them. I said
 no I think it's gas but they, they told me in no
 uncertain terms you have, it is not gas, you're having a
 heart attack. So, by that time I guess I was going to
 have one, whether I had it or not.

In conjunction with this element of surprise, four of the
 subjects compared their situation to that of others and
 described feelings of injustice.

... I know I felt a little bitter at first, ya know, I
 use to think my God what is this ... truckers, ya know
 they're ah, I see them, ya know they're huge guys, ya
 know overweight and they're smoking ...

.....
 ... let's put it this way there are a lot of people that
 don't take care of themselves or take as good care as, as
 I do and uh they're still walking around, my brother is
 one of them and ah he's three years older, so.

.....
 Ah, the guy, a friend of mine, gosh he, he should've been
 underground 50 years ago for the, he ate fat straight out
 of the pan.

.....
 ... I said to a friend the other day there's no justice,
 I've done all these things, in fact a very dear friend of
 mine, ... she's far too heavy, and loves all the rich,
 rich, rich things and she says you do all the right
 things ...

The response to the emergency admission to hospital varied among the subjects. Three subjects felt a sense of security and relief to be there.

Pretty safe actually, all in all, I felt as though I was in good hands. And there were people that really knew what they were doing ...

.....

... I didn't have much time to worry about anything out there [hospital] but ah I knew I was in a place where I would get attention.

.....

I was very relieved to be there [hospital], to be in somewhere, you know, to have somebody around that could make it a little bit easier for me.

The remaining two subjects were bewildered by, or couldn't remember, what took place in the hospital during the first few hours or days.

... I don't know what they were doing. I was being swarmed with a bunch of students and what have you, so you don't really know what you, you're kind of bewildered if ya know what I mean ...

.....

... I'm not sure of what happened after that ...

Being discharged from hospital also evoked different responses from the subjects. For some it was a nervous time

where the fear of having another heart attack was prevalent.

Uhmm, oh it was pretty scary actually ya know, uh like to be out of that hospital and to be away ya know from all the equipment ... you think well uhmm oh gees what if anything happens ya know what am I going to do ... just those first couple of days I found it ah, ya a little apprehensive, ya a little nervous.

.....

... you're away from the people taking care of, and you're suddenly sort of ah on your own and I think I was a little bit nervous that, would I have another heart attack ... that was with me quite a bit in the beginning and it's certainly isn't anything like, so much now ...

For others coming home held no fear and they were glad to be there.

... I was comfortable in as much as I didn't think I was going to come home and die O.K., uh I would've been comfortable if they'd released me ah, a week earlier in that regard ...

.....

Well, I was glad to get home ...

The impact the MI experience had on the personal lives of the subjects depended on how they viewed the MI itself. One young man viewed it as a warning and an impetus to make changes in his life.

... I just feel really lucky that I've been given a warning and potentially that if I really watch myself I'll be O.K.

... I just feel the urge now that I want to change my life a lot, ya know I, in terms of my job as well, and ah just get some things done that I haven't done ...

For two of the older subjects the impact was minimal.

This might be a serious problem, it's hard to say, but I don't really think it's that serious, but I'm not going to worry about it ...

.....

It hasn't really thrown me that much I don't think. I think I'll come back all right ...

One man's response reflected somewhat his personal philosophy about life. He did not foresee the heart attack as an impetus for many changes in his life. He was willing to make some concessions regarding his diet and exercise but he was not prepared to be fanatical about either because as he saw it there would be no guarantees.

... I have a reasonable amount of faith that ah ya know, that ah this is going to be something that ah I go through and ah eventually get better and ah ya know if He decides that ah I, I'm coming home then obviously I'm going to have to go but ah there's not much I can do about it, one way, or another.

The two subjects who felt the MI had impacted a great deal on their lives also related having days where they were down or blue.

... the odd day it's still sort of gets me down a little.

... I just figure it's something that I have to come to terms with and uhm, it's me that's going to do it and nobody else, ya know ...

.....

... I thought it would be you just, a slow steady progress and not any falling back and I haven't really fallen back but some days I'm more ah bluer than others and the days that I'm blue I notice are related to my energy feelings.

The MI's most significant impact appeared to be of a physical nature, as all five subjects reported a notable decrease in their physical stamina.

I didn't have any stamina, ... ya that's what I noticed, how quickly I lost all that ...

.....

... but right now I don't seem to be able to do a hell of a lot anyway ...

.....

But ah I'm kind of weak ya know, I get so tired lately that I have to go and sit down for awhile ...

.....

... the first few days at home, when I felt absolutely grim, ya know I just wasn't up to that [stretching and walking] ...

These reports of feeling physically limited continued to be expressed by most subjects in subsequent interviews.

I feel I guess limited ... I know there's a limit I guess

to what I can do ...

.....

Well, I'm still favoring things ya see, uh I'm not doing what I think is beyond what I can do.

One woman felt her limitations reflected where she was in her recovery and that with time she would feel better.

I'm perhaps limited but ah, after all it's not even two months yet ya know. So, I think that ah another couple of months I'm, ya know, may feel differently even.

The MI event also appeared to have an impact on the subjects and their contact with family members. For some it was demonstrated in a desire to see their families, or in their families desire to see them.

... that was the first thing, well ya know other than my own self survival, uh that was the, the first thing that came to mind that, that night was that I want to see her [daughter] again, like right now, and uh it, when she came over then, it was difficult for me, for me to see her go off again ...

.....

... the family all came to see me and I wasn't to sure ah why they were all there except that I must be kind of seriously sick.

.....

... he [brother] said, well ya know if we hadn't been coming on July the 6th I'd have been beside you now. Ah so, it's, ya know, he felt he needed to see me so.

One man with a younger family delayed seeing his children until he had been stabilized in hospital.

... I made the decision, I didn't want them to see me when I was hooked up to, ya know everything and I guess it was the ah, the right thing ... by the time she [daughter] saw me I, I think I just had the one intravenous in uhm and I think ya know she relaxed a little bit after that ...

In general, all subjects reported their families and friends as being supportive throughout the experience. For those subjects who were married the support of their spouses was evident.

Thank goodness we grow old together ... if you're alone, now that would be a whole lot different story ...

.....

... it's a 50/50 proposition right down the center, so there's trust, and there's love, and there's what have you ...

.....

... my husband's been tremendously helpful and my neighbors have ya know, been really tremendous ...

There were two subjects not married at the time of their MIs. One felt that going through the experience without a spouse made him feel the importance of a good relationship.

... but actually at the time of the heart attack that's

when I felt gees I wish I was married, ya know ... I wish there was somebody that was right there with me ...

The other unmarried subject who described himself as a loner did not feel he lacked support even though he was living alone.

... I guess uh everybody is, is ah pulled together on this and uh I certainly haven't lacked support, sometimes I've had more support then I've wanted ...

For one subject the family pets were seen as being a positive influence and support in the period following her MI.

It's because a dog, it doesn't talk back, they're your best friend, and very truly they are, ah so tolerant of you and they allow you to pet them, they don't care what you do really for them as long as you feed them.

Both women in the study viewed their families as supportive but there also appeared to be expectations placed upon them during recovery by their families.

So, they'll [sons and husband] all be watching me and they all walk and exercise and swim and everything else so they're not going to let me sit around too much without doing what I'm told.

.....

But he [husband] wants me to do all the things that I'm supposed to do of course, he doesn't want me sitting around in the bed all day long and I don't want to

either.

In summary, the occurrence of a MI for the subjects in this study was an unanticipated event which gave rise to a range of feelings from surprise to disbelief. A majority of the subjects expressed a degree of injustice at having had a MI. Three of the subjects considered the hospital a secure and safe place to be. For two subjects being at home after discharge from hospital was initially a nervous time in which they feared having another MI.

The impact the MI had on the subjects' personal lives depended on how they viewed the event. The subjects' responses varied from a minimal affect to an impetus for change. For two subjects the MI had an effect on psychological wellbeing, in that some days they felt down or blue. A decrease in energy appeared to be of significance in the physical recovery of the subjects, with feelings of limitations being expressed by some subjects weeks after the MI.

Generally, the subjects viewed their families and friends as being supportive throughout the MI experience, with spouses being of significant importance to the married subjects in the study. Both of the female subjects perceived their families as having certain expectations for the subject during the recovery period.

