

GETTING BACK TO NORMAL:
WOMEN'S RECOVERY AFTER A
MYOCARDIAL INFARCTION:
A GROUNDED THEORY STUDY

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BRENDA TOBIN



Getting Back to Normal:
Women's Recovery After a Myocardial
Infarction: A Grounded Theory Study

by

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A thesis submitted to the School of
Graduate Studies in partial fulfilment
of the course requirements for the degree
of Master of Nursing

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ABSTRACT

Despite the fact that many women survive a myocardial infarction and are able to resume their roles and responsibilities, with perhaps some modification after their heart attack, little is known about their recovery from this event. Thus, the purpose of this study was to use a grounded theory approach to examine the recovery process for women who experienced an acute myocardial infarction. Interviews conducted with 12 women, who ranged in age from 60 - 80 years and who had experienced a myocardial infarction, provided the major sources of data. The findings of this study indicate that the recovery process is variable and encompasses four stages. In each of these stages the individual focuses on the basic social psychological process of 'getting back to normal'. In the first stage of the process, 'accepting what has happened', the woman attempts to come to terms with the event by confronting mortality and looking for causes. Encountering limitations, accepting limitations, and reducing insecurities are hallmarks of the second stage, 'establishing boundaries'. Throughout the third stage, 'making adjustments', strategies such as testing the waters, monitoring self, and weighing costs and benefits are employed to assist the individual in her attempt to get back to normal. If the first three stages are successfully mastered, the

individual progresses to the fourth stage, 're-establishing normality'. This final stage is characterized by the redefining of normal and the resumption of independence. Findings from this investigation may give new insights into developing guidelines for a cardiac rehabilitation regime that is grounded in a sound scientific rationale and is gender sensitive, addressing women's unique experiences and concerns. Included in this study are implications for nursing practice, nursing education, and nursing research.

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CHAPTER 1

Cardiovascular disease is a significant cause of mortality and morbidity in women (Canadian Centre for Health Information, 1991). The Heart and Stroke Foundation of Canada reports that heart disease and strokes combined cause 41% of deaths among Canadian women annually. Ischemic heart disease accounts for 23% of these deaths, of which more than half are attributable to acute myocardial infarction. However, statistics indicate that since the late 1960s the mortality rate for women from acute myocardial infarction has steadily decreased while the survival rate has increased (Center for Health Information, 1991). Despite the fact that many women survive a myocardial infarction and are able to resume their roles and responsibilities with perhaps some modification after their heart attack, little is known about their responses to and recovery from this event. The majority of research on recovery after a myocardial infarction has been done only with men (Debusk, Houston, Haskell, Fry, & Parker, 1979; Fleury, 1991; Oldridge & Streiner, 1990) or has included a limited number of women as subjects in the study (Fleury, 1993; Holm, Fink, Christman, Reitz, & Ashley, 1985; Kison, 1992; Miller, Wickoff, McMahon, Garrett, & Ringel, 1988). Research on the recovery process of women who have experienced

a myocardial infarction has largely been ignored (Flavell, 1994).

Traditionally, heart disease, particularly myocardial infarction, was thought to be a male disease (Healy, 1991). However, recent research has shown that coronary artery disease is a disease that affects both sexes, with women lagging an average of 10 years behind men in the development of the disease and 20 years behind in experiencing a first myocardial infarction (Flavell, 1994). Studies have indicated that as women age, the incidence of coronary artery disease increases sharply (Flavell, 1994). Further research has shown that 40% of hospital discharges of older women are due to heart problems (Young & Kahana, 1993).

Many epidemiological studies indicate that when acute heart conditions, such as myocardial infarction are examined, the consequences for women may be more serious (Kannel, Sorlie & McNamara, 1979; Tofler et al., 1987). It appears that women have more problems during recovery and rehabilitation after myocardial infarction than men and that these problems differ somewhat. Women tend to have longer, more complicated courses after their heart attacks. In general, following an acute myocardial infarction women tend to experience more psychological symptoms, including anxiety and depression, than men (Boogaard, 1984; Murdaugh, 1990). Furthermore, women report having more fears about resumption of sexual activity

than men (Baggs & Karch, 1987; Boogaard, 1984). Women return to paid employment less often than men after cardiac events, although return to work is not necessarily a reflection of disease severity and might not be a suitable measure of recovery in women (Boogaard, 1984; Sharpe, Clark, & Janz, 1991). Female clients, more frequently than male clients, report physical symptoms that are primarily cardiac and that limit activity (Young & Kahana, 1993). Women report longer recovery and more days lost because of cardiac symptoms than do men (Conn, Taylor, & Abele, 1991). Domestic responsibilities are a major source of concern for recovering women, and women often return to high-demand activities in the home sooner than is advisable (Boogaard, 1984). Moreover, women are referred less often to outpatient cardiac rehabilitation programs, enroll less frequently, and have poorer attendance than men (Ades, Waldman, Polk, & Coflesky, 1992; Oldridge, LaSalle, & Jones, 1980; Shuster & Waldron, 1991). Additionally, women report more difficulty adhering to lifestyle changes during cardiac recovery (Cochrane, 1992; Douglas, 1993; Fleury, 1991; Murdaugh, 1990).

By the year 2000, close to 40% of women in the United States and Canada will be 45 years or older. This suggests that cardiovascular disease may affect an even greater proportion of women (Reddy, 1995). With the increasing incidence of cardiovascular disease in general and myocardial

infarction in particular, there will be a substantial number of women who will need assistance in recovering from this event. Although there is increasing research and discussion on women recovering from myocardial infarction, to date, little attention has been given to women's recovery as a relevant and legitimate concern for study (King & Jensen, 1994). Basing care and expectations for women's recovery on what has been learned from a traditionally male dominated area of research is clearly inappropriate (Young & Kahana, 1993). Thus, the present study aims to address research needs by focusing on what the recovery process is like for women who have experienced a myocardial infarction. A grounded theory mode of inquiry is used for this purpose.

The rationale and problem statement, the purpose, and the research question will be outlined in the remainder of chapter one. Chapter two is a presentation of the literature review pertinent to the focus of the research. Chapter three contains a discussion of grounded theory as a methodology, based on the approach as outlined by Glaser and Strauss (1967) and further explicated by Chenitz and Swanson (1986). The findings will be presented in chapter four. Chapter five is a discussion of the findings, and chapter six explores the implications and limitations of the study.

Rationale and Problem Statement

The impetus for this research comes from my nursing practice. While working with clients in a cardiac rehabilitation program, I observed that the number of male clients attending the program overwhelmingly exceeded that of the female clients, yet, a substantial number of women were admitted as in-patients with an acute myocardial infarction. This observation prompted me to question what happened to these women. How was their recovery facilitated? As I read about women and rehabilitation after a myocardial infarction, I wondered what recovery even meant for them. What does the recovery process entail? Is attendance at a cardiac rehabilitation program an essential component of the recovery process? Is attendance at cardiac rehabilitation synonymous with recovery? These are just some of the questions I thought I needed to answer in order to understand the process better. If women are to be helped to successfully recover from a myocardial infarction, research is needed to explore and understand what the recovery process is like for women.

There is a growing body of literature indicating that there are gender differences both in distribution of and response to different disease entities and illness experiences (Ayanian & Epstein, 1991; Bickell et al., 1992; Council on Ethical and Judicial Affairs, 1991; Puletti, Sunseri, Curioni,

Erba, & Borgia, 1983; Steingart et al., 1991; Tobin et al., 1987) and while a great deal is known about these in relation to men, little is known about women. Women's worlds, and the sociological context within which they live their lives are qualitatively different than men's (Anastasi, 1970; Verbrugge, 1985), yet, the medical and nursing care offered to women recovering from a myocardial infarction is often based on research with men (Boogaard, 1984; Cochrane, 1992; Hamilton, 1991; Lerner & Kannel, 1986). Research in the area of cardiac recovery and rehabilitation has failed to address the recovery process for women and what their specific needs may be within the context of their families and other environmental challenges (Cochrane, 1992; Kuhn & Rackley, 1993; Murdaugh, 1990; Parchert & Creason, 1989). It is unrealistic to base women's care and expectations for recovery on what has been learned from almost exclusively middle-aged male populations (King & Jensen, 1994). This practice of trying to fit women into the prevailing male model of recovery can no longer be tolerated as valid from either a research (MacPherson, 1992) or feminist perspective (Sampelle, 1990). Therefore, research on recovery from myocardial infarction that features women as study participants is imperative.

Over the last decade, sex differences and gender biases in the area of cardiovascular health have been identified and recognized as problematic for women and those caring for women

(King & Jensen, 1994). Some attempts have been made to rectify the problem of having a dearth of empirical information about the care of women who have cardiac disease and about women's recovery from cardiac disease. Consequently, large scale, randomized, prospective research studies such as the Women's Health Initiative have begun but publication of results is many years away (Healy, 1991). At present, information about heart disease in women is being generated by pooling data from previous studies with relatively small populations of women and re-examining specific issues in relation to women.

The bulk of the research on women focuses on physiologic risk factors despite evidence that psychological risk factors may play a role in the etiology of coronary heart disease (Matthews & Stoney, 1988). A number of studies have reported on the medical aspects of recovery from myocardial infarction in women (Wenger, 1990). At least two recent studies suggest that women receive less aggressive treatment following myocardial infarction and that treatment strategies may affect outcome (Ayanian & Epstein, 1991; Steingart et al; 1991). However, none of these studies explored the role of psychosocial factors in female recovery from myocardial infarction. Only a few studies addressed affective or social sequelae of myocardial infarction and a significant portion of these commented on gender differences only parenthetically.

Low (1993) carried out a computerized search of the psychosocial and medical literature published during the past 15 years in women's recovery from cardiac events. All studies of psychosocial factors and recovery from cardiac events reporting separately on women were included in the review. There were only 16 studies that reported on psychosocial factors and women's cardiac rehabilitation or recovery identified over the 15 year period, although many studies included small numbers of female subjects or made brief mention of female outcomes. Thus, a more comprehensive investigation of women's experiences is required if the process of women's recovery is to be understood.

Numerous gaps are evident in the current literature on women's recovery from a myocardial infarction. To date, the nature of what women experience during recovery from an acute myocardial infarction has not been explored in a thorough or systemic manner. Subsequently, current knowledge of the recovery process in women is inadequate to deliver highly focused care to these women. Further research must be done in order to improve the effectiveness of rehabilitation and determine appropriate interventions for women with cardiac disease. Nursing research is also needed to understand the choices women make about their lifestyles after myocardial infarctions. Therefore, it is extremely timely to examine the process of recovering from a myocardial infarction for women

who have experienced this event. The findings from such an investigation may provide an explanation of what is happening with these women in relation to the recovery process and factors which impinge on this recovery. This knowledge will provide a better understanding of women's experiences, what recovery means to them, and can provide a direction for further research on women recovering from an acute myocardial infarction. On a more practical level it can provide areas for exploration with women during cardiac rehabilitation so that their care is more gender sensitive, addressing women's unique experiences and concerns.

Purpose of the Study

The overall purpose of the study is to use a grounded theory approach to examine the recovery process for women who have experienced a myocardial infarction. Additionally, this investigation will attempt to develop a substantive theory on the recovery process for these women. As more becomes known about the recovery process for women who have experienced a myocardial infarction, realistic expectations and goals can be formulated and effective interventions can be developed and implemented to enhance this process.

Research Question

The research question for this study is: What is the recovery process like for women who have experienced a myocardial infarction?

CHAPTER 2

Literature Review

The process of recovery is defined as the phase of illness when treatment ends or becomes predictable and the client begins to re-establish patterns of daily living (Corbin & Strauss, 1988). Numerous psychosocial and physiological factors have been associated with recovery following a cardiac event, in general, and a myocardial infarction in particular. Clients' perceptions of events have been shown to significantly affect outcomes after major cardiac illness (Ewart et al., 1986). Structured cardiac rehabilitation programs have been shown to assist the client who has had an acute myocardial infarction to achieve and maintain an optimal state of health (Wenger & Hellerstein, 1992). Sustained lifestyle changes and adherence to therapeutic regimes have been deemed essential for reducing or eliminating atherogenic risk factors (Stamler, 1985).

The literature review addresses psychosocial and physiological factors, cardiac rehabilitation programs, and lifestyle practices because of their significance to the recovery process. This review, which is comprised mainly of quantitative studies due to the paucity of qualitative studies, is organized according to the following topics: (a) gender and role expectations, (b) participation in structured

cardiac rehabilitation programs, and (c) adherence to therapeutic regimes.

Gender Differences and Role Expectations

The recovery period for men and women following a cardiac event appears to differ significantly (Murdaugh, 1990; Parchert & Creason, 1989). Boogaard (1984) found that men allowed themselves a period of passivity or no activity following hospital discharge; women begin household work soon after they return home. Women and men seem to use different cues and parameters to guide activity resumption after a cardiac event, which is consistent with what is known about gender and role differences in response to illness and surgery in general (Baker, 1989). Women's multiple roles can significantly influence the resumption of activities. Indeed, role demands may supersede physiologic cues as parameters shaping activity progression (Hawthorne, 1994).

A descriptive survey design was used by Hamilton and Seidman (1993) to compare the recovery period for men and women after an acute myocardial infarction. The purpose of the study was to compare return to work in men and women recovering from acute myocardial infarction. A purposive sample of 42 men and 20 women, who had been clients in a coronary care unit, participated in the study. A

questionnaire, developed by the authors, was distributed to the subjects after their discharge from hospital. There was no statistically significant difference between men and women in relation to return to paid employment postinfarction reported in the findings. However, there was a statistically significant difference found between men and women regarding resumption of household activities at the time of, and four weeks after the acute myocardial infarction. Four to six weeks after their acute myocardial infarction, 15 of the women were responsible for household activities compared with 14 of the men. The study used a small sample size and nonrandom sampling which limited the generalizability of the findings. Another limitation was the modest reliability of the questionnaire. The results of the study were, therefore, inconclusive in comparing return to work in men and women recovering from a myocardial infarction.

Sharpe et al. (1991) conducted an exploratory study to compare return to work in men and women recovering from acute myocardial infarction and to compare the differences in the impact of myocardial infarction on men and women aged 60 years and over. All subjects participated in telephone interviews which took approximately one hour to complete. The interview consisted of a series of questions assessing the respondent's general health and a series focusing on specific dimensions of the heart problem. A symptom checklist was also used, which

inquired about the number, frequency, and severity of symptoms experienced by cardiac patients. Functional health status was assessed by a series of questions relating to distance walked and number of stairs climbed with and without symptoms and by the Sickness Impact Profile (Bergner, Bobbitt, Carter, & Gilson, 1981). The sample consisted of 134 women and 189 men divided among six age/sex groups (men and women ages 60-69, 70-79, and 80+ years). The sample was obtained from a list of cardiac clients registered for an intervention study. Statistically significant differences were found between men and women in relation to return to work and impact of acute myocardial infarction. Women returned to work less frequently and reported a greater negative impact of acute myocardial infarction than did men.