Causes of MI

The responses to the question "what do you think caused you to have a MI?" varied with each participant. The two younger men in the study acknowledged the family tendency in the course of their interviews but neither related it as a factor when asked the question as above. Lifestyle practices were considered major contributing factors, with one man considering them as factors but unsure as to the extent of their influence.

Uhmm, just my lifestyle. The way I uhm, just not watching what I was doing ya know not, not watching what I was eating, smoking ... exercise I think I was reasonably good at but it was just too much of the other stuff ... I think that was probably the two ah, two biggest things.

.....

... I've been told what effect stress has but I don't know how long ah, or how much stress it would take in order to create the problem that I have. ... I don't know what proportion of ah my smoking ah would do to it ... I mean obviously I can vary my diet ah which is no problem, I can stop smoking that doesn't appear to be any problem, uhm stress is going to be something else. ... if I can eliminate the two out of the three ah or cut them down, obviously I think that I'll be better off for it ...

The three older subjects whose risk factors included diabetes, hypertension, angina or being overweight gave other reasons for their MI.

I guess I inherited a certain amount of it if ah, if

that's possible from my, my mother ... I don't know why I had a heart attack really unless that chronic a ah, noise and, and whatever showed up on that cardiogram was something to do with ah, from birth. I don't know that, no one ever suggested it, I just sort of thought about that after I had the attack ...

.....

The only thing that I can think of ah that contributed to it was possibly stress that I didn't know I had and ah, maybe too much salt ...

The third older subject expressed disappointment in herself because she felt pushing herself to hard may have caused her to have the MI.

I don't know what to answer to that really. I'm disgusted with myself of course. ... I don't feel very happy with myself about it. No, I'm not disgusted with myself, that's a bit too strong, but I, I'm, I'm sorry it happened. ... I just did have a feeling that I was pushing myself a bit too much so, ya know, maybe that's, maybe I just did push too much.

Another lifestyle component often mentioned by the subjects was stress. For some stress was viewed as a direct cause of their MI, as noted in some of the previous quotes, while for the others it was viewed as a factor present in their lives.

I think I, I handle it [stress] really well but it's just that at that particular time [going through divorce] I didn't and uhm ya, and as I say ya know I got my cigarettes way up there and I just didn't bring them down again.

... I never relax, never relax ... I've always been that way ever since I was very, very small ... that's why it doesn't surprise me that it, this may be stress, it may not be diet at all ...

.....

... you can't raise a family and run a great big house without some stress and I had it ...

.....

Ah, well ya, stress is not the greatest thing and I, you can have stress and not even know it, and of course in my work I, I guess I had quite a bit of stress at that, but you don't realize ya got stress, at least I didn't.

.....

... I'm sure it [stress] comes into almost everybody's life in some kind of way, whether it resorts to a heart attack I don't know, but uhm I'd like to say 'no' to that but I'm sure that, that there probably is an element of that ...

In association with their discussions about stress in their lives three subjects also used terms such as 'perfectionist' or 'worry wart' when describing themselves.

In summary, the subjects in this study cited such things as diet, smoking, stress, family tendency, and pushing too hard as possible causes of their MI. As well, for all subjects stress was a lifestyle factor that was either currently present, or had once been a part of their lives.

Adjustments

In describing their day-to-day routine subjects reported

adjustments they had made or were planning to make in their lifestyles. Four of the five subjects stated they had used the MI book The heart talk series heart attack received in hospital as a guide in making these adjustments. As well, all subjects reported receiving some instruction from their cardiologist before leaving hospital on changes they were to make in their lifestyles.

Four of the subjects were making some changes in their diet. Three of the four were following directions they received from dietitians while in the hospital. The fourth subject had been referred to a dietitian after discharge from hospital when it was found that his cholesterol level was elevated. This was the only subject aware of having a high cholesterol level. The only other subject who knew what his cholesterol level was had been told his was within normal range. Most of the subjects perceived their diet changes as amounting to the deletion of one or two things from their diet.

... ah salt ya I, I'm cutting out the salt ah ... and she's [wife] cut down on the salt on the cooking a bit ...

.....

... I will cut down and on the fat and that sort of stuff uh I don't know if I can cut down on salt since I don't use it uhmm I suppose I could cut down on the amount of taco chips or whatever but that sort of thing, I'm not a big eater of that sort of stuff anyway uh but ah when I went over my diet with, with the dietitian, other than

the eggs and the cheese it wasn't really all that bad ...

.....

The ah, the diet is ah very low fat, and low sugar, and low salt, you see ...

.....

I'm careful about visible fat ya know and I guess when I see stuff like that ya know I do back away from it ... but I was suckering myself into the, the hidden stuff ...

The subjects qualified their diet changes somewhat with statements of limitation either of a personal nature, or of what they interpreted from instruction received.

... I don't have to cut out salt completely so when I've been making porridge the last two days I've put just a little dash of salt in, tastes a lot better ...

.....

[Participant's spouse] Well, Dr. X says she doesn't want him [husband who is the subject in the study] to change the ah ... change too much because she says sometimes it does more harm than good ...

.....

... but the, the big thing I think is, I think is the diet and ah I'm certainly prepared to go half way but I'm not ya know, if I want a pizza and beer, which doesn't happen that often, but if I want one I'm going to have it.

Two subjects had been instructed to lose weight and during the time of follow-up in this study one had continued to lose while the other actually gained weight while away on a trip.

The only subject not making any diet changes viewed her diet to be consistent with what was suggested in the MI book.

The subjects follow-up post MI included scheduled appointments with their attending cardiologists, and visits or telephone calls to their family physician as individual needs dictated. This method of follow-up did not create a problem for four of the subjects. However, for one man, who was scheduled for an angioplasty at another institution under another cardiologist, having three physicians led to several misunderstandings especially in the prescribing of medications. This subject was somewhat confused over how this should have been coordinated.

And I, I don't know ah who was suppose to coordinate that but there should be somebody I would think.

This incident led the subject to certain conclusions about future health care services.

... I don't know what the answer is but I'll tell you one thing is that I probably would not want Dr. X to do it ... I think I'll be going to X Hospital the next time if there is one. ... Well, I just don't want something like this happening again that's all, it really made me nervous ...

Generally, the subjects stated they felt prepared to deal with the possible recurrence of chest pain. Following

discharge from hospital four of the subjects experienced episodes of chest pain which did require them to use their nitroglycerine. The number of episodes for each subject varied, from one episode since being discharged, to one with almost every walk. One subject was readmitted to hospital just one week after his initial discharge because of an episode of chest pain.

... it felt like angina pain but, but to be honest with you I can't be really sure and uh I took a couple of nitros and uhmm I don't know if it was panic or what, but I started to get a steady pain in my chest. Uhmm, I guess I wasn't confident enough to just sort of sit it out and I thought well ta heck with it I'm going back up there [hospital] ...

This same subject, later in his recovery, experienced another episode of chest pain which he successfully treated with nitroglycerine at home.

The subjects reported that they carried their nitroglycerine pills or spray with them for the most part. One subject, when he realized during an outing that he had left his nitroglcerine pills at home, went to the drugstore and purchased another bottle.

Incorporating medications into the daily routine did not present a problem for the subjects generally. The one married man in the study reported that he would not have remembered his afternoon pill if not for his wife, at which time she

informed the researcher that she laid out his pills for him every day and made sure he took them. One man was discharged on warfarin which initially required him to go for blood tests twice a week, this was later cut down to once a week and eventually discontinued. The warfarin dose was adjusted by the family physician based on the test results. The subject was contacted by phone if there was a change to be made in the dosage. Other adjustments in medications were generally made by the attending cardiologist without difficulty, except for the subject previously mentioned who had had a misunderstanding with the medications prescribed because two cardiologists had been participating in his care.

Both men who had been smokers at the time of their MI had quit smoking while in hospital. Although neither had resumed smoking both reported having the occasional urge which, so far, they had been able to resist.

Certain housekeeping activities presented obstacles for some subjects, thus requiring them to make adjustments. One of the single men initially found shopping for groceries tiring.

... it's never occurred to me before because I guess ya know it just gets done so quickly was shopping at the store, ... I noticed how quickly I became tired and uh started to feel light headed, uh this was the first weekend I guess when I got out, and so that I just sat the basket on the floor and walked slowly around and picked up stuff and put it in the basket ...

The other single man, because he could not drive his car, reported grocery shopping as an inconvenience and he found it demeaning to have to depend on other people.

... it's a little demeaning in as much as I have to basically depend on other people ya know to drive me up there [grocery store] but ah it hasn't really been a major problem I just don't like to depend on other people that's all.

Neither of the single men reported any specific concern about doing housework or cooking but both also appeared to have returned to other pre-MI activities more quickly than the other subjects in the study. One man was already driving his car and had returned to work part-time at the time of his first interview, only three weeks after discharge from hospital. The other man, who stated he was not fanatical about housework, reported following the guidelines for it laid out in the MI book.

Both women in the study reported their husbands assisting with some household chores such as the laundry and in one subject's case, her husband had taken over the cooking and shopping as well. These subjects had domestic help come to do their heavy housework prior to having their MI and they found this to be very helpful to them following their MI. However, for one woman the managing of the household and things such as shopping and banking had initially been a concern.

But those few days I really didn't feel very well physically, so I was a bit concerned uhm about how I was going to manage and I have a cleaning lady who's only been coming once every two weeks but in point of fact has come every week since, uhm since I've got home, which is a great relief ... so, what I've been doing of course is taking care of the meals and uhm a little bit of shopping, a lot of my friends and neighbors have helped me a great deal, some I've gone with the odd time, which I haven't enjoyed too much, ... is almost too much for me ... I just find it ah after being to the bank and going to there [store] for a few minutes I was really glad to be home.

This subject reported she accepted help offered by her friends and by spreading the jobs out amongst them she had felt more comfortable with accepting this help. By the time of the second interview both women reported doing more around the house but still expressed gratitude for having hired domestic help to do the heavy work.

As previously mentioned the return to some activities, specifically social and recreational, was slower for the older subjects in this study. For the younger subjects trips and outings did not present a problem, with one man even going on a three week trip to England. However, those subjects in their seventies appeared cautious in resuming some activities even six to eight weeks after discharge from hospital.

... I haven't been out anywhere else. Although, I'm going to a wedding on, this Saturday, and ah but for a while I thought I wouldn't go but I've turned down everything else ...

.....

We've been down [to their cottages] for the day and back but ah to check things out but that's ah, that's the first time we stayed down.

.....

... I'm still at the stage where I'm quite happy to be uhm ya know leading a quiet life, fairly quiet life. But tomorrow is, tomorrow is ah our wedding anniversary so my husband and I are going to the faculty club for dinner ... that's sort of a major outing cause we haven't been out to dinner ...

Two of the three older subjects felt they had slowed down before their MIs.

... I'm slowed down anyway, before this ever happened I was slowed down.

.....

... my lifestyle wasn't ah such that we were on the go all the time, even when we're down to the Bay we stick around pretty well. We're not prancing all over the place but ah no, it's ah, our lifestyle hasn't changed that much.

The other senior subject related that she would have to change her busy life and had decided to stop some activities, like choral singing, but was not upset about that.

... I'm quite happy to listen and ah ya know just sort of cut back on things a little bit, which doesn't mean that I don't do interesting things at all, so. Oh, I think there comes a time in everybody's life when some things have to be given up, so.

These subjects appeared to have considered their age when examining adjustments to their lifestyle following MI and for two of them some adjustments had already been made.

... those things had to change, we just couldn't, we knew we had physically to stop some of that carry on, when you get to be that age you do.

.....

... the main reason was because when you get to 77 ya gotta be a little bit realistic. Ah, how much more do I need to have that, and ah if something happened to me she'd have it all to do.

However, taking these subjects' life stages into account the three senior subjects had still not resumed what they considered to be their normal social and recreational activities six to eight weeks after their MIs.

Another adjustment only expressed by the three older subjects, in relation to the resumption of activities, was their desire to listen to what their bodies told them when it came to their physical limitations.

... In other words I'm taking care, car.. ah be, trying to be careful of what I do and how long I do it. She [doctor] said to go according to what your body tells ya and I've been trying to do just that.

.....

... you see in the past ah I've tended, I, I've been aware of what my body's told me but I ignored it and now I'm listening more.

.....

... if you're going to be sick your body warns you, then's your time to start fretting about doing something wrong.

An adjustment only mentioned by the two women in the study was developing the ability to say "no" to activities they did not feel capable of doing. This appeared to be a new option for them following their MI.

... I don't think I want to go to everything, although I hate being a crybaby and saying I can't come, never have done that, but ah you can't also be a good ol'soak and say oh sure I'll be there whenever they say because that is what stresses you out sometimes ...

.....

... it has made me feel ah that I can say 'no' to things and ah I don't want to do that, or I can't go, or whatever it may be uhm before I didn't feel that was uhm a thing that I wanted to do.

Returning to the activity of driving a car was influenced by each participant's desire and the necessity of doing so. Most subjects were told not to drive for at least six weeks and for one woman, who had given up her car the year before and whose husband still drove, this was not an adjustment. For the two younger subjects not being able to drive was inconvenient and one returned to driving shortly after discharge from hospital. The married man had not returned to driving even after the six week mark and stated he did not see

the need to since his wife was able to drive. The remaining subject was anxious to be able to drive because her husband was a non-driver, yet she was apprehensive about driving even after waiting six weeks.

All subjects had made an effort to follow a daily exercise routine of walking and for most this was the first organized exercise they had done in years. The married subjects were often accompanied by their spouses when they went for their walks. The subjects maintained their walking schedules throughout the time they were followed for this study.

Only two subjects were working at the time of their MI. One man did not have sick benefits and therefore returned to work on a part-time basis three weeks after discharge from hospital. He was then laid off from his job because of a slump in business but later returned to full time employment in a new job. However, this subject viewed his MI as being an impetus to change his career, subsequently went through career counseling, and was planning to start night courses at a community college.

... of course it's come down to reality, the studying and all the rest of it but no, I definitely uhm still want to change ah some things in my life and I'm going to do it, and that's for sure, hah.

The other subject, at his initial interview, stated he had not been told when he would be able to return to work. Although finding out when he could go back to work appeared to be his foremost concern, it did not create a financial worry for him because he had sick benefits. At the time of the first interview he was awaiting the results of a thallium stress test to determine if an angioplasty would benefit him. This subject did undergo angioplasty but he was hesitant to go back to work even when told he could do so by a cardiologist. He expressed concern about his job being stressful, especially over the summer with people on holidays, and he wanted to take the summer off.

... I know that going to September ah is stretching it but ah the only other, other alternative would be to have me go back to work to some other job until September ah which is ah possibility ...

Approximately three months following his MI the subject did in fact return to work in another position part-time, but only for two weeks. The subject reported he found it tiring and for every half day he worked he was being deducted a half a day in sick time so he decided to take the rest of the summer off. His family physician did not feel this was necessary and the subject was informed that he would have to make his own arrangements with the occupational health doctor at his place

of employment.

The occurrence of a MI required the subjects to make adjustments in their lifestyles which included changing their diet, managing episodes of chest pain, incorporating medications into a daily routine, adjusting the running of their households, adding a walking routine, and for two subjects the cessation of smoking. Although the senior subjects appeared to have made some adjustments in their lifestyles prior to having a MI their return to social and recreational activities was slower than the younger subjects in this study. For the women in the study having a MI made it easier for them to say "no" in situations where they did not want to do some activities. Returning to work was not a smooth transition for either of the men employed at the time of their MI.

Concerns About Damage, Prognosis and Treatment

Only one subject was aware of the amount of damage to his heart because while in hospital recuperating from his MI he had undergone an angiogram and the results of this had been explained to him. The other subjects in the study expressed concern over not knowing the extent of the damage and it was something they had asked or planned to ask their cardiologist about.

I, I want to know exactly, well I don't know how precise they can be about this, but I want to know how he [cardiologist] knows what part of my heart is damaged. I want to know how much is damaged. I want to know the exact results of the thallium test. I want to know what they found, was there any restrictions. Uh, I just want to know a lot more about what happened to me and where exactly I stand.

.....

... I don't even know the extent of the damage. ... Ya, she [cardiologist] said, you had a damn big heart attack and that's all and not gas. So, well but no, I didn't get any ah answers on.., I don't think they know unless they ah put you through some kind of ah, a dye deal.

.....