In addition, they exhibited more cardiac symptoms and had poorer physical functioning than their male counterparts, a finding consistent across the three age groups. Women also rated their ability to carry out daily activities as less than that of men and expressed greater stress associated with "household responsibilities." The authors point out that the greater difficulty women experienced in carrying out their daily activities and their higher level of stress related to household matters may be, in part, a function of female roles within the home. They note that older women do not retire from household chores, and even symptomatic women may continue

to have domestic responsibilities. Performing these responsibilities in the face of illness, and/or worrying about the ability to manage is likely to lead to feelings of stress. Generalization of findings from the Sharpe et al. study is somewhat restricted by the nature of the convenience sample of older men and women who agreed to participate in an intervention study. The data presented were collected prior to the intervention and did not include information on specific diagnosis or comorbidities -- factors that have been found by other investigators to differentially impact on functional status (Nickel & Chirikos, 1990) and may have explained a portion of observed gender differences. Additionally, this study failed to address the reliability and validity of the Sickness Impact Profile. However, the results do help to identify some of the issues and challenges facing older women in managing heart disease.

Young and Kahana (1993) used a prospective design to address differential recovery patterns of elderly men and women in the aftermath of acute myocardial infarction. Specifically, the study explored health status and functional ability of older men and women during a one-year period following a myocardial infarction. A longitudinal study was conducted with 82 female and 164 male subjects. A convenience sample was recruited from the coronary care registries of seven hospitals in a large urban area of the United States.

Two postdischarge medical and psychosocial assessments were made at six weeks (Time 1) and one year (Time 2) posthospital phases. Data were collected using the Multilevel Assessment Inventory measures of instrumental activities of daily living (Lawton, Moss, Fulcomer, & Kleban, 1982), and Cardiac Symptomology Index (1964), a modification of the New York Heart Association measure for cardiac symptoms. Statistically significant differences in cardiac distress and functional ability were noted between men and women at Time 1, with women exhibiting a greater number of cardiac symptoms and greater functional disability than men. At Time 2, health status had improved overall for both males and females. However, there was still a statistically significant difference in cardiac symptomology, with women exhibiting more cardiac symptoms than men, at Time 2. The research showed several trends indicating poorer outcomes among aging women. Women had less chance of full recovery than did their male counterparts. In addition, in women, the number of cardiac symptoms rose and functional disability increased. These findings concur with those of Sharp et al. (1993).

There is also evidence that women's role demands add significant stress during recovery from cardiac illness (Elliott, 1995; Rankin, 1989). Women tend to report feeling guilty, less healthy than men, exhibiting more depression about inability to perform usual activities, yet, they

continue to assume responsibility for and perform these tasks (Cochrane, 1992; Hamilton, 1991).

Conn et al. (1991) used a correlational study to determine if gender and age differences exist in mood states and perceptions of well-being among acute myocardial infarction survivors. The authors compared 80 women and 111, men who had experienced acute myocardial infarction, on measures of anxiety, depression, quality of life, and health state. Anxiety and depression were measured by the Profile of Mood States by McNair, Lorr, and Droppleman (1971). Quality of life was measured by the Perceived Quality of Life scale (Patrick et al., 1988). Subjective health appraisals were assessed using investigator - developed questions. Statistically significant differences were found between women and men on measures of health state. Women reported having more chronic illnesses and more days of reduced activity than did men.

Further, increased age was associated with significantly more days of reduced activity, poorer subjective health ratings, and more chronic illnesses. The correlations between health variables and age were stronger for women than men. No statistically significant gender differences in anxiety, depression, or quality of life were found when men and women were compared. However, the authors did not control for severity of disease or use objective measures of cardiac

disability that could be related to decreased function or emotional distress. In addition, despite acknowledging the strong relationship between age and both psychological outcomes, anxiety and depression, the authors did not report controlling for age in their gender comparisons. The differences in health in the two groups may be the result of the women's greater age. The findings are thus limited by not controlling for differences such as age in the men and women, the nonrandomized sampling method, and the failure to address reliability and validity of the investigator - developed health appraisal instrument.

Johnson (1991) used a grounded theory approach to examine the process of adjustment that individuals experience after having a myocardial infarction. Twenty-six unstructured interactive interviews were conducted between a one-month and 26-month period postinfarction with a purposeful sample of seven men and seven women. The findings of this study indicate that the process of adjustment after myocardial infarction is variable and incorporates four stages. In each of the four stages the individual focuses on the core process of regaining a sense of control. The first stage of the adjustment process involves attempts to defend oneself against a threatened loss of control. In the second stage, the individual attempts to come to terms with the myocardial infarction. Throughout the third stage, the individual

employs numerous strategies in an attempt to re-establish a sense of control. If control is re-established, the individual progresses to the final stage of adjustment. The findings of this study also reflect gender differences in the adjustment process postinfarction. Many of the women felt uncomfortable with attempts made by family members to provide comfort and often chose to engage in prohibited activities rather than feel dependent. In contrast, rather than initially discouraging attention, most men encouraged and enjoyed it. Although most of the male informants minimally assisted with housework they performed it less vigorously and resumed it much later than did the women. Contrasts were also found in the ways men and women made lifestyle modifications.

The majority of men considered lifestyle modifications to be a joint venture with their spouses while women made lifestyle modifications independently, and were reluctant to make changes that might interrupt the family routine. Based on this research, the author concluded that further research is needed so that a more complete understanding of the experiences of the patient with myocardial infarction can be attained.

Other studies have been designed to investigate physical and psychological variables in men and women recovering from an acute myocardial infarction. Shuster and Waldron (1991) designed an exploratory study to examine gender differences in

exercise tolerance, self-efficacy, and anxiety. Convenience sampling was used to elicit the participation of 81 male and 20 female clients admitted to one of three phase II cardiac rehabilitation programs in northeastern Ohio. Client records and two questionnaires, the Physical Ability Self-Efficacy Questionnaire (Shuster, 1988) and the Trait Anxiety Inventory (Speilberger, 1983) were used to collect data. Statistically significant differences were found between women and men with women reporting less activity tolerance, greater anxiety, and less efficacy for physical ability than males. These authors failed to control for age, therefore, some of the activity and efficacy differences may be related to the females in the sample being older or sicker than the males. Generalization of conclusions from this study is limited pending further analysis with random samples of clients.

Research studies have examined sexual functioning in women who had experienced a myocardial infarction and have reported that a majority of women failed to resume their pre-infarction level of sexual activity, that many took longer to resume sexual activity, and that many were fearful about intercourse (Baggs & Karch, 1987; Hamilton & Seidman, 1993).

Papadopoulos, Beaumont, Shelly, and Larrimore (1983) used a survey design to determine the impact of a myocardial infarction on the sexual activity of postinfarction female clients. This research focused on the effect of myocardial

infarction on the sexual life of the female client in an effort to obtain data for future counselling and rehabilitation of the female client who has had a myocardial infarction. One hundred and thirty female clients, under 65 years of age, who had suffered their first myocardial infarction, were randomly chosen and interviewed using an author - developed questionnaire. Findings revealed that 51% of the clients and 44% of the husbands feared resumption of sexual activity. Sexual activity was not resumed by 27%, was unchanged by 27%, and was decreased by 44%. Only 45% of the total group received sexual instructions before discharge, and in only 18% of the cases did the physician raise the topic. Symptoms during intercourse were reported by 57% of the women. The findings indicate that a myocardial infarction has a negative impact on the sexuality of the female client. These results should be interpreted with caution as the authors failed to address the reliability and validity of the author - developed interview schedule. However, based on their findings, the authors suggested that accurate and complete sexual instructions of both partners with specific attention to the women's concerns and needs should be part of cardiac rehabilitation.

A descriptive survey was used by Baggs and Karch (1987) to gather data that could help nurses and other health professionals become more aware of the need for sexual

counselling in female clients with coronary disease. The purpose was to help meet client's needs more effectively and facilitate women's return to their prehospitalization level of sexual functioning. A convenience sample, comprising 58 women who had been diagnosed with myocardial infarction, was used. Data were collected using a researcher - developed structured interview schedule. The interview was conducted with each participant 2 or 3 days prior to hospital discharge. The authors found that only 33% of the women had received information about resuming sexual activity and that 29% of the women had expressed fear about resuming sexual intercourse. A larger sample size, randomized sampling, and an instrument with known reliability and validity would strengthen the validity of this study. The findings did, however, support the fact that women lacked knowledge about return to sexual activity; a lack of knowledge that might well impair return to pre-infarction levels of sexual activity and increase the fear that many expressed.

In a previously described study, Hamilton and Seidman (1993) not only compared return to work in men and women recovering from acute myocardial infarction but also investigated return to sexual activity. Findings revealed that only 8% of the women and 23% of the men reported sexual activity as the same as before acute myocardial infarction. Additionally, statistically significant differences in the

decline of sexual activity were noted between men and women, with women reporting a more significant decrease in the frequency of sexual activity. In addition, women reported significantly more chest discomfort or angina during sexual activity than men. In this study, a large number of men and women reported that sexual activity was never discussed. These findings are consistent with those of Papadopolous et al. (1983) and Baggs and Karch (1987).

Summary

Research findings are inconclusive on gender differences and role expectations after a myocardial infarction. The limited number of studies and the limited representation of women in these studies prohibits anything but tentative conclusions based on their analyses. Comparisons are difficult due to the variations in study designs, theoretical frameworks, and diversity in data collection instruments. Methodological problems including questionable reliability and validity of instruments, and nonrandom sampling restrict the generalizability of findings. Despite the limitations noted, the research reported here demonstrates that there are important gender differences regarding physical activity, return to work, and sexual activity. These important

differences support further research to explore the women's perspectives following an acute myocardial infarction.

Participation in Structured Cardiac Rehabilitation Programs

Despite the positive effects of cardiac rehabilitation on female clients or, those that have been documented, women are referred less often to outpatient cardiac rehabilitation programs, are perceived as being less motivated to attend, and are more likely to drop out of structured programs ("Fair of Face," 1991; Sharpe et al., 1993).

A quasi-experimental design was used by Ades et al. (1992) to examine participation in a structured cardiac rehabilitation program. The purpose was to examine gender - related differences in cardiac rehabilitation referral and response to an aerobic conditioning program in 134 male and 98 female coronary clients. Four weeks postinfarction, all clients were interviewed regarding cardiac rehabilitation and asked about the strength of the physician's recommendation for participation. Treadmill testing was performed as a pretest to measure metabolic equivalents in the 18 women and 37 men who enrolled in the 12-week aerobic conditioning program. As a posttest, participants, after 36 sessions, were retested on the treadmill. Findings revealed that older women were less likely than older men to enter the cardiac rehabilitation

program. Statistically significant differences were found in referral patterns with physicians recommending participation more strongly to older men. There were no statistically significant differences in response to the 12-week conditioning program, with maximal oxygen consumption increasing 17% in women and 19% in men. As a result of this study, the authors determined that older female coronary clients are less likely to be referred for cardiac rehabilitation, despite improvement in functional capacity from the training component. However, these findings were limited by the small sample size included in this design and by the nonrandomized assignment of participants in the study. The addition of a nonequivalent control group could greatly strengthen the validity of these findings.

McGee and Horgan (1992) used a retrospective design to examine cardiac rehabilitation program uptake for men and women. Records of all patients with a diagnosis of myocardial infarction admitted to the coronary care unit of a Dublin hospital over a 30-month period were crossreferenced with cardiac rehabilitation program records. Statistically significant differences were noted in program uptake with 49% uptake noted in men compared to 34% in women. Findings also revealed that a client in his or her 40s was 6.9 times more likely to take advantage of cardiac rehabilitation than a patient in his or her 70s. The authors concluded that being

a female and increasing age are independently associated with decreasing cardiac rehabilitation uptake. Self-selection into the cardiac rehabilitation program by these participants is considered a limitation of this study. As the authors were unaware of pre-existing differences in the participants, alternative explanations for observed behaviours could exist. Because of this threat to the internal validity of the study, the findings can only be considered tentative.

Shuster and Waldron (1991) conducted a 6-month exploratory study to examine gender differences in attendance at cardiac rehabilitation sessions. A convenience sample, composed of 81 men and 20 women who had suffered an acute myocardial infarction, was used. Researchers followed the clients in the rehabilitation program for a period of four weeks. The authors reported both lower enrollment rates and higher drop-out rates for women in the postinfarction group. These findings are consistent with those of Oldridge et al. (1980), who, in a study of 28 female cardiac clients, found that enrollment rates were lower and that drop-out rates were somewhat higher than that observed in male cardiac patients in the same institution.

Using a descriptive survey design, Hamilton and Seidman (1993) compared participation in structured cardiac rehabilitation programs in men and women recovering from an acute myocardial infarction. A purposive sample of 42 men and

20 women was surveyed using an author-developed questionnaire. Findings revealed that there was no statistically significant difference between men and women participating in a structured cardiac rehabilitation program while hospitalized. Cardiac rehabilitation enrollment after discharge from the hospital or discussions about enrolling in programs revealed no statistically significant differences between women and men. These findings are in contrast to those of Ades et al. (1992) and Oldridge et al. (1980).

Summary

Researchers investigating participation in cardiac rehabilitation programs reported lower enrollment rates and higher drop-out rates for women than men. Ades and colleagues (1992) indicated that postinfarction women were less likely to be referred to cardiac rehabilitation, and that physician recommendation was the most powerful predictor of rehabilitation attendance. It is probable that lack of physician recommendation, age, and the primarily male constitution of the groups all contribute to lower rates of attendance by women. More research is needed to determine factors relevant to women's participation in cardiac rehabilitation programs in order to more fully understand their lower attendance and higher drop-out rates.

Adherence to Therapeutic Regimes

Although many physical and behavioral characteristics that increase the risk of developing coronary artery disease have been identified, the challenge of promoting sustained lifestyle change to reduce or eliminate atherogenic risk factors has not been met (Stamler, 1985). Secondary prevention for the population with coronary artery disease consists of dietary restrictions, exercise, stress reduction, and smoking cessation (Kison, 1992). Despite the effectiveness of secondary prevention in the reduction of coronary risk, lack of adherence to therapeutic regimes is a fundamental problem in risk modification after a cardiac event (Fleury, 1991). Women find it particularly difficult to adhere to lifestyle changes (Douglas, 1993). Women have not stopped smoking as readily as men despite adverse health consequences (Kannel, McGee, & Castelli, 1984; Willet et al., 1987). In addition, recommendations for increased exercise have not been accepted as readily as by men. Though the positive effect of exercise by female clients has been documented (Ades et al., 1992; Oldridge et al., 1980), women are perceived as being less motivated to attend and more likely to drop out of structured exercise programs.