... I don't remember having any idea of how much damage there was ... I don't know, I hope to know more about it really. I don't know whether it's, some doctors are not crazy about giving too much information away but I would like to know.

In relation to this concern about the extent of the damage most of the subjects also expressed anxiety over what to expect in the future and what in fact was their prognosis.

... what can I expect for the future ya know, based reasonably on what he [cardiologist] saw and the results of all these tests they took.

.....

... I would've preferred to have known what the prognosis was, O.K.. Now, very early on they said that, that I would return to a normal life eventually, reasonably normal life is what they said. Ummm, that doesn't conjure up any particular restrictions in my particular area because I don't think I, I ah want to do anything in a physical nature that, that was really out of the ordinary ...

.....

Well ah, I guess how serious it was and was I going to get better, was I going to be an invalid ...

.....

Uhm, I suppose in the back of my mind there's still a bit of a concern that I'll get back to the way I'd like to feel. I mean ah sometimes I feel that there's no doubt about it and other times I'm a little bit uhm wary, ya know.

Concerns regarding treatment were also raised, especially by the subjects undergoing invasive procedures such as angiogram and angioplasty. Although these concerns related to the specific procedure being performed they often included things such as risk factors and what to expect during the procedure.

In summary, the subjects were interested in knowing about the damage caused by their MIs and the effect it would have on their abilities in the future. For those undergoing further treatments and procedures there was also an amount of concern expressed about these procedures.

Cardiac Education

Both the formal and informal aspects of cardiac education received by the subjects following their MI will be presented in this section. The focus of this study was to obtain the subjects' perspectives of their experience, therefore no

attempt was made by the researcher to test the subjects' knowledge level or to judge the quality of the teaching received. To facilitate presentation of these data, the section has been subdivided into education from health professionals, and self education.

Education from health professionals.

During their stays in hospital all five subjects had received the MI book The heart talk series heart attack used by the institution for cardiac patient education. The five subjects reported having read the book and a majority used it as a guide or reference throughout the recovery period.

Oh ya, they gave me ah literature on, I guess it's from the heart foundation, ... essentially what had happened to me, and uhhh how to get over it, ya know, that it'll applies to different age groups ya know, but how to start your exercise schedule and what to look for. ... That's what I was doing ya, was like trying to stick roughly to that book ya know ...

.....

They gave me a book which I've read through a couple of times ... that's a very good book ...

.....

Ya, well ah, I've read it [MI book] more then a couple of times. I keep checking on, it ..it's ah like a guide now, because I know where to look for what I want to find out.

.....

So, I read it when I got into the cardiac ward, from cover to cover, and in fact I read it also and look at it, I mean I refer to it a little bit now, just to give me an idea of perhaps where I might be at this stage.

The cardiac education protocol at this institution included the distribution of the MI book with supplementary instruction from the nursing staff. Only two subjects in this study report receiving instruction from their nurses.

... actually before I left she [nurse] ah sat down with ah, sat down with me and ah, and ah brought this little plastic heart thing that ah folded and whatever and ah explained ya know what happened and, and ah ya know what angina is and she wrote that [hand written note on the use of nitroglycerine] and we had ah I, I would imagine that it would've taken her at least half an hour so I felt fairly comfortable ah as to ya know what had happened and, and ah what could happen if it ever happens again that sort of stuff and why and all that sort of stuff.

.....

The nurses came in and talked to me and asked me a few questions about the book [MI book] and that. I, I guess they'd figured I read it. They were checking I guess, more or less, cause I pretty well had the answers.

For one of these subjects the circumstances under which he had received his instruction had concerned him. He felt it had only been done because he personally knew the nurse who did it.

The thing that concerned me about that was that, was almost an after thought I mean if it hadn't been her it probably wouldn't have been done ... if she hadn't been on shift even I don't think that would've been done ...

This same subject also felt that teaching sessions, such as the one he had received, should be something done more often by nurses..

That's the type of thing ya know that I, that I think nurses should do, I ah don't think that they should be making beds ...

Three subjects reported that they did not receive instruction from their nurses. However, the nurses were often viewed by these subjects as being supportive and kind.

... I was really impressed by the nurses, and uh maybe because I'm single it made a difference ya know because maybe they related to me a little better I don't know. But uhm, I just found them really good ya know it made such a difference to me but uh just the way they were ya know really nice, and professional, not like professionally aloof, they were friendly as well ...

.....

... but once I was into the cardiac ward some of the nurses that I knew more because of the situation, where they were there in the daytime or whenever it was, were ah very nice and very helpful.

Although the nurses had not reviewed the MI book with these subjects, nurses were viewed as a source of information by at least one of the subjects who reported asking questions of the nurses.

The cardiologists, and to a certain degree family physicians, were viewed as sources of information as well. Activity restrictions or guidelines appeared to be the focus of the information received or the questions asked of the physicians. The information varied from specific instructions as to when the subjects could go back to work, or drive cars, to more general instructions on activities permitted.

Uhm, just to go back [to work], possibly if I could part-time, which I'm doing and uhm, no heavy lifting and uhm like strenuous movements, which I don't do normally anyways, but uhm other than that just to do it as relaxed as I can and to just build up to it slowly.

.....

Oh ya, she [cardiologist] told me what to do and ah I wasn't to drive the car for six weeks, and ah we're not to go down across the line for three weeks [to cottage]

.....

She [cardiologist] said to just, she said no big meals, no big walks, and ah tired, rest when you're tired.

The type of questions the subjects asked or were planning to ask reflect the subjects' desire to know information specific to them.

Ya, ya I asked him [cardiologist] like how much I should exercise, uhmm what sort of heart, heart rate I should be getting up to when I'm exercising and how long I should do it for, and uhm how long before I can do this and before I can go back to work and drive and this sort of stuff ya know. I asked him about the tablets, how long will I be on them, and what the long term effects.

.....

Well, there's, there's the work and the car thing, that's fairly important to me because that goes with the independence thing, ah I would like to know whether I'm going to travel, I would like to know what the restrictions are.

Once home, subjects often contacted their family physicians when they had questions regarding their medications or physical symptoms that were not, in their opinion, connected to their heart problem. Some subjects felt that concerns about their heart should be directed to their cardiologists.

... uh he's [family physician] told me on a number of occasions he really doesn't know what ah they're talking about in terms of heart ... I don't think that he would know what the effects of various things are and, and that sort of stuff so, which didn't cause me any discomfort it's just you know uhmm if I wanted to talk to somebody about a heart I guess I would talk to, to X or Z [cardiologists] I guess.

.....

... maybe it should have been a question to Dr. X [cardiologist] rather than my own family physician but anyway we'll see.

Although the subjects used their physicians as resources many also expressed that sometimes their physicians were in a rush and this affected the information they were able to obtain. Four of the subjects did report making lists of

questions for their physicians and to some extent this had been beneficial.

... well because I guess ya know like doctors and ya know they're in a rush ya know a lot of the time ...

.....

Uhmm, the doctors ah, ya know they, ah Dr. ah X [cardiologist] he ah, he gave me as much time as I ah probably ah needed ha, ha. Ah, it's one of those things where you always think of questions after they've left ya know and ah actually I've started to write down questions so that ah ... I can ask these things ...

.....

... and of course when you go to see people [physicians], even when you make a list, you can't stay there all day, they haven't got that kind of time uhm so all my questions are, are not answered ya know ...

The subjects reported the dieticians, whether seen while in hospital or on an outpatient basis, as another source for information that was felt to be beneficial. The dieticians helped the subjects to identify areas in their diet that they felt required adjusting.

... the same mistakes I guess that I made only to a less degree before my heart, I was still getting suckered into things like muffins ... no matter what you call it ya know a sunflower oil or whatever, that fat is fat. That's the bottom line, so now I understand a lot better than I did ...

.....

Low cholesterol, low fat, low, low sugar ... yes the girl [dietician] that came to visit and gave us a list of

things.

.....

The one fault I guess I have is the number of, of eggs and cheese that I have during the week. It's quite astounding ah ... ya, well she's [dietician] talking about three eggs a week and I'm talking about three eggs a sitting ...

.....

This one [diet] you gotta watch the salts and the fats ...

The readiness of subjects for teaching or educational materials varied among the three subjects who had expressed opinions in that area. One of the two subjects, who had received teaching in the hospital from a nurse, felt that the teaching could have been done earlier in his hospital stay. This was the only subject who had undergone angiography during his admission and who knew the specifics of the damage done to his heart. For him, receiving teaching at the time of discharge was disconcerting.

... I think it should have been done earlier rather than ya know her feeling that ah she's keeping me from going ... I was already discharged and she said wait until I come back so I had my ride and everything there and, and ah ya know we went over it. And I, I thought it was, it was ya know a good presentation and a lot of good stuff but I think it should have been done ah a few days earlier. ... I had that ah thing on the heart anyway ... the sheet where they, they told me where the actual blockage was ...

Another subject initially expressed surprise at receiving the MI book while she was still in the intensive care unit instead of being given it the day she came home. For this subject other things took priority during the time in the intensive care unit.

I mean I, it seemed like a good idea to me I just was surprised, cause I thought that, it would be the kind of thing they'd give you the day you came home. Uhm, but of course they gave it to me then persumably and everybody else, so that's the time when you get out of ICU, [ICU] is not the time that you want to start looking at it perhaps too much else is going on, but once I was on the cardiac wards certainly was the time that I read it from cover to cover. Uhm, so you're prepared for what's going on when you get home which I, so in retrospect it seemed like a good idea.

One subject whose cardiac education had consisted of reading the MI book and a discussion with his cardiologist did not feel ready for that information while in hospital. This subject expressed interest in participating in a cardiac follow-up group after his discharge.

Uhhh, no I don't think so, I think that, that time [while in hospitall uhm that's I think when I felt I most needed somebody to talk to about what had happened to me and ah somebody to spend a bit more time with me ...

The only other health professional mentioned in the context of giving information to the subjects was a

pharmacist. One subject reported receiving information sheets from his pharmacist when he filled his prescriptions.

Four of the five subjects asked questions of the researcher during the course of the interviews. The questions varied from wanting validation or clarification of information already received, to requests for further information. One subject was particularly interested in knowing how her experience compared to the experience of other subjects in the study.

For the subjects in this study the physicians, specifically the cardiologists, were used as a principal source of information even though the time spent with their physicians had been limited. Also, those subjects receiving instruction from other health professionals, such as dietitians and nurses, felt this information to be beneficial. During the course of the interviews the researcher was viewed by most of the subjects as a source of information as well. Timing of teaching activities was a concern for three subjects. Four of the five subjects viewed the written material received while in hospital as useful as a guide and reference during recovery at home.

Self education.

All five subjects reported having discussions with family or friends about their MI. Topics of these discussions ranged from changes in their diet, to comparing the course of their

illness and recovery to that of others. One subject did not view these discussions as very beneficial.

Well, everybody's a doctor, I got more damn advice then ya can shake a stick at, I just let it go in one ear and out the other.

While for another subject talking to a person who had been through the experience was thought to be helpful.

... ah it's better to talk to somebody that's had it and to find out exactly what ya know, what they do to you and how he [friend] felt ...

The extent to which subjects felt comfortable talking to people about their MI varied as well. One woman who reported having interesting conversations with both her family and friends, many of whom were physicians, was still cautious about discussing it too much.

... No, I don't know whether it's wise to talk too much to people, they get tired of listening to other people's, at least that's my theory, that your illnesses, that's why you have a doctor to talk it over with ...

Another subject, who described herself as someone who craved information, did not view everyone she talked to regarding her MI as an appropriate source of information.

... in fact I sort of almost crave it [information] and if anybody has anything to tell me, like you [interviewer], ah I don't mean the people next door, much as I like them very much indeed because they're not into that. Ah, but if people have anything interesting to tell me, I, or to tell me what books to read about it I'm very much interested.

As well, for another subject certain aspects of the experience had to be dealt with on his own, specifically in relation to his feelings of being down following his MI.

Uhhh, no I usually try and resolve it myself ya know and ah just think about why I'm down and what I can do about it ya know I mean it's more, cause I figure well to a point that I've talked enough about it to other people ya know and ya know other people have asked me about it and not that it bothers me but ah I just figure it's something that I have to come to terms with and uhm, it's me that's going to do it and nobody else ya know, so.

Two subjects, both of whom reported being inadequate readers or poor retainers of information that was read, stated they preferred the one-on-one instruction received from the nursing staff to reading independently as a method of receiving information.

... I think that people learn much better by being taught than by reading ah ... let's put it this way I had no problem gaining the information from the book but I'd certainly rather because I don't personally read that well, so if, if I'm going to be taught ah I would certainly if I had my druthers be taught in person rather than by being handed a book.

It also should be noted that these subjects were the only two that received one-on-one instruction from the nursing staff.

Both of the subjects who did not prefer reading had read only the information received in the hospital regarding their MIs. Other than the questions they asked of their physicians, and of this researcher during the interview process, neither of these subjects had reported actively seeking other information during the recovery period and both had expressed satisfaction with the information they had received.

... generally speaking I'm satisfied with the information that I got.

.....

No, I'm just going by that book [MI book] I got. I figure that's, about covers it ...

The three subjects who preferred reading did not express dissatisfaction with the information received, however they actively sought information from other sources. The methods most often used to obtain this information were discussing it with family or friends, doing further reading, and watching television shows.

The amount of extra reading varied among these three subjects with one having only made plans to read her husband's medical journals and another having already done extensive reading about the heart attack experience from a variety of

sources. The topics of the books and articles read varied with each subjects individual tastes and often reflected areas of interest held by those subjects before their MIs.

The two subjects who were the most active in obtaining other information following their MIs were also the same two subjects who perceived the impact of the MI as an impetus for change in their lives. Both of these subjects had already made changes that would effect their futures such as undergoing career counseling and deciding not to resume certain activities such as choral singing. As well, they were the only two subjects that had expressed feelings of being down or blue following their MIs which may reflect somewhat the impact the MI had had on them.

For one of these two subjects viewing a television talk show, featuring three guests who had survived their heart attacks, encouraged him to feel he could survive it too.

... I think that seeing that made me realize ... that you can survive it [heart attack] and you can go on and live a normal life ya know.

This subject was also the only person in the study to express interest in participating in a support group following his MI and he had written the local heart foundation for further information. As well, he had volunteered to participate in another research study investigating the effects of a new drug

on cholesterol levels but was dropped from the study when he did not meet all the selection criteria.

The other subject who had read extensively before her MI continued to do so following her MI. She had read books prior to her MI about other persons' battles with major illnesses but found after her own MI some parts of these books were too close to her own situation to read.

... I don't know whether you know the name of a man called Norman Cousins ... he wrote a book called The anatomy of an illness which I read many, many years ago and he subsequently wrote another book called The healing heart. Now, I read it many, when it first came out many, many years ago and I thought it was a fascinating, interesting book, and he's a fascinating and interesting man. So, when I came home, two or three days after I'd been home, I thought I'd reread it and ya know that I couldn't read some of it. Ah, it was too close to me and ah the, especially the part where he had his major heart attack ...

Although this subject continued to read other things regarding the heart she tried not to focus only on illness and also began to read things that were on the lighter side.

... and I like to read other things too but ah I don't want to just sort of focus on health and ya know ill health because I just don't want to do that. I think that's not an absolutely good thing.

This subject also practiced techniques such as meditation and scattered imagery and believed these techniques could have

a positive effect in her recovery. She did not necessarily view advanced medical and surgical techniques as wrong, but she was taking into account all that she had read before making a decision to have the angiogram that was requested by her cardiologist.

... but it is certainly making me think, think a bit more about it ya know because if I can lead a reasonably interesting life, which is important to me and, and cope with ah ya know things and lis., and then learn to listen to my body more, at least not listen to it but do what my body says uh cause I've told you I meditated ya know and I still do, I, I think somehow that I should be able to make my own bypass, whether I will or not is another story, so we'll see.

It became evident as the interviews progressed that for these five subjects their individual preferred method of learning influenced the extent to which they participated in the education process. The two subjects who acknowledged they had inadequate reading abilities preferred to receive information on an one-on-one basis and only minimally sought any further information about MI after discharge from hospital. The three subjects who preferred reading were the subjects who took a more active role in obtaining information about MIs from other sources such as books, television shows, and friends. In addition, for one subject beliefs and opinions held prior to the MI about alternative health care techniques were also observed to influence that subjects

choices during the recovery period.