Adherence to therapeutic regimes has also been reported to be affected by psychosocial variables. Client's attitudes,

intentions, and personal belief of others have been found to affect performance of adherence behaviours (Miller et al., 1988; Miller, Wickoff, McMahon, Garrett, Ringel, Collura et al., 1989). In addition, social support has been found to predict personal, psychologic, and social adjustments after a cardiac event (Johnson, 1991; King & Jensen, 1994; Oldridge & Streiner, 1990). It has been found that women who are at greatest risk for cardiovascular disease, specifically black women, older women, and women who have stressful lives due to multiple roles, are the least likely to have the social support, particularly family support, or the time and energy to make, or adhere to, even modest changes in their lifestyles (Douglas, 1993).

Kison (1992) used a descriptive correlational investigation to examine the degree of compliance with diet, activity, medications, stress reduction, and smoking cessation in clients postmyocardial infarction. A total of 29 men and 2 women comprised the sample. The Health Belief Behaviour Scale (Miller et al., 1989) was used to measure compliance to the treatment regimen for the cardiac clients. The highest degree of compliance reported by the sample was for medications. Of the five compliance variables, subjects were least compliant in modifying their response to stress. As the majority of subjects in the study were male, there is a need

to conduct a study, comprised of a sufficient number of females, to investigate the compliance behaviours of women.

In a descriptive correlational study Conn et al. (1991) compared age and gender differences in therapeutic regimen adherence among myocardial infarction survivors. A convenience sample of 80 women and 111 men was interviewed 1 to 2 years after their first acute myocardial infarction. The Health Belief Behaviour Scale was used to assess therapeutic regimen adherence. There were no statistically significant gender differences in adherence to the exercise, diet, medication, stress modification, smoking reduction components of the cardiac therapeutic regimen and participation in structured cardiac rehabilitation programs. As the age of the subjects increased, the amount of cardiac rehabilitation program attendance decreased. The strength of the inverse relationship between age and exercise adherence was somewhat stronger for female subjects ($r = -0.37$) than for male subjects ($r = -0.23$). Despite acknowledging the relationship between age and exercise adherence, the authors did not report controlling for age in their gender comparisons. Participation in exercise in older adults, particularly women, may be the result of other chronic illnesses that interfere with exercise, such as arthritis. Therefore, caution should be used in interpretation of these results.

A series of three follow-up experimental studies examined the relationship between the effects of (a) a nursing intervention and (b) the perceived belief of others on compliance to a medical regime of diet, exercise, smoking cessation, medications, and stress reduction postinfarction. A group of 20 female and 83 male first-time myocardial infarction clients were, prior to discharge, randomly assigned to either a control group (n = 47) or an experimental group (n = 56). The control group received a nursing intervention at 30 days postdischarge that consisted of three components: assessment, problem identification, and development of a health plan pertinent to the client's rehabilitation. Data were collected through structured interviews and administration of the Personal Belief of Others Scale (Miller, Wickoff, McMahon, Garrett, & Johnson, 1982). The instruments were administered on completion of the inpatient cardiac rehabilitation program and at 60 days (Miller et al., 1988) at one year (Miller et al., 1989) and at two years postdischarge (Miller, Wickoff, Garrett, McMahon, & Smith, 1990). None of the three studies found that a nursing intervention improved compliance to the medical regime. There was no statistically significant difference between the experimental and control groups in terms of compliance at any of the data collection periods. In both groups, perceived beliefs of others, which encompasses the concept of social support, was the strongest

predictor of compliance to the regime. These findings are congruent with those of Conn et al. (1991), Holm et al. (1985), Kison (1992), and Oldridge and Streiner (1990) but inconsistent with those of Fleury (1991). The findings of these studies should be interpreted with caution because, although the studies utilized an experimental design, sample size was relatively small. Mortality is a threat to internal validity, as only 51 subjects remained at the end of two years, control (n = 22), experimental (n = 29). Thus, generalizability is limited.

Fleury (1993) used a naturalistic design to identify and describe the role of social networks in influencing individual wellness motivation within the context of cardiac rehabilitation. Data collection procedures involved the use of increasingly structured interviews with a sample of 17 men and 7 women who were participating in an outpatient cardiac rehabilitation program. Two primary categories were identified that describe informant perception of the role of social networks in motivating health behaviour change: enabling and limiting. Subcategories identified were consistent with the general types of support described in social support literature (emotional, feedback, problem solving, instrumental), as well as behaviours found to dominate motivation in cardiovascular health behaviour (value conflict, boundary maintenance). The author concluded that

social network behaviours were associated with enhanced individual wellness motivation by enabling the initiation and maintenance of positive health patterns. Potential limitations were noted in theoretical sampling procedures and data collection and analysis. These limitations serve as relevant considerations for future research in motivating health behaviour change for clients recovering from an acute myocardial infarction.

Fleury's (1991) exploratory study examined the relationship among social support, health locus of control variables, health value orientation and wellness motivation in clients undergoing cardiac rehabilitation. A convenience sample of 52 male clients who were actively involved in cardiac rehabilitation programs on an outpatient basis were selected from three Southwest institutions. Data were collected using the Norbeck Social Support Questionnaire (Norbeck, Lindsay, & Carrieri, 1981), the Health Locus of Control Scale (Wallston & Wallston, 1981), the Value Inventory Scale (Brink, 1984), and the Self-Motivation Inventory (Cox & Wachs, 1987). Pearson correlation coefficients indicated significant positive correlations between health locus of control variables, health value orientation variables, and wellness motivation. An examination of social support variables showed no significant correlations between social support and wellness motivation in this sample. These results

are in direct contrast to those of Conn et al. (1991) and Holm et al. (1985). Limitations of Fleury's (1991) study require that results be interpreted cautiously at this point. The small sample size may have increased measurement error because of the number of variables examined in relation to subjects. In addition, the sample consisted of preselected subjects who agreed to participate in the study. Those subjects who returned questionnaires may have had higher levels of motivation in relation to variables being measured than those subjects who refused to participate, thus introducing a bias in the findings.

McSweeney (1993) used a descriptive naturalistic field study to identify factors that informants believed contributed to their ability to initiate and maintain behaviour changes in their naturalistic environments after an acute myocardial infarction. The study used purposive nonprobability sampling to select the informants who constituted eight family dyads. Intensive ethnographic interviews were individually conducted with each member of the dyad. Two primary categories that were identified as contributing to behaviour changes postinfarction were facilitators and inhibitors to health promoting activities. Internal enhancers and external support were identified as subcategories of facilitators. Internal conflict, external barriers, and role uncertainty were identified as subcategories of inhibitors to health promoting

activities. The author concluded that the findings of this study add support to previous studies on health behaviour change. The key concepts that have been frequently linked with relapse -- namely social support influences, environmental factors, and internal factors were identified by this group of informants. Several facilitators, such as social support, and belief in the effectiveness of recommended changes have also been documented. Based on this work, the author concluded that continued research in the area of maintaining health behaviour changes is needed.

Summary

There is limited research available on women's adherence to therapeutic regimens. Most studies have failed to address this issue or have included women in such small numbers that no appropriate conclusions can be drawn. Only one researcher, Kison (1992), indicated that further research was needed to investigate if differences existed between males and females in relation to adherence behaviours and to discern what these differences might be. To date, one simply does not know about women's adherence to therapeutic regimens. Therefore, research is needed to explore this issue in order to enhance the recovery process for women and reduce their risk of subsequent cardiac events. This present research contributes

to an understanding of the recovery process for women who have experienced a myocardial infarction, thereby filling some of the gaps identified by other researchers. By having a clearer understanding of the process women undergo when recovering from a myocardial infarction, health providers may be able to develop guidelines to assist in the provision of effective and individualized nursing care for these women.

CHAPTER 3

Methodology

Research Design

In this study a grounded theory approach, as outlined by Glaser and Strauss (1967), was used to explore and describe the recovery process of women who have experienced a myocardial infarction. The basic position of these authors is that "generating grounded theory is a way of arriving at theory suited to its supposed uses" (Glaser & Strauss, p. 3). Since my main interest was in generating a theory of women's recovery from an acute myocardial infarction, grounded theory was the appropriate methodology. Grounded theory is a highly systematic research approach for the collection and analysis of qualitative data with the aim of developing theories "grounded" in real world observations (Polit & Hungler, 1991). The objective of grounded theory is to develop theory that explains patterns and variations in behaviour common in social life (Chenitz & Swanson, 1986). This approach is especially useful in providing information about phenomena that have not been subjected to much formal investigation and about which little is known. It is also appropriate for the illumination of basic social and physiological processes (Sandelowski, Davis, & Harris, 1989).

Grounded theory uses a symbolic interactionist perspective to study human behaviour and interaction. Symbolic interaction is a theory about human behaviour and is an approach to the study of human conduct and human group life. Symbolic interaction focuses on the meaning of events to people in natural or everyday settings. For symbolic interactionists, meaning guides behaviour and a stage of deliberation or definition of the situation precedes action (Morris, 1977). The reality or meaning of the situation is created by people and leads to action and the consequences of action. One's action toward an object or event is a measure of the purpose or value of that object or event to the individual. Studying one's experiences and behaviours in relation to an object or event reveals the significance and meaning of that event to the individual. Additionally, symbolic interactionists view human behaviour as the result of process. According to Blumer (1969), all human behaviour is the result of "a vast interpretive process in which people, singly and collectively, guide themselves by defining the objects, events, and situations they encounter" (p. 132). Thus, the premises of symbolic interaction serve as the theoretical underpinnings of grounded theory.

The grounded theory approach to knowledge development is characterized by the simultaneous and ongoing collection, categorization, and interpretation of data (known as the

constant comparative method), the deliberate sampling of subjects all of whom can illuminate the phenomena being studied, and the ongoing use of measures to ensure validity of the study (Glaser & Strauss, 1967).

Participants

In this study, participants were selected initially because of their ability to illuminate the recovery process following a myocardial infarction; purposive sampling was used. Data collection was ultimately guided by theoretical sampling, a procedure in which the continued selection of subjects is based on the findings that emerge in the course of the study. A total of 12 participants was included in the study. This number was determined when data saturation occurred; when no new themes or patterns emerged (Chenitz & Swanson, 1986).

Women, recruited from three acute care agencies in the city where the study was conducted, participated in the study. Nursing supervisors or the cardiac teaching nurses at these agencies acted as intermediaries in the recruitment of participants for this study. These supervisors and cardiac teaching nurses informed clients of the study and asked if the researcher could meet with them to explain the study. Eligibility criteria included women who (a) had experienced a

myocardial infarction, (b) resided within a 60-mile radius of the city, (c) were able to read and write in English, and (d) agreed to participate in the study. Arrangements were made to meet with the potential participants prior to discharge to explain the study. The participant was informed that she would be contacted, by telephone, to schedule a home interview approximately eight weeks posthospital discharge if she agreed to participate in the study. This period was chosen as research has identified the 8-week period following a myocardial infarction as a milestone in the recovery process (Wenger & Hellerstein, 1992). Once the quota had been obtained, the respective departments were notified and thanked for their support.

The Setting

Eleven of the interviews were conducted in the women's homes, at times mutually convenient to the women and the researcher. The interviews were conducted in private, usually in a quiet room, such as the living room or dining room. One woman was interviewed in a private room in the hospital on the evening prior to a scheduled surgical procedure. These designated areas eliminated the noise factor, interruptions, and other environmental influences. Using a comparable

setting for the interviews provided consistency of conditions for data collection.

Ethical Considerations

Prior to conducting this study, a proposal was submitted to the Human Investigations Committee at Memorial University for research approval. Letters were then sent to the ethical review committee at the various agencies for approval to conduct this study (see Appendix A). Subsequently, letters explaining the study and requesting permission to conduct the investigation were forwarded to the Assistant Executive Directors of Patient Care Services (see Appendix B), and to the Medical Directors in each of the three agencies (see Appendix C).

Following approval from the Human Investigations Committee (see Appendix D) and the coordinating body of the three agencies involved, (see Appendix E), the nursing supervisors and cardiac teaching nurses on each of the medical units in these agencies were approached by the researcher and the study was explained. The supervisors and cardiac teaching nurses were asked to inform potential participants about the ongoing study and ask the participant's permission to have the researcher meet with them to explain the study. The supervisors and cardiac teaching nurses were contacted every

Tuesday and Thursday in order to procure the names of potential participants. The researcher also provided her phone number so that the nursing staff could contact her. Arrangements were then made to meet with the interested client, prior to discharge, to describe fully the title, purpose, and nature of the study, data collection techniques, the researcher's responsibilities and the likely risks and benefits that could be incurred. At this time, two copies of written informed consent were obtained. One copy was kept by the researcher and the other copy was given to the participant (see Appendix F). The participant was then informed that she would be contacted, approximately eight weeks postdischarge, so that a home interview might be scheduled. Permission was requested to audiotape the interview. The woman was assured that her decision to participate was voluntary and that, if she agreed to participate, she reserved the right to withdraw from the study at any time. The woman was also assured that there were no health risks involved. The woman was informed that her anonymity would be protected by using code names instead of names on the interview data and was guaranteed that all identifying information would be kept confidential.

In order to maintain confidentiality, all identifying information and lists of ID numbers with corresponding identifying information were kept in a locked file. No identifying data were entered onto the hard drive of the

computer. Identifying information was destroyed as quickly as was feasible. Audiotapes were erased once transcribed. Participants, who so desired, were sent a summary of the research findings upon completion of the study.

Data Collection

An unstructured formal interview was used as the method of data collection. The interview was opened by the general theme "As I mentioned when I talked to you first, I am interested in your recovery from your heart attack. Starting with your hospitalization, tell me about what has happened since." The suggested topics to guide the interview (see Appendix G) were used with all participants throughout the interview process. Probing was used to direct the interview, including probing to elicit information about the timing and details of events, and for further explanation and clarification. Silences occurred that allowed participants to collect their thoughts before expressing them. Tracking or redirecting to topics was used but only when the women had finished expressing their thoughts. As the study proceeded, more directed interviewing became necessary to validate data.

Interviews ranged from 45 - 90 minutes. Interview data were audiotaped and transcribed in their entirety.

Demographic data and health characteristics were also collected from the informant at this time (see Appendix H).

Data Analysis

In grounded theory, data collection, analysis and verification, and the development of theoretical explanation occur simultaneously throughout the grounded theory approach (Chenitz & Swanson, 1986). In this study, the constant comparative method (Glaser & Strauss, 1967) was used to discover the core category that accounts for most of the variation in the data and that integrates the data, codes, and analytic process memos that accumulate during the course of the study.

The interviews were analyzed examining the dialogue line by line and coding the data, producing substantive codes. These substantive codes were then assembled into "laundry lists" (Chenitz & Swanson, 1986). The lists were examined for similarities and differences using constant comparative analysis. From this process the initial categories, including the range and variation of their properties, were identified. As data analysis proceeded, some of the initial categories were subsumed and the researcher was able to formulate hypotheses to be explored with other participants. More data were gathered and incidents were compared to discern the

similarities and differences occurring and recurring in the data. Each category was then compared with every other category to ensure that they were mutually exclusive.

The categories initially developed were verified and refined as data collection continued. Further theoretical saturation was sought with the addition of each new participant. Some of the initial categories were abandoned and the data reworked into a smaller set of more abstract categories. At this point it was evident that one core category, the basic social process of 'getting back to normal' was emerging. Many pieces of the data and their subsequent categories and properties revolved around this core category.