Summary

The occurrence of a MI was perceived by the participants in this study as a significant event that precipitated feelings of shock, disbelief, and injustice. Although the MI was viewed as a motivating factor for change, the impact of the MI varied depending on how serious the event was perceived to be by each individual participant. The participants believed their MIs to have been caused by diet, smoking, stress, heredity, and overexertion. Lifestyle adjustments made by the participants included changing their diet, managing angina, incorporating medications, walking daily, and/or quitting smoking.

The concerns expressed by the participants were not unanimous but rather reflected each individual's situation and experience. Their major concerns included: fearing another heart attack; adjusting to a decrease in physical stamina with continued feelings of limitation; eliminating stress as a lifestyle component; and, desiring more information on the amount of damage caused by the MI, prognosis, and treatment.

The cardiac education received by the participants varied, but the information obtained from the MI book, physicians, dieticians, and nurses was viewed as beneficial. Those subjects who preferred reading as a method of

instruction took a more active role in self education and used other sources such as friends, books, and television shows to learn more about the MI experience.

In this chapter a description of the illness experience following a MI for the five participants in this study has been presented. In Chapter Five, these findings will be discussed in relation to the purpose of the study, Anderson's framework, and the literature reviewed.

Chapter 5

Discussion of the Findings

Introduction

In this chapter the findings of this study will be discussed in relation to the purpose of the study, the framework used to conceptualize the problem, the literature reviewed in Chapter Two, and where necessary additional literature. The purpose of this study was to examine patients' illness experiences following a MI in order to determine what it meant to patients to have a MI, what patients identified as learning needs following a MI, and how patients met these learning needs. To examine this experience from the patients' perspectives the research method of phenomenology was used which produced an extensive amount of data. The data presented in Chapter Four included all aspects of the illness experience following a MI as described by the participants. It would be a formidable task to discuss all aspects of this data, therefore the discussion in this chapter will be restricted to the specific purposes of this study and will address the meaning of the MI, the learning needs identified, and how learning needs were met.

Meaning of the MI

The meaning of the MI was determined by examining how the subjects viewed the occurrence and impact of the MI. For the subjects in this study the extent of the MI's impact, and their willingness to make adjustments post-MI were influenced by their beliefs as to the causes of their MI.

The initial reaction of the subjects to the MI was that of surprise and disbelief. Even the subject who had a fourteen year history of angina could not believe what was happening. One gentleman continued to deny that the event had been a MI and at his six week follow-up appointment again questioned the diagnosis with his cardiologist.

The feelings of injustice expressed by a majority of the subjects reflects their attempts to rationalize to themselves the occurrence of the MI. For most it was difficult for them to understand why they had had a MI when they knew many people who had worse habits or did not take care of themselves as well as the subjects felt they had.

An examination of what these subjects considered to have been their risk factors for MI may explain somewhat their inability to view themselves as candidates for MI. The written education material received and read by all the subjects identified nine risk factors: family history, being male, diabetes, high blood pressure, smoking, high blood cholesterol, overweight, lack of exercise, and stress (The

heart talk series heart attack, 1988). The subjects were also aware, through this literature, that their risk for MI increased with the number of risk factors.

Certain factors have been identified which may have increased your risk of having a heart attack or having another one. People with one of these factors are almost twice as likely to have a heart attack as those with none. Those with two of these factors may more than triple the risk. Those with three may multiply their risk of heart attack by ten. (p.10)

However, even with their exposure to this information the subjects often overlooked a majority of their own risk factors.

In the analysis of the data, it was found that the subjects had a minimum of three and a maximum of six of the nine risk factors. Three subjects were unaware of what their cholesterol levels were, thus high cholesterol levels could have added another risk for those three subjects. Therefore, from the perspective of a health professional these subjects were in fact prime candidates for cardiac disease, yet the subjects did not view themselves as such.

In regards to certain risk factors the subjects often compared themselves to people they knew. They acknowledged in a sense the presence of the risk factor, but felt they knew others for whom it was even a greater risk. Comments such as

a person ate more fat, was more overweight, or had a more stressful job than they did were frequent. Instead of examining their entire risk profiles the subjects appeared to have concentrated on one or two of their risk factors. Therefore, it was not surprising when the subjects were asked specifically what they felt caused them to have a MI that most only named one or two risk factors or gave reasons other than risk factors as causes of their MI.

The subjects in this study identified such things as diet, smoking, stress, too much salt, heredity, and overexertion as causes for their MIs. However, not every subject who had these factors identified them and other risk factors such as diabetes, high blood pressure, lack of exercise, and being overweight were never mentioned by the subjects for whom these were major risk factors. This finding supports previous research done on the patient's perspective as to the causes of MI.

Rudy (1980) found in her study of patients' and spouses' causal explanations of a MI that tension was the most frequent cause given by both patients and spouses. She further states that "in general, patients with an identifiable medical risk factor and their spouses did not name that risk factor as an explanation of their heart attack at either the acute or convalescent phase of their illness" (p.355).

Fielding (1987) and Murray (1989) also examined the

patients' beliefs regarding the causes of MI and found that psychosocial factors such as overwork, stress, and worry were most often cited by patients. Although smoking was also found to be the most cited physical cause, the percentage of smokers recognizing it as a factor varied between the two studies. It should be noted that both smokers in this study had acknowledged their smoking as a factor.

The emphasis placed by patients on psychosocial causes and by health professionals on the more standard risk factors concerned both Fielding (1987) and Murray (1989). They believed that what patients perceived as causes of their MI would influence the lifestyle adjustments made by patients, therefore possibly leading to poor compliance following a MI.

Although this study did not address adjustments and compliance specifically the adjustments made by the participants following their MIs were noted to reflect somewhat the participants beliefs as to the cause or causes of their MI. Thus, smokers quit smoking, and people who viewed diet as a factor made diet changes. Also, the subject who felt her MI was caused by pushing herself too hard had made decisions to decrease her involvement in certain activities. More than one subject had related stress as a cause of their MI but these subjects were unsure of how they would change that in their lifestyles. Since the subjects who had diabetes and hypertension did not relate them as risk factors it was

not surprising that keeping these illnesses in control was not mentioned as being important following their MIs.

It appears that the adjustments made, or not made, by participants in this study were in fact influenced by the participants' perceptions, whether accurate or not, as to the cause of their MIs. As well, subjects were unsure as to how they could manage some factors such as stress. This lends support to Murray's (1989) contention "that account needs to be taken of the patients' beliefs in this area so that correction of misconceptions can form a part of the process of individually-planned rehabilitation" (p.691).

The impact of the MI on the participants in this study varied, with two subjects viewing it as an impetus for change in their lives, two relating it as having minimal effect, and one believing it was something he would get over and if he did not there was not much he could do about it one way or another. The most significant impact appeared to be one of a physical nature. All subjects reported fatigue and a decrease in their physical stamina. Fatigue post-MI has been noted in other studies (Dunn, 1985; Hilgenberg, & Crowley, 1987; Mayou, Williamson, & Foster, 1978; Wishnie, Hackett, & Cassem, 1971). For the subjects in this study fatigue continued throughout the recovery period with most subjects reporting that they were not back to normal activities by the time of their second interview at least six weeks after discharge from hospital.

The initial two subjects, who were followed longer, still had complaints of being tired and not feeling "back to normal" 14 and 16 weeks post discharge. One subject related that the days she felt blue were the days she had less energy.

The older three subjects also reported a slow return to social and recreational activities. This finding was similar to that of Hilgenberg and Crowley (1987) who found one third of the 25 post-MI patients they interviewed reported going to fewer social gatherings.

Anxiety and depression have been reported in the literature as outcomes following MI (Hilgenberg, & Crowley, 1987; Nagle, & Gangola, 1971; Mayou, Williamson, & Foster, 1978; Wishnie, Hackett, & Cassem, 1971) Two subjects in this study reported feeling down or blue post-MI and it was the same two subjects who expressed fears of having another MI. These two subjects also viewed the MI as a catalyst for change in their lives, thus the MI appeared to have impacted on them more than it had on the others in this study. For the others, viewing the MI as not serious and having a personal philosophy of "what will be, will be" may have helped them psychologically in their recovery post-MI.