This process was aided by examining the data through the use of diagramming. Diagramming provided a visual representation of the emerging categories and how they linked together. Diagramming was quite useful because it allowed the researcher to visualize the logical flow of the process and to determine if any major categories in the process had been overlooked.

The diagramming was facilitated by the simultaneous application of the "six C's" family of theoretical coding (Chenitz & Swanson, 1986). The six C's -- causes, contexts, contingencies, consequences, covariances, and conditions -- enabled the researcher to ask questions about the categories in the data. The theoretical codes were applied to the core

categories and their related properties in an attempt to organize the categories and to make theoretical sense of the data. Each category was examined to see what its relation was to other categories. The researcher asked: Is this category a condition of some other category? Is it a cause, a context, or a contingency (bearing on another category)? Does this category co-vary with other categories? Finally, is this category a consequence of some other category? Answers to these questions produced the relationship between the categories indicated by the data and resulted in the identification of the basic social process of 'getting back to normal' for women recovering from a myocardial infarction.

Although the data collection and data analysis procedures are presented here in a linear fashion it is noteworthy that these procedures do not occur in a linear manner. As Glaser and Strauss (1967) state: "There tends to be a continual blurring and intertwining of all three operations (implicit coding, data collection and data analysis) from the beginning of the investigation until near its end" (p. 57). Based on the author's experience of this research process, it is evident that as the analysis progressed and the systematic processes emerged, the researcher believed that the theoretical framework developed truly represented the data.

Credibility and Auditability

The techniques that were used to ensure the trustworthiness of the data and control for methodological error were based on criteria established for naturalistic inquiry (Sandelowski, 1986). Throughout this process the researcher attended to the issues of credibility (validity) and fittingness (applicability) by insuring the data, as they were reduced, were fully represented in the categories, including the typical and atypical aspects, constantly questioning conclusions about the data, and validating the data with the participants themselves. Further clarification of the data was obtained by having the participants describe, to the researcher, what 'getting back to normal' meant to them.

The maintenance of process and analytic memos throughout the course of the study were used to ensure stability of the data and track variance over time. After each interview, memos including decisions about the data and sampling decisions to clarify patterns identified in the data, were made. These decisions were reviewed with the researcher's thesis committee to ensure accuracy and consistency in the process of data collection, analysis and interpretation. Confirmability, which refers to the interpretational objectivity of the data, was maintained by exploring

alternative explanations for data generated with the researcher's thesis committee and the respondents. As patterns emerged from the data and hypotheses were formulated regarding processes, the researcher was able to explore these and confirm them with other respondents.

CHAPTER 4

Findings

This chapter describes what the recovery process is like for women who experienced a myocardial infarction. The findings presented depict the recovery process as an attempt or struggle to get back to normal - or normal with some modifications. The similarities and variations that occur within the stages of this process are reflected in the interview data. This chapter is divided into two parts. The first part describes the characteristics of the participants. The second part of this chapter is a presentation of the process of 'getting back to normal' supported by selected material from the interview data.

Characteristics of the Participants

Demographic data were collected from the twelve participants in the study, approximately eight weeks posthospital discharge. The women ranged in age from 60 - 80 years with a mean age of 69 years. Seven of the women were married, five were widowed. Two of the women had completed high school, four had attended high school, and six of the women had attained an elementary school education. Four of the women had worked outside of the home while the others had

not. Three of these four women have since retired. For eight of these women, their myocardial infarction was a first time event, while for four of the others it was a second or third time experience. Eight of the participants were nonsmokers. The four women who had experienced a second or third acute myocardial infarction were smokers and have continued to smoke. Six of the women reported a low activity level while the other six perceived themselves as moderately active. Five of the women reported following a diabetic diet and four reported following a low fat diet. Three women, two of whom were diagnosed with diabetes, stated that they did not follow any special diet. Data also revealed that eleven of the twelve women had been diagnosed with heart disease, specifically angina, prior to their myocardial infarction. Six of the women had arthritis in conjunction with their heart disease. Seven of the women reported that they had been diagnosed with diabetes, one of whom was diagnosed as insulin dependent. Six of the women participated in a structured inpatient cardiac rehabilitation program while the other six women were not provided the opportunity to do so.

Findings of the Study: The Recovery Process:

Getting Back to Normal

Analysis of the data revealed that the core variable in women's recovery after a myocardial infarction was 'getting back to normal' -- or normal with modifications. The participants in this study envisioned recovery as getting back to normal -- being able to do what they had done prior to their heart attacks with perhaps some changes in their lives. To the women, getting back to normal meant being able to complete their daily household responsibilities, visit their friends, and leave their homes without fear or worry. After experiencing their heart attacks, many of the women realized that there would be some limitations, or restrictions, in their lives. They would no longer be able to do "heavy work" such as scrubbing floors, washing walls, cutting wood, or moving furniture. The majority of the women accepted these limitations and modified their lives accordingly. They recognized that these modifications had significant implications for their recovery and their future. Further inquiry revealed that the majority of the participants defined getting back to normal as, "doing what I want when I want and going where I want when I want to go" while one woman described it as "being able to do my everyday chores." All

the responses and approaches that characterized the recovery process were directed toward getting back to normal.

The attempt to get back to normal after a myocardial infarction encompasses four interrelated stages: (a) accepting what has happened, (b) establishing boundaries, (c) making adjustments, and (d) re-establishing normality. The first stage, accepting what has happened, involved the women realizing that they did have a myocardial infarction and looking for a reason why this event occurred. The second stage, establishing boundaries, was a transitory stage in the struggle to get back to normal. This stage depicted recovering women's first encounter with imposed limitations and their attempts to reduce the insecurities surrounding their heart attacks. The third stage, making adjustments, was where the women learned what they would or would not be able to do. This stage was a focal point in the recovery process. Participants who did not successfully master this stage were not able to make the necessary changes required for them to re-establish a sense of normality. At this point, these participants made one of two choices. They either returned to the first stage where they struggled again with accepting what had happened so that they could move on, or they gave up on recovery and allowed the disease process to overwhelm them, thereby losing control of their futures. Participants who did successfully master this stage moved on. As the women learned

their capabilities, they re-established normality - and got back to activities they regarded as normal for themselves and considered themselves to have recovered (see Figure 1).

Getting Back to Normal

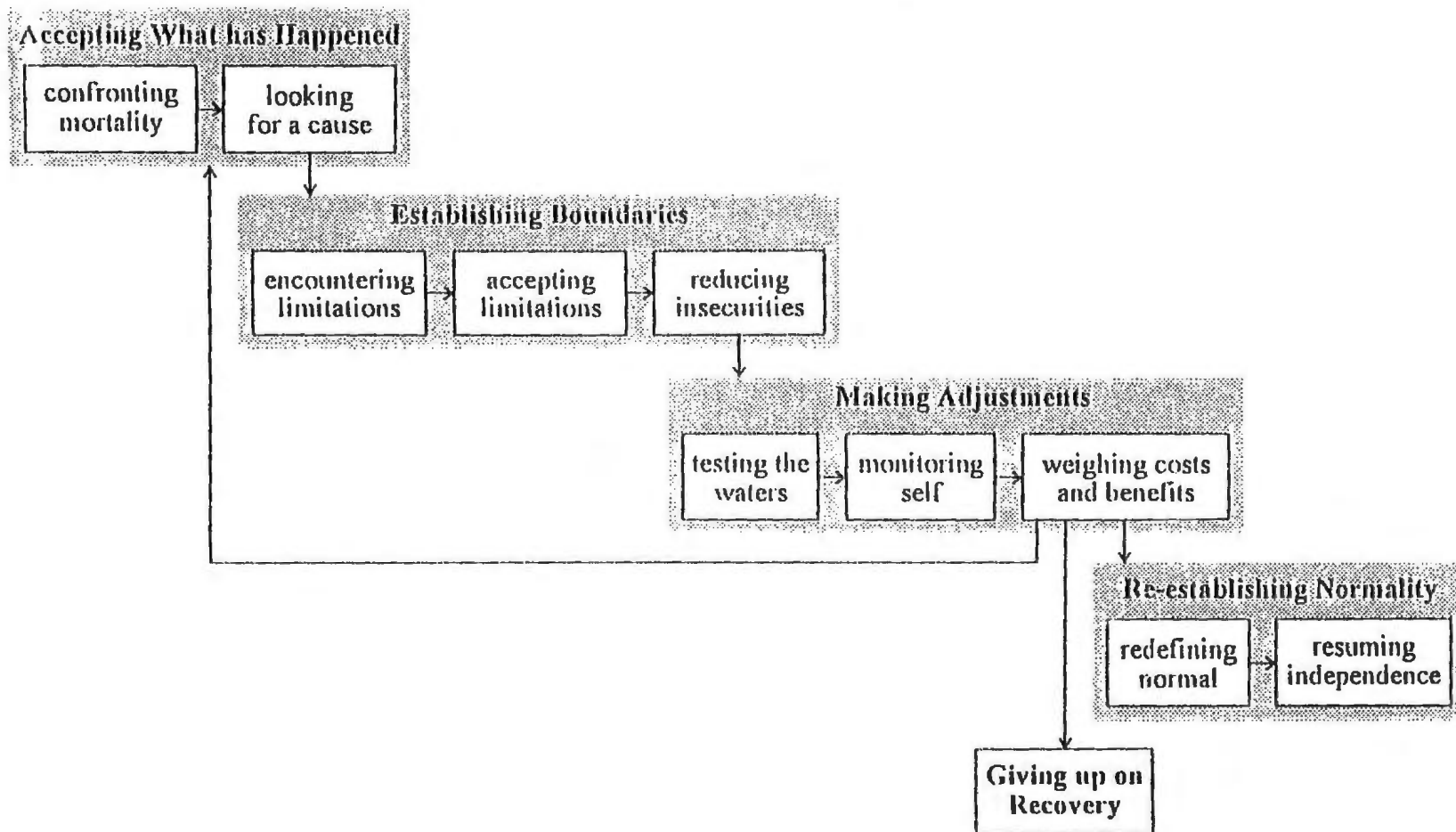


Figure 1. The Recovery Process: Getting Back to Normal

Stage One: Accepting What has Happened

Accepting what has happened refers to the process by which women realized that a heart attack had actually occurred and began to realize what that might mean for their future. It was also a time when they tried to make the event coherent for themselves, trying to realize what had happened and why. This stage was composed of two phases: (a) confronting mortality, and (b) looking for a cause. The length of this stage was contingent on the individual and the length of the period of acute illness. Depending on the course of their recovery, some women returned to this stage. For example, when the women faced set-backs or when they were forced to change their expectations concerning their recovery, they again had to try and accept what had happened.

Confronting mortality. The women's recovery from their myocardial infarction began in the coronary care unit soon after they had experienced their heart attack. As the women progressed from the critical phase of their illness to a more stabilized level, they were confronted with the fact that they had come very close to dying. Thus, confronting mortality was regarded as the initial phase in women's recovery from a myocardial infarction. The women frequently described the survival of their heart attack as a "profound" experience as

it provided them with an awareness of the severity of their illness and presented them with the possibility of their own deaths. The women were forced to contemplate their mortality and to recognize how close they had actually come to dying:

They [the medical personnel] lost me on Friday morning. They couldn't get a pulse, they couldn't get a heart beat, they couldn't get anything. But, they got me back anyway. The doctor told me I was lucky I was in the hospital. If I had to be home, I wouldn't have made it. He said that you were that close, you'll never be so close no more 'til you're dead.

And another woman reported:

They told my daughter if they didn't do something, I'd be gone within the hour. The doctor said to get in touch with our family. They sent for the priest.

This phase also depicted the women's varied responses to the heart attack and to their survival of the event. Within this phase, there was a wide variation in the range of responses to the occurrence of the heart attack. Responses ranged from fear, to seeming indifference, to acceptance, to anger. Some women described having a heart attack as a "frightening" experience. One woman reported that it "shook her up." However, the majority of the women stated that the heart attack didn't bother them:

I'm not afraid of dying, it [the heart attack] didn't bother me. You can't live forever. I've come to that conclusion.

It appeared that one woman looked upon death as a viable alternative to living with pain:

Well it [having the heart attack] didn't bother me really. It sounds foolish I know, but, it didn't. I had that much pain, that I didn't care. I'd just as soon go [die]. It didn't really bother me what happened as long as the pain stopped.

Although variation was noted in the responses of the women to their heart attacks, it was evident that the responses were not contingent on the number of attacks that the women had experienced. Women who reported that their first heart attack had not bothered them expressed the same sentiment even after their third myocardial infarction.

The informants generally displayed one of two types of responses to the survival of the myocardial infarction. The first type of response was a feeling of gratitude for having survived. Many of the women woke up in the morning thankful to be alive and saw their survival as getting a second chance at life. Several of the women thanked God for giving them this second chance and the opportunity to be reunited with their families.

Now, when I go to bed and when I get up, I say before I go to bed in the night time, I say thanks for another day. In the morning I wakes up, I says thanks for all night. I came back to life and I got another chance. ...I'm very lucky.

The second type of response was profoundly negative and pessimistic in relation to surviving the event. The informants reported a fear of dying and were pessimistic about the possibility of recovery. Several of the women were

concerned that they would not be able to do the things that they had done prior to their heart attacks:

I wondered if I'd ever be able to do what I did before. I didn't know if I would ever have the strength to do what I wanted to do.

Several women feared that they would never see their loved ones again:

I thought well, I'll never see my family again. I'll never be able to go to the States to see my daughter and grandchildren.

Looking for a cause. Once the women had acknowledged the severity of their condition and had confronted their mortality, they began to question what might have precipitated their heart attack. Thus, the occurrence of the heart attack prompted the informants to try and find out why it had happened and to rationalize its occurrence. They did this by reviewing their lives and seeking causal explanations for their heart attacks. The women offered various explanations including individual lifestyle practices, heredity, and the presence of concomitant medical conditions. Recognizing the cause often enabled the women to establish a sense of direction for their rehabilitation.

Several of the women felt that certain individual lifestyle practices had contributed to their heart attacks. Many felt that hard work and long hours of work had a significant impact on the occurrence of the acute myocardial

infarction. Several women felt that smoking had played an influential role in the precipitation of the attack. Even though these women considered smoking a "bad habit" they continued to smoke as they felt it helped relieve the stress often present in their lives. Some women attributed their heart attacks to poor dietary habits. These women were accustomed to eating foods high in salt and fat content. Further, many of the women identified stress as an influential factor in the precipitation of their acute myocardial infarction. This stress was often related to family and/or health matters. One woman reported:

I'd say that it was stress. Stress got a lot to do with it. My son's divorce is pending and this is worrying me and this is probably what brought the heart attack on.

In addition to individual lifestyle practices, the women often saw heredity as a contributing factor. Many of the women had parents, brothers, sisters, or other relatives who had either experienced a myocardial infarction or who had died as a result of one. Many felt that it was inevitable that they, too, would experience a heart attack:

I was always waiting for it [acute myocardial infarction] to happen because there is so much of it in the family and I knew there was no way to escape it.

Concomitant illnesses were often cited as contributing to the women's heart attacks. Many of the women felt that conditions such as angina, coronary artery disease, a long

standing history of heart disease, and diabetes played an influential role in the precipitation of their myocardial infarction:

I had diabetes, too. So that had a lot of effect on the heart attack.

Some women felt that in one way or another arthritis was responsible for bringing on the heart attack. One woman attributed her myocardial infarction to the gold therapy she was receiving for the treatment of her arthritis:

I blame it [acute myocardial infarction] on the gold treatment ... In August, I started getting fluids ... and by the middle of August I was really swollen ... so the doctor did tell me that it's a possibility that it was the gold.

Although most of the women could find a causal explanation for their heart attacks, at least three of the women were unable to do so even though they tried to come up with a cause. These women stated that they had never felt sick, a feeling they frequently equated with pain and inability to perform their customary roles and responsibilities, and that although they received regular check-ups, no one had ever told them that they had anything wrong with their hearts. One woman commented:

Sure I can't understand how I came to be like this, you know. I was so strong all my life, I don't know what happened. I thought I was too heavy and too strong to have anything like that happen ... I still can't figure it out.

These three informants could not discern the cause of their heart attacks, though each of them had concomitant medical conditions and strong family histories of heart disease.

I can't figure out how I had it [acute myocardial infarction]. I had no signs of anything, no signs, no pain, only thing I have is the diabetes.

Stage Two: Establishing Boundaries

Following the acute stage of their illness, the women were transferred from the coronary care unit to the postcoronary care unit. This transfer not only marked the women's transition from one hospital unit to another, but, also their transition from the first stage of the recovery process, accepting what has happened, to the second stage, establishing boundaries. This second stage of the recovery process was the time when the women attempted to discover what they could and could not do and pondered what this might mean for their recovery and their future. There was both a temporal and permanent dimension to this stage in that the women realized some of their restrictions were necessary for their immediate physical recovery to allow their heart to heal while they also acknowledged that damage to their heart meant permanent changes would need to occur. The length of this stage varied, but, it generally corresponded to the women's

length of stay on the postcoronary care unit. This stage consisted of three distinct phases: (a) encountering limitations, (b) accepting limitations, and (c) reducing insecurities.

Encountering limitations. Before they were able to establish boundaries for what activities they might be able to do the women had to find out what their limitations were. Encountering limitations was a significant phase of this stage and thus of the recovery process. Many of the limitations that the women initially encountered occurred during their hospitalization and were short term. Oftentimes, it was not until the women were transferred to the postcoronary care unit, that they became cognizant of these limitations:

Well, the first day or so I was up in ICU and I was up there for 3 days. Then I moved downstairs, and I was just allowed to go from my bed to the door for the first 4 days. Then I gradually got to go a little bit farther and farther. So then, I got to go from the door to the window, in the hallway. Then, in another few days I got to go down another little bit farther until I finally done the full hallway.

Although the women realized that these limitations were short term, they did exist and were often a source of concern. The women frequently expressed that they felt confined and restricted. According to the informants, these imposed restrictions were often the result of doctor's orders, medical

therapies, or inpatient cardiac rehabilitation protocol. There was little variation in the limitations imposed upon the informants. The women were often confined to bed, with little activity, and little independence. While the majority of the informants adhered to these limitations, variation existed in their responses to them. Some women were very accepting as they felt these limitations were essential to their recovery. One woman felt angry that she was unable to carry out activities such as sitting in a chair when she wanted, walking to the washroom unassisted, or walking in the corridors unattended. In commenting on her experience one woman remarked:

While I was in there [hospital] I was on bedrest. I was barred to the bed except for the last two days. I was restricted in me activities on account of the heart.

When the women were "allowed" to carry out these routines, they initially had to be accompanied by another individual, either a staff member or a family member:

They [the cardiac rehabilitation team] told me what to do and how far I should go. They took me up and down the stairs. I wasn't allowed to go outside of the door unless I had one of them [hospital staff] or my family with me.

These limitations were further reinforced by feelings of weakness and fatigue. The women found that the performance of routine activities, such as going to the washroom or walking

around their hospital rooms, made them extremely tired. They frequently had to return to bed and rest.

The majority of the women wondered what impact these limitations would have for their futures. What would they be allowed to do when they returned home? Would they be able to "carry on" as they had done before? What changes would have to be made at home to accommodate these limitations? Would there be more limitations or would there be different limitations?

Accepting limitations. In attempting to discover what they could and could not do, the women realized the existence of immediate and possibly future limitations. They also recognized that if they were to get back to normal, they would have to live within boundaries established to assist them with recovery. Establishing boundaries involved not only encountering but accepting limitations. Thus, accepting limitations was a critical component of the recovery process. The women perceived many of their initial limitations as merely temporary and witnessed their gradual decline as they approached discharge.

I used to, after so many days get up and go for a walk ... then one day, they'd [medical personnel] put you a little more [let you do a little more]. Gradually, they'd put you on those exercises until you come home... and that was more or less "like practice."

Many of the women believed that these limitations would disappear as they progressed and that, in time, they would get back to normal. Although the majority of the women did not particularly like these limitations, recognition of the severity of their illness fostered their compliance to the restrictions.

The acceptance of limitations and the ways in which participants envisioned their futures were particularly significant to recovery. The majority of the women were optimistic about their futures while only a few displayed pessimism. Women who accepted limitations and who were optimistic had a positive attitude, were confident they would recover, and were grateful for a second chance. These women realized there would be some limitations in their lives but they would accept these limitations and adapt accordingly. They felt that they might not be able to do "quite so much" as they had done before or do it as quickly but were prepared to "take it easy" as it was essential to their recovery. Several of the women acknowledged that initially they would not "be able to do like they used to" but that, in time, they would get back to their normal routines:

I'll come around later on and I'll be able to do whatever I done before. I think, I know I will. If I take my time and look after myself, I'll come back to normal again.

Another stated:

A lot of people will give up and won't do anything. I'm not going to let that happen to me. I'm hoping to do more. I think I'm alright, and I think I'll be alright. After awhile, I'll be able to do the things I did before ... I know I will.

Those with a pessimistic attitude generally had fears about being permanently disabled, or of dying, and perceived their limitations to be insurmountable. Three of the informants held this attitude. Two of these women were afraid to resume routine activities or to walk outside the home because they feared "something" might happen. Additionally, they stated they felt "depressed" and had lost interest in "doing things" or in even "wanting to do things." The other woman envisioned surgical intervention as the key to her recovery. She had hoped to be scheduled for coronary artery bypass surgery. When surgery was not recommended, she stated:

When the doctor told me he couldn't do anything [coronary artery bypass surgery] you know, as far as I was concerned, the death sentence was passed on me.

The way in which the informants saw their future changed throughout the course of the recovery period. If the informants continued to encounter and accept limitations as they arose, they changed from feelings of uncertainty to feelings of confidence. Conversely, some informants who had initially held a positive attitude were unable to maintain

this attitude in the face of repeated limitations and their inability to accept them.

Reducing insecurities. In establishing boundaries the informants underwent a period filled with doubts, uncertainties, and setbacks. They all attempted to seek a way of life that they could tolerate and maintain. Additionally, they sought to regain trust in their own abilities. The insecurities that the women with myocardial infarctions experienced were initially perplexing to them. They were unsure about what to do and how to do it. This period of insecurity initially appeared during hospitalization and often continued postdischarge. While hospitalized, the women often questioned their ability to complete their own hygiene or to engage in physical activity. Postdischarge, the majority of the women expressed doubts and uncertainties about performing their everyday chores and about going out to places such as supermarkets, shopping centres, or even to the homes of family and friends.

I always wondered should I do this, or if it was alright for me to go over the stairs ... I did it, then I wondered if I should be doing those things. ...Perhaps I should do more.

One woman reported:

After I had the heart attack I wouldn't go out through the door. I wouldn't do nothing. I wouldn't go out in

the car. I was housebound. Then I started getting nervous and I wouldn't stay in the house alone.

These feelings of insecurity affected not only their activities, and their daily routines, but, also how they perceived themselves. One woman expressed her concerns:

I don't feel the same about myself. I don't feel secure. I'm afraid.

Another source of insecurity for these women was fear of recurrence of a heart attack. The women were totally preoccupied with this thought, particularly within the first six weeks postdischarge. Many of the women stated that they were always thinking about the heart attack, it was always on their minds, and that they couldn't forget about it. Several of the informants asserted that they were expecting, any minute, for "it" to occur or to "strike back" but were hoping it would not. This source of insecurity created concern within the women, not only for themselves, but for others:

I felt nervous, especially when I would drive the car. I said if I have another one [heart attack] and kills half a dozen people. That was on my mind.

Oftentimes, the women used a variety of strategies to reduce their insecurities in their struggle to get back to normal. Three of the most commonly employed strategies

included seeking reassurance, acquiring knowledge, and practicing caution.

When the women were insecure about their progress, their abilities, or their future, they attempted to reduce their insecurities by consulting health care professionals or by relying on the results of specific diagnostic examinations. They frequently gauged their progress by the doctor's or nurse's assessments and by the results of their diagnostic tests. When the public health nurse discharged them, or the doctor scheduled a 6 month return visit, the women felt that this was an indication that they were getting better:

The doctor told me I was alright. I haven't got to see him until February. That's six months. So, I must be good.

The women also resumed activities based on the results of their stress tests:

I won't do it [household chores] just now, probably when I go back for a stress test, maybe I'll be able to do a bit more.

One woman who had successfully passed her stress test reported:

I went back for my stress test. I did ok. Now, I've got my clearance, I can go and do things.

Generally, when the informant and the health care professionals' assessments concurred, or when the results of tests were positive, informants perceived themselves as "doing well." Conversely, when both the informant and the health professional viewed the progress negatively, the informant felt despondent.

Another strategy that the women frequently employed to reduce uncertainty was acquiring information. Knowing what was happening, or what to do, helped prepare the informants to get back to normal. The majority of this information was acquired from health professionals. It might have been offered by the professional or requested by the informant. Many times the physicians informed the woman about what she should and shouldn't do. They repeatedly advised the women that they had to "slow down" and "take it easy." However, these physicians often failed to provide specific directions or instructions pertaining to recovery. Oftentimes, it was the nurse who provided the cardiac teaching and explained vital postinfarction regimes to the women. In one hospital, which conducts a structured inpatient cardiac rehabilitation program, the cardiac rehabilitation nurse was perceived as an important source of information:

The nurse who is in charge of rehab [cardiac rehabilitation program], she told me everything, showed me pictures, and brought around the television about your heart.

In addition to being offered information, several of the informants also requested information. This information ranged from wanting to know what was wrong with their hearts to why surgery could not be performed. Additionally, the women sought information on medications, diet, and activity progression. However, one of the women adamantly asserted that she had not received any information from health professionals:

I got me information second hand from having friends who've had bad hearts and stuff like that ... second hand information!

Although one of the agencies in the current investigation offered a structured outpatient cardiac rehabilitation program, eleven of the women interviewed had neither been informed about, nor referred to, this program. One woman questioned whether this program, which has been in existence for 15 years, was a new program. Another informant, whose husband has been a participant in this program for the past ten years, was not offered the option of enrollment. One of the women had been a member of the cardiac rehabilitation program prior to her most recent heart attack. Particularly significant, perhaps, is the fact that admission to the cardiac rehabilitation program is contingent on physician referral.

A third approach used to reduce uncertainty was practicing caution. This was a method employed by the women to ensure that they did not harm themselves, or place themselves in a position to be harmed or to harm others. Many of the women described themselves as being "nervous," "wary," or "insecure." Consequently, they felt that they had to be "cautious" about what they did or where they went because they "never knew what might happen." In commenting on her insecurities one woman stated:

Once I took the car since I had the heart attack. I felt, really, really nervous, so I turned the car around and came back. I wouldn't go no further. I don't know. It seems I'm more secure here in the house.

Oftentimes, because they did not trust themselves to make judgements regarding appropriate activities, they chose to be overcautious. This practice had a significant impact on activity selection, activity performance, and decision making. Several women commented that it took them longer to do their work. They felt that doing things slowly reduced the chance of "bringing it on again." Four of the women reported they feared travelling and preferred to stay at home in case "something" happened. One woman, whose husband wanted to relocate to another area, commented:

My husband wanted to go to [community] to live and I said no. Staying right here where I'm to, close enough to the hospital.

The practice of cautiousness varied. For some it was used only when confronting new tasks, whereas others used it to such a degree that they were unable to resume their usual activities.

Stage Three: Making Adjustments

Once the women knew what the boundaries of their activities were, they moved on to the next stage of their recovery. The third stage of the recovery process was the time when women learned what they were able to do or not do based on the limitations they had encountered in the previous stage. They realized that to get back to normal they needed to at least make some adjustments in their lives. This stage encompassed three distinct phases: (a) testing the waters, (b) monitoring self, and (c) weighing costs and benefits.

Testing the waters. The women's arrival home, postdischarge, generally heralded the initiation of the third stage of the recovery process. Testing the waters, the first phase in this stage, refers to the ways in which the women found out what they could comfortably do postinfarction. The women attempted to perform various simple tasks and when they could perform them without experiencing pain or discomfort, they moved on to more complex routines. When they could not

successfully complete these tasks, it indicated that they needed to change their lifestyle and activities to accommodate restrictions placed upon them. Initially, in this phase of recovery women were unable to complete even routine activities. Making a bed, sweeping the floor, and doing laundry were considered monumental tasks. The women had to depend on others to help them do what they had done previously, routinely, and unassisted. However, the women were determined to complete these tasks and to complete them independently and sought ways to achieve their goal. Consequently, they resumed activities on a gradual basis.

When the informants first returned home they were very insecure about their abilities and were hesitant to resume or even participate in their customary routines. Many women reported that they "couldn't do very much" and "didn't do very much." One woman stated:

First when you come home, you sit, you move. You don't do this, you don't do that.

Several women stated that they wanted to carry out their customary activities, but felt they were unable:

It is a big cut when you comes down that you can't do anything. You're mind is active but your body is not.

As time progressed, the women became more confident in their abilities. They began to test their abilities and to ascertain what they could, and could not do. However, at

first, even routine tasks were faced with trepidation. What were originally viewed as normal routines now appeared as challenges. One woman reported:

I can't do things like I used to, like I used to get up in the mornings and get my own breakfast and do things like that and maybe help clean up or clear up, or pick up a few dishes, but I haven't been able to do that. I get up in the morning and I got to sit. I mean, anybody gets up, you'd think after all night you'd be stronger. But, like I said in the morning, I'm weak. I got to wait for a while to do anything. But, I can't do anything worthwhile.

Although many of the women attempted to perform routine activities, several of them found these activities difficult to complete. Therefore, the women were often forced to seek ways to assist them with the completion of these tasks. One of the most frequently employed approaches was that of breaking their tasks down into manageable pieces. Several of the women utilized this technique in chores ranging from bed making to household cleaning:

I did a little bit each day. I couldn't make my bed first when I came home. Then, I started with turning the pillow, then I'd probably pull up a sheet and I gradually increased like that until, now, I can make my bed.