It is evident that the occurrence of a MI did not hold the same meaning for all of the subjects in this study. The attempt by each subject to rationalize why they had had a MI and to focus only on certain risk factors reflects an effort

by the subjects to understand what had occurred to them from their perspective. Their understanding of the causes of their MI and the seriousness of it also appears to have influenced their adjustments and outcomes post-MI.

Learning Needs

In this study a learning need was defined as a concern identified and expressed by the patient, for which the patient required information in order to manage on a day-to-day basis following a MI. The subjects found it difficult to directly articulate learning needs or areas where they lacked information but the researcher through the analysis of the interviews was able to identify areas of concern.

The traditional topics for cardiac patient education such as anatomy and physiology of the heart, risk factors for coronary artery disease, signs and symptoms of heart attack, cardiac diet instruction, and use of medications were not the type of areas acknowledged by the participants as causing them concern. It can either be assumed from this that the information received by the subjects was perceived to be adequate in these areas or that these topics were not perceived by the subjects as a priority in the recovery period at home. The fact that most of the subjects were not aware of all their risk factors may lend credence to the idea the subjects did not perceive certain topics as priorities.

However, this is not to say that the participants did not find information on such topics as diet, and medications, beneficial, only that they expressed satisfaction in what they knew in these areas. The purpose of this study was not to evaluate the subjects' level of knowledge in these areas, therefore it is impossible to state if more information was required. The fact that the subjects put personal limitations on such things as their diet adjustments suggests that the subjects were only willing, regardless of the information given, to make certain changes in their lifestyles. In the area of exercise, personal limitations were also noted as one subject related she was walking but wanted to do it at her own pace and that she was not willing to start something she did not feel she could continue.

Activity restrictions and resuming of activities appeared to be the only traditional area of cardiac patient education in which the subjects in this study lacked information. It was very important for the subjects to know when they could resume driving, working, traveling, and exercising. The general guidelines for activities laid out in the MI book were viewed as helpful but most subjects varified with their individual cardiologists what the specific restrictions would be for them and when they could resume certain activities. Some patients reported they had received instructions from their cardiologists regarding activities before leaving the

hospital, yet once home they often wanted to varify again with their cardiologist before trying some activities.

This focus on the need for more information on activity restrictions and limitations in the recovery stage at home was also identified by Moynihan (1984) in her study of the educational needs of post-MI patients. According to Moynihan Phase III of recovery, which begins at discharge and ends when the patient returns to previous productive lifestyle, was the time when patients identified their educational needs as requiring instructions on specific hobbies, sexual activity, and other activity limitations. In her study she concluded that "patients expressed a need to have instructions on items which would facilitate their resumption of a normal lifestyle" (p.445). The fact that subjects in this study appeared discouraged because they were still experiencing fatigue and had not resumed fully their normal activities shows that these subjects were also concerned with resuming a normal lifestyle.

In conjunction with resuming a normal lifestyle the subjects in this study were also quite concerned with finding out the specifics about the damage caused by their MIs, what their prognoses would be, given the amount of damage, and what treatments would be offered. It appeared that they were still searching for what the occurrence of a MI would ultimately mean to their futures and what type of restrictions they could expect, thereby placing the emphasis on the reality of the

situation. Focusing on the reality of an illness and wanting to know information that would help to plan for both immediate and long-range problems an illness would impose was also identified by Dodge (1969) in her study of learning needs as the patient's main cognitive need. In the present study the subjects appeared satisfied with the information they had received for the immediate recovery period but once home they were concerned with long-range plans.

Generally, the subjects in this study appeared satisfied with the information given in the traditional areas of cardiac education. The concerns identified focus on the subjects desire to know more about their individual situations regarding activity restrictions, damage done by MI, prognosis and treatments. It appeared that the subjects were concerned about the reality of the situation and were trying to put their MI in perspective by planning for the long-term.

Meeting Learning Needs

The patient education received by the subjects in this study was not consistent, as described previously. However, other than the timing of the one-on-one instruction received by one subject, the subjects appeared satisfied with what they had received from health professionals. It was disconcerting to the researcher that only two subjects received any patient education from nurses. It was encouraging however, that the

two subjects who had received this instruction found it beneficial.

Physicians, specifically cardiologists, were viewed by the subjects in this study as the principal sources of information. The subjects often asked questions of their cardiologists while in hospital and all had prepared lists of questions to take with them when they went for their follow-up visits later in their recovery. Four of the five subjects had had contact with their family physicians during this time as well.

Patients' preference for teaching, regarding the specifics of their own heart condition, to come from physicians was also noted by Tilley, Gregor, and Thiessen (1987). In their study of the nurse's role in patient education these researchers found not only were there incongruencies between nurses and patients in who patients viewed as the preferred teacher, but when patients felt teaching should be done, and what teaching the patients desired from nurses. They concluded that nurses must stop making assumptions about patients' desires regarding patient education and that nurses need to validate patients' preferences in: "(a) the educational approaches with which patients feel most comfortable (e.g. group or individual strategies), (b) the timing of patient teaching, and (c) the type of information patients can accommodate during various

stages of their illness and recovery" (pp. 299-300).

The findings from the present study support the need for patients' preferences to be validated. Of the five subjects in this study, three preferred reading and two preferred one-on-one instruction as methods of obtaining information. As well, only one subject expressed interest in participating in a group education program with the other subjects relating that groups were not their style. Only three subjects commented on the timing of education received, and as previously described they were not in agreement as to when teaching should take place, which indicates timing of education was a personal preference. As previously discussed, the type of information patients wanted in the recovery period at home differed from the traditional topics of cardiac patient education suggesting that patients needs vary at different stages of their illness.

The degree to which the patients in this study participated in self education following their MI varied. There appeared to be a correlation between learning styles, impact of MI and motivation for self learning, with the two subjects who had felt the MI had impacted on their lives the most, and who preferred reading, taking on the most active roles in self education. These two subjects used a variety of sources to obtain further information from magazine articles, to television shows. The extent to which patients required

further information appeared to be a personal preference with the subject most active in self education describing herself as a person who 'craves' information.

Both subjects who reported inadequate reading ability preferred the one-on-one method of instruction and neither actively sought any further information except for questioning their physicians. This would suggest that nurses need to assess patients' preferences in instructional methods to ensure that patients receive information in a way that is easily comprehended by them.

Although not all subjects preferred reading, all five subjects reported reading the MI book received in hospital and four continued to use it as a reference at home. This is encouraging for patient educators who spend time and effort in developing these written teaching aids. However, it must be stressed that the presence of these aids does not relieve the nurse of her responsibility in making sure patients are equipped with the information they need for their recovery at home. As discussed previously, patients may have needs for more specific information regarding their illness and these needs cannot be dealt with in a general information book.

The subjects in this study used their physicians, specifically their cardiologists, and the MI book received in hospital as their principal sources of information. The degree to which subjects participated in self education

varied, as did the amount of information desired by each participant. The subjects who preferred reading as a means of obtaining information took on a more active role in their own education.

Relation of Findings to Conceptual Framework

Anderson's (1985) adaptation of Kleinman's health care system framework was used to conceptualize the problem being investigated in this study. According to Anderson "interactions between the nurse and client are transactions between explanatory models which differ in cognitive content, expectations and goals" (p.238). Explanatory models "contain explanations of any or all of the five issues: etiology; onset of symptoms; pathophysiology; course of sickness (severity and type of sick role); and treatment" (Kleinman, 1978, pp.87-88). Using the research method of phenomenology it was hoped that a better understanding of the patient's explanatory model of the MI experience would be obtained.

The findings from this study have shown that patients perceive the etiology, the course of their illness and the treatment for their MI from the perspective of their world. Regardless of the information the patients had on standard risk factors they analyzed their situations individually by comparing themselves to others and identifying factors in their lifestyles which they believed contributed to their

having a MI. Some adjustments were made according to these beliefs, with the subjects applying personal limitations on these adjustments. The patients desire to know the amount of damage caused by their MI, their prognosis, and future treatments demonstrate that they were concerned with how this illness would effect their lives in the future. The goal of the subjects appeared to be a return to normal activities.