Another woman described her experience:

I had a fridge downstairs and it's not self-defrosting and it's older. I was so tormented about it because it was iced up so much that I went downstairs. And there's three bins, like vegetable bins and what I did now bringing it up, I'd put it on one step, and I'd go up, and I'd move it up on the other step, and I'd go up, but I did it.

Additionally, in this phase the importance of social support, particularly family support, to the informant's progress was clearly evident. It appeared that the amount of support, particularly family support, that the informants received could either inhibit or facilitate their recovery. The support provided often determined how frequently, or to what extent, the informants tested their limitations. Additionally, the balancing of the informants' needs and support appeared to influence how well they progressed. Women who perceived themselves to have few needs and too much support considered themselves overprotected. One woman in this situation stated:

And the children are so protective over me, that those things that I could do, they won't let me do.

Informants who perceived themselves to have many needs and too much support saw themselves as invalids. One woman who lived with her grandson and his girlfriend stated that she didn't do anything, couldn't do anything, and wouldn't try to do anything because her grandson's girlfriend did it all. This constant requiring and accepting support only intensified this woman's feelings of uselessness and reinforced her invalid status.

Informants who perceived that they did not have enough support to meet their needs felt isolated and abandoned. Two of the women perceived themselves as "lonely," one whose

husband had died and another whose husband has Alzheimers disease. Both felt they had nobody to whom they could really talk because "there's no one like your husband."

Women who perceived themselves with few needs and who had few supports imposed upon them considered themselves as "nearly normal." The quality of the relationship between these informants and their families enabled the women to progress more rapidly towards getting back to normal.

During this stage of their recovery, many women expressed that they found it difficult to accept the assistance of others. Several women reported that they were not used to others having to do for them, they were used to doing for themselves. They stated they felt "bad," "awkward," and "guilty" about having to enlist the assistance of family or friends to complete their "work." Many women reported that doing their own housework gave them a sense of responsibility and independence. Oftentimes, as well, the women felt that things were not done the way they would like them to be:

I'd like to do me own housework instead of me husband having to do it you know. I don't know, you feel more independent when you can do things for yourself ... and if you're not liking the way they're doing it, it's nothing you can say about it because you're lucky to be getting it done.

Although, it was necessary to "test the waters" in preparation for getting back to normal, these women found it extremely difficult to return home and "test the waters." The

majority of the women wanted to return home and immediately resume the work role. Oftentimes, the women rationalized that housework was not "real work" and that they weren't really doing anything "worthwhile." Occasionally, the informants felt compelled to overstep the limits. One woman reported that she finished what she was doing, even if she was experiencing pain. She feared that if she stopped, she might not be able to complete what she had started.

Several of the women perceived themselves as not quite able to "carry on as they did before," yet, did not perceive themselves as sick. Many women felt that they could accept a period of time away from their regular routines knowing that it would benefit their health and help speed their recovery.

Monitoring self. After their heart attacks, many of the women were unsure about their abilities and capabilities, yet, seemed to have no difficulty determining how much activity was appropriate. In order to effectively test their limitations, the informants required some means to judge possible outcomes and to determine what adjustments they needed to make. One method they utilized was that of monitoring self. The women "monitored self" by becoming more sensitized to their body's needs and demands, and by learning to trust both physical and psychological cues. Women who had a history of heart disease developed this sensitivity over time and began to recognize

certain cues as "warning signals" that another heart attack might occur. Many of the women recognized specific cues as time to "pop the pills." The majority of the women felt that these cues came from within themselves. As one woman so aptly put it:

There is something inside that will tell you ... It is all in my thinking.

In conjunction with the cues that came from within, the women also used a variety of physical cues to monitor themselves. While some women identified shortness of breath or chest pain as an indication to discontinue an activity, the majority of the women reported that "how tired they felt" often determined their activity level:

I'm not able to do it as I used to because I get tired real fast.

A significant number of the women not only recognized the existence of these physical cues but responded to them:

And if I feel tired, I lies down and rests, but if not, I just keeps on going.

This "tiredness" was a good marker to the women in that they noticed it decreased as they recovered.

Generally, reading their bodies was an instinctive reaction. However, one doctor was quoted as advising his client:

Your body will tell you what you can do. If you take the pain, you know you can't do it. If you does it and you don't feel any pain, you can do it.

At times, the informants felt that they were becoming overly sensitive to their bodies. However, this strategy commonly provided a means by which they could make decisions regarding the continuation of an activity.

Weighing costs and benefits. The final strategy that the informants used in making adjustments was complex and involved weighing the costs and benefits of making lifestyle changes and attempts to implement these changes. If the implementation of these changes produced improvement in the women's health status, then these changes were incorporated into their daily lives. Decisions regarding lifestyle changes were often based on the way informants made sense of their heart attacks in terms of its cause; whether it was stress, smoking, diet, or activity related. Several women reported making work related changes, not working as hard, not working as long, and possibly not returning to work at all. Other women reported that they were going to "take it easy," not rush around, not lift heavy objects. Several women stated that they had to change their diets, modify their activities, and stop smoking. One women commented:

I've been out at the [fire] wood, helped saw it up, helped put it in the shed, which I won't be able to do now. The doctor said, though, you can do what you want done, but, keep it down to a different lifestyle. I have different foods now, too. You don't want to have too much salt or fats. I'm on medication now. I'll have to stay on them for the rest of my life. I never took a

pill in my life before. I'd take an aspirin if I had a headache or something like that, that's all.

Another woman commented:

I can't jump up and do what I used to - scrubbing the floor, rushing around. I limit myself to what I do. I can't run. I got to take it easy.

Although lifestyle changes were frequently prescribed, many of the women displayed difficulty in adhering to these changes. The majority of the women adhered strictly to their medication regime, however, there was little compliance to dietary, activity, and smoking cessation regimes. Many women stated that they found it difficult to give up their "Sunday dinners" and their "sweets." Several women reported that although they had been encouraged to walk, that they had not been "outside the door." Three of the women who just experienced their third heart attack continued to smoke.

Informants who did not experience the improvements they expected as a result of their lifestyle changes, returned to the stage of accepting what had happened. At this time, they often re-evaluated their goals and expectations for recovery. One woman felt that changing her lifestyle was not the answer to her recovery:

I think if I had the surgery, if I came out of it, I could be a new woman, a different person all together.

When women returned to the first stage of the recovery process but repeatedly failed to be able to accept what had

happened, they often gave up on recovery. Only one informant in the current study was truly unable to get back to normal. She believed she had experienced too many setbacks, had too many home and health-related stressors to face, and that the struggle to get back to normal was "useless."

I said to the doctor, if my heart stops this time, now don't try to start it. I thought I had too much on my plate. I thought I might as well go on [die].

Although somewhat contradictory, giving up on recovery was the only means by which some semblance of normality could be regained. By surrendering responsibilities for the difficulties faced, the informant was able to avoid repeated disappointment.

Stage Four: Re-establishing Normality

As the informants progressed through the recovery period, they were sometimes confronted with the fact that they were not living life to the fullest. All of their efforts during the first three stages of recovery had been directed towards getting back to normal. Now, having made necessary adjustments, they sensed that they needed to move on in the recovery process. The majority of the women entered this final stage of recovery gradually and, upon entering this stage, realized that getting back to normal meant a newly

defined normal, a normal with some modifications. Additionally, as the informants began to get back to normal, they began to focus their attention on other aspects of their lives. Although the informants never forgot that they had experienced a heart attack, it was no longer the predominant focus in their lives. This final stage is characterized by two responses (a) redefining normal, and (b) resuming independence.

Redefining normal. In the final stage the informants were faced with accepting those limitations that they were unable to change. Moving furniture, chopping wood, scrubbing walls would no longer be a part of the informants' routine activities. Therefore, the informants were required to decrease or alter their expectations so that inability to perform these tasks would no longer be considered a limitation. By decreasing or altering their expectations, the informants were able to incorporate what they had once perceived as limitations into their lives to such an extent that they were no longer considered limitations but were now normal for them. The informants now perceived what they had originally regarded as limitations as merely new boundaries imposed on them after a heart attack.

The majority of the women did not particularly like these changes that accompanied this redefinition and displayed

varying responses to them. Some women were openly accepting, some were resentful, while the majority were resigned to the fact that they had no choice but to accept these changes. The women often intimated that "worrying" or "complaining" was of no benefit and that they had little choice but to accept the restrictions:

I was so used to doing for myself. But gradually I had to watch what I was doing. If it's done today, it's done. If it's not, leave it. Why get myself in a hassle? You're better off for it.

Another woman reported:

I felt a bit resentful, right. You say, why me? But now I take it easy, a little bit easier. If I can't do it, what's the use of complaining? My life has changed, but I'm accepting it because I can't do anything else about it.

One of the women found it more difficult to accept the imposed limitations and thus move on to a redefinition of normal than did the others:

I can't cope with it, sitting around all day long, doing nothing. You know, that gets on my nerves. Can't see the sense of living like this. I want to be able to do my part. When you're doing something all your life, then all of a sudden, you can't do it, it's a lot to accept.

In addition to accepting these changes, in many cases the women attempted to justify their existence. Some women attributed their restrictions not only to their heart attacks but to the presence of concomitant illnesses such as arthritis, chest conditions or, most frequently, to age:

Well, I'm 80 years old, so you know, you can slow down. You can say, well it's getting a little bit beyond me.

Another woman commented:

Now probably, it's age that got a lot to do with it. You're older. You're 65 years old, you're not 45.

As informants accepted the changes, they began to focus on other areas and other issues in their lives. The heart attack, though never completely forgotten, no longer occupied their every thought. Many of the women stated that they occasionally, but not constantly, thought about the fact that they had had a heart attack. Many of the women thought about it only when they experienced pain. Some women forgot about it completely. One woman reported:

I was over cleaning the fridge, and taking stuff out, and my husband said "Do you realize that you're not supposed to do that, lift anything heavy?" It's like I forget.

The ability of the women to refocus was augmented by physical improvements. As physical limitations decreased, the informants perceived themselves as being closer to getting back to normal.

Resuming independence. The last response, indicative of the successful achievement of the final stage of the recovery process, was resuming independence. This phase was marked by the ability to complete tasks and participate in activity.

Several of the informants referred to the resumption of independence as being able to do what they wanted, when they wanted, without worry.

The informants described this phase as the time in which they could do their work and have no problems. They saw the initial 6 to 7 weeks following their heart attack as a period of nonproductivity, of "fiddling around." However, after that time period the women generally perceived themselves as being useful and productive. This feeling of productivity provided them with a sense of accomplishment, pride, and independence.

The majority of informants in this study were interviewed 7 to 8 weeks posthospital discharge. At this point in time, the women perceived themselves as "almost" back to normal, "nearly" back to normal or as "easing" themselves back to normal. Though not evident in this group of informants, there is a time when women who recover from a myocardial infarction see themselves as back to normal. However, this was ascertained only from women who had experienced more than one myocardial infarction. These women indicated that there came a time when they got back to normal and "continued on as they had before." It was evident that the length of time it took to get back to normal varied with the individual. Getting back to normal took six weeks for some women, while for others it took six months. One woman reported:

I could do me work and I had no problems. About six months, I felt grand. I could continue on as I continued on before.

Moreover, these women felt that it took longer to get back to normal after the second or third heart attack than it did after the first.

And I don't feel like doing what I did [after] the first heart attack I had, because I get tired easy . I can't do as much as I did after the first attack ... different world altogether.

They also felt that it would take a longer time to forget about the heart attack, if indeed they could at all:

The last time it wore away, right away, and I forgot about it, but this time I'll never forget about it.

Conclusion

The informants perceived the recovery process as 'getting back to normal' -- or normal with some modifications. They considered being able to "do work" or "everyday chores" as the hallmark of their recovery. This ability to perform "work" provided them with a sense of accomplishment, pride, and independence.

Moreover, the woman proceeded through this process at different rates depending on what was happening in their lives, on setbacks, and on complications that arose during this period. However, the majority of these women strove to

achieve the same goal, to get back to normal -- to do what they wanted, when they wanted and to go where they wanted, when they wanted to go.

CHAPTER 5

Discussion

In this chapter, the recovery process of getting back to normal for women who experienced a myocardial infarction is discussed. Although it is evident that there is overlap between the findings of this study and previous research, new insights are gained from the present inquiry.

At present little is known about what the recovery process is like for women who have experienced a myocardial infarction. The majority of cardiac research on recovery has traditionally focused on men and has failed to address the recovery process for women. Expectations and care for women recovering from acute myocardial infarction have been based on a predominantly male-oriented approach to research. These studies do not provide an accurate picture of the recovery process nor the rehabilitative needs of women.

The main purpose of this study was to examine the recovery process of women who experienced an acute myocardial infarction and to develop a beginning substantive theory to explain the process more fully. This chapter is a discussion of this process. The first section contains new insights into women's recovery from an acute myocardial infarction. The second part of the chapter is a discussion of the findings in relation to the literature.

New Insights - Women's Recovery from a Myocardial Infarction

The findings from the present study have revealed aspects of women's recovery after a myocardial infarction not recognized in past research. Two such areas include (a) how women perceive recovery, and (b) the manner in which women resume activity.

Recovery has been defined as the process of regaining health after an illness or as the process of regaining a former state of health (Stamler, 1985). Few of the women in the current study described recovery in either of these terms as the majority of the women did not perceive themselves as "sick." While the women recognized that their heart attack could have been fatal and that they were "sick" at the time of the attack, once the pain subsided and the shortness of breath and tiredness eased, they no longer perceived themselves as ill. Many of the women stated that having a heart attack was not like having surgery, there was no scar -- no visible reminder that, indeed, their health was compromised.

Corbin and Strauss (1988) described recovery as the resumption of activities of daily living and the return to an independent role after an illness. The perceptions of the women in this current investigation correspond somewhat to those of Corbin and Strauss, yet, reflect a truly female perspective of recovery. While each of the women had her own

unique and individual perceptions of recovery, derived from life experiences, roles, and responsibilities, they shared many similarities in their perceptions of recovery. They considered their heart attack as a serious event, as an event that disrupted their family, work, and social lives but not as an illness. Although the women realized that their hearts had been damaged, because there were no external indicators of injury, many of the women had difficulty visualizing themselves as "sick." Hence, they envisioned recovery as getting back to normal -- the period in which they would be able to resume their customary roles and their normal family, work, and social responsibilities, and in which they would be able to make adjustments necessary to move on with life. Further, findings revealed that all strategies and responses, utilized by the women during recovery, were directed toward getting back to normal -- being able to do what one wants, when one wants, and going where one wants to go, when one want to go.

Several of the women had difficulty understanding why they could not return home and immediately resume an independent role and normal activities and responsibilities. Other women were impatient with the length of recovery and the lack of a quick recovery. Thus, only when the women experienced pain or discomfort did they perceive the need not

to resume or to abandon their customary roles and responsibilities.

The literature reports that four to six weeks postmyocardial infarction women resume and are responsible for household duties. However, the literature has not reported if this has been a gradual process or if, at the 6-week period, there has been a complete resumption of activities. The findings of this current study indicate that getting back to normal involves a gradual resumption of activities. The women usually resumed their duties by completing their own hygiene. They then progressed to getting themselves a cup of tea and clearing away dishes. When they performed these tasks without experiencing either pain or discomfort, they moved on to more complicated routines. Because tasks such as making beds, doing laundry, and cleaning fridges were more demanding of their energy, the women had to devise ways in which they could eventually accomplish these tasks. They did this by breaking these tasks into manageable pieces. Making a bed might involve turning the pillow over one day, pulling up a sheet the next day, and putting on the bedspread before the week was over. Cleaning the fridge might involve cleaning one shelf one day, another shelf the next day, and completing the procedure by the end of the week. This practice of breaking tasks down was quite helpful to the women. Not only did it provide them the opportunity to complete tasks, but it

provided them, upon completion of the tasks, a sense of pride, accomplishment, and independence.

Discussion of Findings in Conjunction with Literature Reviewed

A number of topics will be discussed as they concur with previously identified research. These topics include the similarity of Johnson's (1991) adjustment process after a myocardial infarction to the recovery process following an acute myocardial infarction identified in this current inquiry, the variety of methods used to monitor progress, gender and role expectations, and women's role demands postinfarction. Additionally, balancing needs and support, participation in structured inpatient cardiac rehabilitation programs, lifestyle changes, and adherence to therapeutic regimes will be addressed. Finally, the impact of social support and chronic illness on adherence behaviours will be discussed.

Several similarities were found to exist between the study conducted by Johnson (1991) and the current study. Johnson found it difficult to capture the adjustment process for individuals who had experienced a myocardial infarction because of the cyclical nature and reciprocal stages of the process. The adjustment process, described in Johnson's

study, was comprised of four stages: (a) regaining control, (b) coming to terms, (c) learning to live, and (d) living again. The recovery process, described in the current study, was also comprised of four stages: (a) accepting what has happened, (b) establishing boundaries (c) making adjustments, and (d) re-establishing normality. As in Johnson's study, the researcher found it difficult to capture the recovery process as the perceptions of women's progress and abilities changed over time and contributed to the reiterative nature of the process. Johnson's study found that depending on the course of their recovery, women often vacillated between the second and third stages of the adjustment process before moving on to the final stage. The findings of the present inquiry concur with those of Johnson. Vacillation was identified between the first and third stages of the recovery process. However, as with the process described by Johnson, there were distinct stages in the process where transitions could be identified.

Similar to the findings of Johnson (1991), the findings of this study also suggest that the women used a variety of methods to monitor their progress. Although Johnson did not use the terminology "dual method of monitoring progress" or "internal and external monitoring," the informants in her study used similar methods to gauge their progress. The findings of both studies indicated that when the women were uncertain about their progress or abilities, they attempted to

alleviate these concerns through the utilization of two monitoring techniques, internal monitoring, and external monitoring. Internal monitoring involved reading their bodies, that is, becoming sensitized to body cues, and making decisions based on those cues. After their heart attacks, many of the women in this study, as well as the informants in Johnson's study, had difficulty determining how much activity was appropriate. They had to become more perceptive of their bodies' needs and learn to trust physical and psychological cues. This strategy provided a means by which judgements could be made about the continuation of an activity. In the current study, when an informant was performing an activity and experienced tiredness or chest pain, through monitoring herself she recognized the tiredness or chest pain as a signal or an indication to discontinue the activity.

Oftentimes, in the current study and in Johnson's study, the informants used external monitoring. External monitoring involved seeking confirmation of progress from external sources such as health care professionals or diagnostic test results. If an incongruency existed between their own perceptions of progress and the health professionals' or the test results, the informants often felt devastated or wondered if there was some mistake in the assessment. If there was congruency and both assessments were perceived to be positive, the women perceived themselves as doing well. When both

assessments concurred and were negative, the women felt despondent. The informants in Johnson's study appeared to rely heavily on health care professionals' assessments whereas the women in the current study appeared to place as much emphasis on diagnostic test results as they did on the assessments of the health care professionals.

One topic that has been previously addressed is gender and role expectations following myocardial infarction. Hamilton and Seidman (1993) found that four to six weeks postmyocardial infarction women resumed their domestic responsibilities. Findings in the present study concur with those of Hamilton and Seidman (1993) and with prior research on women's resumption of household duties following acute myocardial infarction (Boogaard, 1984; Hawthorne, 1994; Murdaugh, 1990; Parchert & Creason, 1989). In the current study many of the women attempted to protect their previous domestic roles. They felt uncomfortable with attempts made by their children to provide assistance. They felt that it was unacceptable to sit while there was work to be done (cooking, cleaning, ironing). Oftentimes, the women proceeded to carry out these activities rather than feel dependent and watch others do the work. They found it extremely difficult to return to their homes without resuming their work roles. The majority of the women felt that doing their work provided them with a sense of pride and accomplishment.

There is evidence that women's role demands add significant stress during recovery from cardiac illness (Elliott, 1995; Rankin, 1989). Women tend to report feeling guilty about the inability to perform usual activities, yet, they continue to assume responsibility for and perform these tasks (Cochrane, 1992; Hamilton, 1991). Several of the women in the current study stated that they felt "bad" that someone, other than themselves, had to perform their customary duties. They felt that they were imposing on others or being a bother, and they expressed frustration. In the current inquiry, findings revealed that all the participants, who ranged in age from 60 - 80 years, continued to assume responsibility for their own household activities. These findings are consistent with those of Sharp et al. (1991) who found that older women, aged 60 years and over, do not retire from their domestic responsibilities. This study also found that women who continued or who attempted to continue to carry out these responsibilities experienced greater feelings of stress. These findings are consistent with those of Young and Kahana (1993).

Johnson (1991) found that one aspect of the recovery process that presented the informants with many difficulties was the area of balancing needs and support. In the current study, as well, the women were often overwhelmed by the assistance offered by others when they returned home. In

order to preserve their sense of independence, they attempted to balance their needs and support. In the present inquiry this phenomenon was clearly representative of women approximately eight weeks posthospital discharge. Although these findings concur with those of Johnson, it is difficult to establish explicit similarities as Johnson's study was comprised of both men and women and was conducted in a time range of one to forty-five months postinfarction. However, both Johnson's study and the present inquiry found that support was most helpful to the women's recovery when it was shared equally between the women and the family members. When the women were constantly in receipt of support, it caused them to feel inadequate and indebted to others. When the women were passively cared for without consideration of their needs, they felt overprotected and "smothered." When informants perceived that they did not have enough support to meet their needs, they felt lonely and abandoned. When there was a mutual exchange of emotional support and actual help with tasks between the women and the family members, the women felt independent and "worthwhile." Consequently, this relationship, which involved a mutual exchange of giving and receiving, was considered to be most beneficial to the women's recovery.

A study by Gulanick (1991) found that individuals who participated in a comprehensive inpatient cardiac

rehabilitation program made substantial improvements in the resumption of activity early in the recovery period. The findings of this current study concur with those of Gulanick. Six of the women who participated in the structured inpatient cardiac rehabilitation program provided by one of the participating agencies felt that they had acquired a good knowledge of postinfarction regimes and were better prepared to participate in activity. While participating in this inpatient cardiac rehabilitation program, they had resumed activity on a gradual basis. They had begun with leg exercises and progressed to stair climbing. They viewed this as "more or less like practice" for when they returned home. By discharge, they had increased their activity levels and their activity tolerance. For women who had not attended an inpatient cardiac rehabilitation program, stair climbing posed concerns when they either had two-story homes or steps leading up to their houses. This stair-climbing activity frequently aroused feelings of insecurity and concern in these women.

Despite the role of lifestyle changes in the secondary prevention of the reduction of coronary risk, lack of adherence to therapeutic regimes is a fundamental problem in risk reduction after a cardiac event (Fleury, 1991). The findings in this current investigation concur with those of Douglas (1993) who reported that women find it particularly difficult to adhere to lifestyle changes. Several of the

women found it particularly difficult to adhere to dietary restrictions. They refused to give up their usual eating habits. Several of the women did not comply with their activity program. Although encouraged to walk, many reported that they had not been "outside the door" since they had come home. One woman had overstepped the boundary of activity progression and had driven to another province nine days posthospital discharge.

Findings of this study also concur with those of Kannel, McGee, and Castelli (1984) who found that women have not stopped smoking as readily as men despite adverse health consequences. Four of the women in this current study, who have just experienced either their second or third heart attack, have continued to smoke. The participants in this study were all older, postmenopausal women. These women had all adapted and become accustomed to lifelong individual lifestyle practices. In this stage of their lives, many of the women were probably reluctant and/or unwilling to make lifestyle changes; changes that might interfere with established routines and consequently impede their quality of life. In this study, as well, findings revealed that women were most compliant to medication adherence. These findings concur with those of Kison (1992) who found the highest degree of compliance was to prescriptions regarding medications.

Social support and perceived beliefs of others, which encompasses social support, have been found to have a significant effect on adherence behaviours (Miller et al., 1988, 1989, 1990). Several authors have concluded that social support, particularly family support, was associated with enhanced wellness motivation by enabling the initiation and maintenance of positive health patterns (Conn et al., 1991; Fleury, 1993; Kison, 1992). Findings indicated that the families of the informants in this current investigation were supportive. However, the presence of the family support did not appear to influence adherence to lifestyle changes as the majority of the informants were noncompliant to diet, activity, and smoking cessation regimes. These findings are congruent with those of Fleury (1991) who found no significant correlation between social support and adherence behaviours.

If a chronic illness cannot be cured and the symptoms are only partially relieved by therapy, the client is generally not highly motivated to comply with the therapy plan (Aiken, 1976). Thus, clients with chronic illnesses, such as cardiovascular disease, may become less actively involved in their care, may experience greater frustration, and may comply less readily with care. Such might be the case with the informants in this current investigation.

Much of what has been found in the present study does reflect what is previously reported in the literature,

especially in regard to gender and role expectations, participation in structured rehabilitation programs, and adherence to therapeutic regimes. There are, however, several unexplored areas that emerged from the interview data, such as women's perception of recovery, and the manner in which women resume activity.

CHAPTER 6

Limitations and Implications

The final chapter of this thesis begins by outlining the limitations of the study. Implications for nursing practice, education, and research are presented. This chapter concludes with the presentation of a comprehensive summary of the study.

Limitations

A limitation of the present study is that theoretical sampling was confined to one group, women who had experienced a myocardial infarction and who resided within a 60-mile radius of the city. Therefore, only a beginning substantive theory on women's recovery after a myocardial infarction could be derived. Although informants were recruited from each of the three city hospitals, sample size was small and theoretically representative of postmenopausal women only. Further, it is difficult to know if the older age of the women and the presence of comorbidities may have impacted on the recovery process. Thus, the substantive theory produced is applicable to this one group. The researcher recognizes that with additional variability a greater diversity of conceptual categories may have been developed, thus increasing the applicability of the theoretical findings.

Implications of the Study

This study has several implications for nursing including implications for the nurse as an educator, provider of support, and client advocate. Therefore implications for nursing practice, education, and research will be addressed.

Implications for Nursing Practice

The current inquiry has identified that different learning needs exist in each phase of the recovery process. To first address this issue, nurses in practice settings must recognize that client education must be based on the perceived learning needs of the client, in this instance, women who have experienced an acute myocardial infarction. When education is provided based on these learning needs, learning can be improved. Thus, nurses must address women's perceived needs during hospitalization and at home, if women are to effectively care for themselves and function at an optimum level of health.

To further address this issue, nurses must provide relevant information to the client in each phase of recovery: in the coronary care unit, on the postcoronary care unit, and at home. When women are admitted to the coronary care unit, they experience shock, disbelief, and fear. In this study,

the women realized the severity of their illness and confronted their own mortality. They looked for the causes of this event. Because, at this time, the women are exposed to various sources of stress, retention of information may be limited. Therefore, nurses should encourage the women to express their concerns and ask questions. Nurses can discuss these concerns or reactions to the event and help women adjust to the recovery process by reviewing information often and patiently.

When improvement occurs, the women are transferred to the postcoronary care unit. They are now cognizant that limitations exist. However, as their anxiety has decreased, the women are better able to retain information pertinent to their health. Thus, in an attempt to alleviate the stress and anxiety that often accompanies these limitations, the nurse should provide the women with information addressing risk factors, therapeutic regimes, lifestyle modifications, and medical follow-up. Additionally, discharge planning, involving the women and their families, should be carried out, taking into consideration the often limited resources of older women, women's attitudes towards their customary roles and responsibilities, and the fact that many women are themselves health care providers for elderly husbands.

Once the women are discharged home, they are able to devote energy to learning about and managing self-care needs.

However, this period is initially filled with doubts and uncertainties. The women seek a way of life they can maintain and seek to regain trust in their own abilities. In order to assist women through this phase of the recovery, community and/or home care nurses should reinforce information that has been taught in the hospital and provide information on promoting and maintaining health-related behaviours. Throughout the educational process multiple educational strategies, including nurse-client interaction, audiovisual aids, and print materials, should be employed to enhance the learning process. Because of the importance and impact of relationships for women, spouses, family members, and significant others should be involved in these educational sessions.

The present inquiry has revealed that social support has been found to have a significant impact on the recovery process. Thus, nurses should, throughout all phases of the recovery process, provide support by helping women understand the various recovery phases and the strategies used to move through the phases. Additionally, because of the importance of family support to recovery, nurses should teach family members and significant others the appropriate use of support for women recovering from an acute myocardial infarction. Providing too much support can "smother" the women. Too little support may cause the women to feel lonely and

abandoned. When appropriate support systems are not available, nurses can assess the appropriateness of local support groups and then refer women to them in order that they be provided an opportunity to express their fears and concerns in an emotionally supportive environment.

This current investigation has revealed that little professional help is available to women recovering from acute myocardial infarction. Therefore, nurses must become more involved in client care both as caregiver and client advocate. In this current study, women stated that they had difficulty knowing how much activity they could do. Research studies have demonstrated that women participating in cardiac rehabilitation activities recover more quickly and with less stress than those women not attending. However, women must be asked if cardiac rehabilitation programs are appropriate for them. Based upon their responses, nurses might then lobby to have cardiac rehabilitation programs developed that are tailored to the needs of women. These programs should include lifestyle, nutritional, hormonal and medication counselling, smoking cessation and stress management courses, and appropriate exercise programs. These programs should also provide emotional support, a component essential to the recovery and rehabilitation. Nurses should teach women about the benefits of cardiac rehabilitation programs and encourage them to enroll. Nurses must also educate family members so

that they understand the usefulness of these programs and their significance to recovery. Further, nurses need to encourage physicians to promote cardiac rehabilitation programs to women. It is hoped that with family and medical support women will participate in cardiac rehabilitation programs.