Summary of Findings

The initial reaction to the MI event, for these subjects, was that of surprise and disbelief. The subjects attempted to rationalize their MI and expressed feelings of injustice because they considered the effects of their risk factors to be minor when compared to other people they knew. The subjects analyzed their risk factors from their own perspectives often focusing on one or two factors and not their risk profile as a whole. Their beliefs regarding the seriousness and causes of the MI appear to have influenced both their outcomes and adjustments following their MI. Thus, the impact of the MI varied from having minimal effect to being an impetus for change. A decrease in stamina with feelings of limitation appeared to be the most significant physical outcome noted by these subjects.

The traditional topics of cardiac patient education were not identified as causing concern for these subjects. The

learning needs of these subjects during the period of recovery at home related to knowing more about their own individual situation regarding such things as activity restrictions, damage done by the MI, and their prognosis and treatment. The focus for these patients appeared to be obtaining information that would enable them to plan for the long-term.

The cardiac patient education received by these subjects from health professionals was not consistent. Physicians, especially cardiologists, were viewed as principal sources of information and those who had received information from nurses, and dieticians considered it beneficial as well. The MI book, The heart talk series heart attack, was perceived by the subjects as being helpful and was often used as a reference by the subjects at home.

The degree to which the subjects participated in self education varied with the subjects who preferred reading, as a method of obtaining information, taking the most active role in their own education. The amount of information sought appeared to be influenced by the subjects personal desire for information and the impact the MI had had on the subject.

Conclusions

The subjects desire to rationalize their MI by comparing themselves to others may have resulted in these subjects minimizing the magnitude of their own risk factors. Risk

factors that appeared obvious to this health professional were overlooked by these subjects, such as diabetes, hypertension, and being overweight. This supports the supposition that subjects' beliefs regarding the causes of their MI may differ from that of the professional. However, there appeared to be a willingness on the part of the subjects to make adjustments in areas they viewed as important. Thus, it should be stressed that an assessment of the patient's perceptions regarding risk factors and causes of MI is desired in order to promote and encourage risk factor modification on an individual basis.

The information received by the subjects on the traditional topics of cardiac patient education were viewed as beneficial. However, the desire of the subjects to know more of the specifics about their activity restrictions, damage caused by the MI, and their prognosis and treatment reflect the subjects' focus on the reality of their own individual situation. Thus, general information may be helpful but in order to make long-term plans patients require that the information received be organized according to their individual needs.

The information needs of these subjects varied, as did their desire and motivation to obtain information. Personal preferences for the method of instruction, timing of education, and type and amount of information received were

expressed by these subjects. The type of information requested in the recovery period at home reflected the subjects' desire to understand the long-term effects of their MI. Therefore, general information regarding MI and its treatment can be viewed as helpful to patients but they still require specific information about their own MI.

Although the MI book was viewed as beneficial it contained only general information, thus the desire for information specific to themselves may have been the impetus for these subjects to use their physicians as principal resources. The subjects appeared unclear as to the role of nurses in the education process, with only one of the three subjects not receiving instruction from nurses even commenting on its absence. In the next section the implications these findings have for nursing practice, education, and research will be presented.

Implications for Nursing Practice

Nurses in the practice setting must be cognizant of the fact that the patient's perspective of the MI experience may differ from that of the health professional. Nurses cannot assume that what is obvious to them, in regards to risk factor modification and lifestyle adjustments post-MI, will be obvious to the patient.

In order to deliver patient education that will be more

beneficial to the patient nurses must complete individual assessments which identify the patients: (1) beliefs regarding risk factors and causes of MI; (2) desire for information; (3) preference for method of instruction; and, (4) preference for timing of education. This type of assessment will help nurses in clarifying misconceptions that might influence adjustments made by patients and to identify the method and timing of instruction desired by patients.

The fact that only two of the five subjects in this study received patient education from nurses during the hospital stay leads one to question the priority given to patient education in the practice setting. As well, the findings in this study demonstrate that patients do have information needs following their MIs but that they are unclear as to the role of nurses in fulfilling these needs. Thus, nurses must be more active in delineating their role in patient education and actually functioning in that role.

Implications for Nursing Education

The promotion of the nurse as a patient educator begins with each nurse's educational development. Students must be prepared to take on the role of patient educator and to be supplied with the tools necessary to teach their patients. It is hoped that the priority given to patient education throughout the students educational experience will be

transferred to the practice setting.

Nurse educators must also prepare their students to consider that the patient's perspective of an illness experience may differ from that of the health professional. An awareness of these differences will prompt the student to more fully analyze the illness experience by including the patient's perspective.

Implications for Nursing Research

The small sample size in this study limits the amount of direction that can be taken from the findings. However, the findings suggest that further study in this area is required to better understand the illness experience of patients post-MI and their education needs. Therefore, a replication of this study using a larger sample is recommended.

During the analysis of the data other areas of concern were raised that invite further research of the patient's MI experience. These areas include: (1) the influence of patients' health beliefs on lifestyle adjustments post-MI; (2) the maintaining of patients' lifestyle adjustments over the long-term; (3) the differences in perceptions of the experience in relation to patients' gender; (4) the differences in perceptions of the experience in relation to patients' age; and, (5) the influence of learning styles on patients' participation in their own patient education. As

well, the findings in this study support the need for more research into the nurse's role in patient education from both the perspective of the nurse and the patient.

Summary

In this chapter the findings of this study were discussed in relation to the purpose of the study, the conceptual framework, and the available literature. The findings were summarized and the conclusions presented. Lastly, the implications of these findings for nursing practice, education, and research were presented.

In conclusion, the findings of this study suggest that health professionals and patients do view the MI experience from different perspectives. The emphasis of the patients on understanding the MI experience from the reality of their world is reflected in their attempts to rationalize the occurrence of the MI and their desires to know more about their own MI, prognosis, and treatment. In order to plan patient education that will assist post-MI patients in their recovery health professionals must assess patients individually for their: (1) beliefs regarding risk factors and causes of MI; (2) desire for information; (3) preference for method of instruction; and, (4) preference for timing of education.

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Appendix A

Physician Information-Consent Letter

My name is Dawna DeAdder. I am a Registered Nurse and a student in the Master of Science in Nursing Program at the University of British Columbia. I am conducting a study entitled "The Illness Experience of Patients Following a Myocardial Infarction: Implications for Patient Education". This study will examine what it means to patients to have had an MI and how having had an MI affects their day-to-day lives. The focus of this study is to examine how these experiences relate to what patients identify as their learning needs post MI and how they meet these needs.

I would like to interview a sample of your patients regarding their illness experience following an MI. The first, of two interviews, with each participant will be conducted two to four weeks following the participant's MI. Second interviews to validate and clarify data will be conducted as data is being analyzed. The interviews will be approximately one hour in length and will be conducted in the participants' homes. I would like to commence interviewing as soon as possible.

To participate in this study an individual must be between the ages of 30 and 65, able to speak and understand English, experiencing his/her first MI, and living within the city of Vancouver. Eight to ten participants are required and will be obtained from the University Hospital, UBC Site. The

Appendix B

Participant Information-Consent Letter

My name is Dawna DeAdder. I am a Registered Nurse and a student in the Master of Science in Nursing Program at the University of British Columbia. I am interested in learning about cardiac patients' illness experience following a heart attack. My study is entitled "The Illness Experience of Patients Following a Myocardial Infarction: Implications for Patient Education".

I am inviting you to participate in this study. Participation entails being interviewed on two occasions. If you wish to participate you will be interviewed in your home in 2 to 4 weeks time. I will conduct the interview which will take approximately one hour and it will be tape recorded. To help clarify information obtained during the first interview it will be necessary to interview you again at a later time. If at any time you wish to stop the interview, stop the recording, or have portions of the tape erased you may.

Although your participation in this study may not benefit you directly, the sharing of your experience will help nurses better understand the illness experience of patients following a heart attack which will improve care for heart attack patients in the future.

Your participation in this study is strictly voluntary and refusal to participate will not affect your medical or nursing care. You may withdraw from the study at any time.

Appendix C
Demographic Data Sheet

- (1) gender _____
- (2) age _____
- (3) ethnic origin _____
- (4) primary language _____
- (5) occupation _____
- (6) marital status _____
- (7) education level _____
- (8) other health problems _____

Appendix D

Interview Trigger Questions

- (1) Tell me about your first few weeks at home following your heart attack.
- (2) How has having had a heart attack affected your day-to-day routine?
- (3) What information did you receive about your heart attack? and from whom?
- (4) Now that you are home, what information do you feel is helpful or would be helpful in managing your heart disease?