The findings in this current investigation indicate that women find it difficult to adhere to lifestyle changes. In order to promote adherence to therapeutic regimes, the nurse should discuss individual lifestyle practices with the client and determine the importance of these practices to the client. Based on the results of this discussion, the nurse should, in collaboration with the client, plan appropriate lifestyle modifications. It might be that the client is reluctant or unwilling to make these changes if they affect her quality of life. However, the nurse should provide education and support as the client strives to achieve and maintain adherence behaviours. As the family often plays a significant role in compliance behaviours, nurses need to involve family members in this endeavour.

Finally, nurses need to sensitize and educate their nursing peers and physician colleagues to the unique needs and concerns of women recovering from a myocardial infarction.

Implications for Nursing Education

The findings of this study also have implications for nursing education. Because the prognosis for women with myocardial infarction becomes significantly worse once the disease is apparent, and because women generally have concomitant illnesses, education directed at the prevention of complications and deterioration is essential. Nurse educators will have to teach students about the tertiary management of heart disease so that they might assist women during the rehabilitative phase of their disease. In addition, nursing students will need to be taught to discuss the role of risk factor management in order that they might assist women to adapt to their heart conditions and teach these women to prevent future complications.

Nurse educators will need to teach students to be sensitive to the unique needs and concerns of women recovering from myocardial infarctions. Student sensitivity can be increased through contact with clients who have experienced an AMI and through discussion of research findings related to the topic. The findings of this study should add insights into what recovery is like for women who have experienced an acute myocardial infarction. In an effort to increase student's knowledge about women's recovery after a myocardial infarction, students need to be encouraged to explore, with

women, their perceptions of the recovery process. Such information could be a valuable learning experience for the student and provide a foundation for future nursing encounters with women who have experienced an acute myocardial infarction.

Finally, nurse educators should instruct and guide nursing students to become responsible client advocates. Nursing students should be encouraged to educate colleagues, the public, the media, the political sector, and women themselves about heart disease. Nursing students must be taught to encourage women to take a more active role in their health care and to lobby with them, for care that is appropriate for women. Unless the public and political sector are properly informed about the value of prevention of myocardial infarction in women, lifestyle change, advocacy, and the creation of environments conducive to heart health in women, will not occur.

Implications for Nursing Research

From the present study it became apparent that future research is warranted in several areas. Future studies by nurses need to address specific problems associated with women's recovery after an acute myocardial infarction. This research should recognize women's diverse roles and be

directed towards defining their needs in the context of their families and their related role functions. This research must include interdisciplinary collaboration in order to respond to women's varying rehabilitative needs.

Though several women in the present study attributed their myocardial infarctions to individual lifestyle practices, few made lifestyle modifications, either before or after their acute myocardial infarction. Thus, nursing studies are needed to understand the choices women make about their lifestyle before and after myocardial infarctions. Findings of this study indicated that women adhere poorly to therapeutic regimes. What are the factors that influence compliance? Is there a relationship between social support, particularly family support, and adherence? Further studies are warranted to address the issues surrounding compliance to therapeutic regimes by female clients.

Subsequent research should be conducted to examine the impact of social support on the recovery process. This present inquiry indicated that one aspect of recovery that presented the informants with some difficulty was the area of balancing needs and support. Though much of the cardiac rehabilitation literature asserts that social support is a positive factor, the findings of this study revealed that indiscriminate social support, especially family support, was not always beneficial. These findings point to the need for

additional research on which aspects of social support are most beneficial for women recovering from an acute myocardial infarction.

Lack of referral to outpatient cardiac rehabilitation has been identified in previous studies, and in this present inquiry. Thus, investigation is required into the physician - client relationship and physician referral patterns of female clients to cardiac rehabilitation programs.

Findings of this study point to the need for more comprehensive research on older women managing a chronic illness. Age may bring specific health management problems or significantly modify women's perceptions of themselves and their abilities to cope with the effects of their illness. Innovative strategies may be required to empower older women to cope with the demands of heart disease.

Since the informants in this current inquiry were all postmenopausal women who ranged in age from 60 - 80 years, no data were obtained about the recovery process of women under 60 years of age. Hence, future studies are recommended to explore what the recovery process is like for younger, premenopausal clients.

The results of this investigation indicate that women experience guilt about the perceived inability to function normally within their homes and families after an acute myocardial infarction. Anxieties, concerns about self-care

abilities, and feelings of uselessness were also reported. Thus, future studies are warranted to examine the impact of emotional sequelae of women's recovery from a myocardial infarction and to determine the need for the establishment of women's cardiac support groups.

It is also recommended that a grounded theory study be conducted to help derive a substantive theory on the recovery process of women who have experienced similar medical conditions. A clearer perception of what the recovery process is like may improve intervention strategies and rehabilitation programs for women and lead to the development of a formative theory on women's recovery from life-threatening illnesses.

Conclusion

The primary question addressed in this study was: What is the recovery process like for women who have experienced a myocardial infarction? To investigate this question, a grounded theory approach was used. Interviews conducted with twelve women provided the major sources of data. The basic social psychological process of 'getting back to normal' was identified and analysis of the data revealed four stages of this process: (a) accepting what has happened, (b) establishing boundaries, (c) making adjustments, and (d) re-establishing normality. Following this, a discussion of the

findings was presented in relation to the literature reviewed, as well as areas not identified in previous research. Limitations of the study were addressed and finally implications for nursing practice, nursing education and nursing research were presented.

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Appendix A

Letter to Ethical Review Committee

Dear Sir/Madam:

This letter is to request permission to conduct a nursing research study on the medical unit in (agency). The study is in partial fulfilment of the requirements for the Masters of Nursing degree at Memorial University and is under the guidance of committee chairperson, Shirley M. Solberg, M.N., R.N.

The study is an exploratory study which will examine the recovery process in women who have experienced a myocardial infarction. I would like to make initial contact with the women, prior to discharge, and set up a follow up interview in a setting convenient to her, approximately eight weeks post hospital discharge.

I enclose the completed Human Investigations Committee form for review by your committee. The study has already been reviewed by the Human Investigations Committee, Memorial University of Newfoundland - Faculty of Medicine.

If permission is granted, I will be requesting the opportunity to discuss the study with the nursing supervisor on the medical unit, whose assistance will be sought for identification of and initial approach to the woman.

I anticipate that data collection will take five to six months, from August 1995 until January, 1996.

When the thesis is completed, I am willing to donate a copy to the hospital library and to conduct seminars on the topic if requested by the hospital staff.

Yours sincerely,

Brenda Tobin, R.N., B.N.
Graduate Student

Appendix B

Letter to Assistant Executive Director

Dear:

I am a graduate student in the Masters of Nursing Program at Memorial University. I am conducting research for my thesis on the recovery process for women who have experienced a myocardial infarction. The study will explore the recovery process approximately 8 weeks after the event has occurred.

The sample for this study will consist of women who have experienced a myocardial infarction. Informants will be interviewed in their own homes or in a setting of their choosing, 8 weeks post hospital discharge. An open-ended interview format will be used and permission will be requested to tape record the interviews from the informant. My plan is to interview approximately 25 women from the three major hospitals within the city.

I am requesting permission to approach the nursing supervisor on the medical unit in your agency and seek her cooperation in providing information to the clients about the study and to subsequently submit the names of interested clients to me.

I have also enclosed for your information, a sample consent form and a sample interview guide. If you have any questions or wish to discuss the study with me, I can be contacted at 739-8981 (residence). Thank you.

Sincerely,

Brenda Tobin, R.N., B.N.
Graduate Student

Appendix C

Letter to Medical Doctor

Dear Doctor:

I am writing to inform you about a nursing research study on the medical unit at (agency) which may involve some of your patients. This study is in partial fulfilment of the requirement of the Masters of Nursing degree at Memorial University under the guidance of committee chairperson, Shirley M. Solberg, M.N.,R.N.

As a nurse, I am very interested in the recovery process of women who have experienced a myocardial infarction. As a number of research studies have not specifically addressed women's responses to recovery and rehabilitation during this period, it is hoped that the findings from this study will add to the body of knowledge that does exist.

Participation by the women is voluntary. After the woman has signed the consent, the study will involve a direct interview in the woman's home or in a setting of their choosing, approximately 8 weeks post hospital discharge.

The study has been reviewed by the Human Investigations Committee, Memorial University of Newfoundland - Faculty of Medicine.

If you have any questions or concerns relating to the study, please contact me. My home telephone number is 739-8981.

Yours sincerely,

Brenda Tobin, R.N., B.N.
Graduate Student

Appendix D

Approval Letter from Human Investigations Committee



Memorial

University of Newfoundland

Office of Research and Graduate Studies (Medicine)
Faculty of Medicine, The Health Sciences Centre

July 11, 1995

TO: Ms. Brenda Tobin

FROM: Dr. Verna M. Skanes, Assistant Dean,
Research and Graduate Studies (Medicine)

SUBJECT: Application to the Human Investigation Committee #95.87

The Human Investigation Committee of the Faculty of Medicine has reviewed your proposal for the study entitled "Women's Recovery After a Myocardial Infarction: A Grounded Approach".

Full approval has been granted from point of view of ethics as defined in the terms of reference of this Faculty Committee.

It will be your responsibility to seek necessary approval from the hospital(s) wherein the investigation will be conducted.

Notwithstanding the approval of the HIC, the primary responsibility for the ethical conduct of the investigation remains with you.

Verna M. Skanes, Ph.D.
Assistant Dean

Appendix E

Approval Letter from Health Care Corporation

Health Care Corporation of St. John's
South Wing, Waterford Hospital, Waterford Bridge Road,
St. John's, NF Can. A1E 4J8

1995 09 21

TO: Ms. Brenda Tobin, 8 Larch Place, St. John's, NF, A1B 1R5

FROM: Eric R. Parsons, MD, CCFP,

SUBJECT: #95-87 "Women's Recovery After a Myocardial Infarction: A Grounded Approach".

This letter is to formally inform you that the Board of Directors of the Health Care Corporation of St. John's has recently approved your above investigation on recommendation of the Medical Advisory Committee.

The approval to conduct this research is contingent on the preparations of formal budgets and when the investigation is being done on the request of a pharmaceutical company and others where responsibility and ownership of the data is their's, indirect costs (overhead) will be charged.



ERIC R. PARSONS, MD, CCFP,
Vice-President,
Medical Services

ERP/sh

c.c. Linda Purchase
Research Centre

Appendix F

**SCHOOL OF NURSING
MEMORIAL UNIVERSITY OF NEWFOUNDLAND
ST. JOHN'S, NEWFOUNDLAND A1B 3V6**

Consent to Participate in Nursing Research

TITLE: Women's Recovery After A Myocardial
Infarction: A Grounded Theory Approach

INVESTIGATOR: Brenda Tobin
Phone: 739-8981

You have been asked to participate in a research study. Participation in this study is entirely voluntary. You may decide not to participate or may withdraw from the study at any time without affecting your normal treatment.

Confidentiality of information concerning participants will be maintained by the investigator. I will be available during the study at all times should you have any problems or questions about the study.

Purpose of Study:

The purpose of this study is to examine the recovery process for women who have experienced a heart attack and to use the findings to develop and implement interventions that can enhance this process for women.

Description of Procedures and Tests:

The investigator will conduct an unstructured interview lasting approximately one hour. During this interview you will be asked to talk about your recovery from your heart attack. You may refrain from answering any questions you prefer to omit. If you agree to participate in this study, I request your permission to tape record the interview(s) and make a written copy of the tape-recording(s).

Duration of Subjects Participation:

I will schedule an interview to be conducted in your home or a setting of your choosing, approximately 8 weeks after your discharge from hospital. If, during analysis of the data, I feel the need to further explore certain issues, I may need to contact you for a second or third interview.

Foreseeable Risks, Discomforts or Inconveniences:

There are no obvious health risks involved in this study. Timing and length of the interview will be at your convenience.

Benefits Which The Subject May Receive:

While you will not benefit directly from participation in this study, the information obtained may be helpful, in future, in addressing the concerns of women who are recovering from a heart attack and add to the knowledge that presently exists on this process. However, this study will provide you the opportunity to discuss your heart attack - some women find it helpful to talk about these events.

Liability Disclaimer:

"Your signature on this form indicates that you have understood to your satisfaction the information regarding your participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the investigators, sponsors, or involved institutions from their legal and professional responsibilities."

Any Other Relevant Information:

Other conditions that are part of this agreement include: (1) all personal identifying characteristics will be removed from the written copies of the tape recordings (2) you will not be able to be identified in the final report.

I, _____, the undersigned, agree to my participation or to the participation of _____ (my child, ward, relative) in the research study described.

Any questions have been answered and I understand what is involved in the study. I realize that participation is voluntary and that there is no guarantee that I will benefit from my involvement. I acknowledge that a copy of this form has been given to me.

(Signature of Participant)

(Date)

(Witness Signature)

(Date)

To be signed by investigator:

To the best of my ability I have fully explained to the subject the nature of this research study. I have invited questions and provided answers. I believe that the subject fully understands the implications and voluntary nature of the study.

(Signature of Investigator)

(Date)

Phone Number _____

Appendix G

Suggested Topics to Guide the Interview

As I mentioned when I talked with you first, I am interested in your recovery from your heart attack. Starting with your hospitalization, tell me about what has happened since.

Probes:

1. Has your heart attack interfered with you resuming your normal activities? In what way?
2. Have you had to make any changes in your life because of having a heart attack? What were these? When did you decide to make these changes? How did these changes come about?
3. Were you prepared for the way in which your heart attack has affected your life and activities? Who or what has helped you the most?
4. What resources were available to you (family, friends, health professionals or others) to help with your recovery? Did you receive any information that helped? What was this information?
5. What has helped you the most during your recovery? What has helped you the least? Do you still have some outstanding questions or issues you feel you need to deal with?

Appendix H

Demographic Information

ID Code: _____ Time to complete _____ Date:

Location of interview: _____

Audiotaped: _____

Section I: Demographic

Age:

- a) 30-39 years of age _____
- b) 40-49 years of age _____
- c) 50-64 years of age _____
- d) > 65 years of age _____

Marital Status:

- a) Married _____
- b) Widowed _____
- c) Divorced _____
- d) Separated _____
- e) Never Married _____

Educational Level:

- a) Elementary School _____
- b) High School _____
- c) Post Secondary _____
- d) Graduate _____

Occupation:

- a) White Collar _____
- b) Blue Collar _____
- c) Unemployed _____
- d) Retired _____

Section II: Health Patterns

Time lapsed since heart attack?

- a) < 6 weeks _____
- b) 6-8 weeks _____
- c) 8-10 weeks _____
- d) > 10 weeks _____

Is this your first heart attack?

Yes _____

No _____

Smoking Behaviour:

Do you smoke?

Yes _____

No _____

Activity Level:

Low _____

Moderate _____

High _____

Nutritional Patterns:

Do you follow a special diet?

Yes _____

No _____

Type of Diet _____

Concomitant Illnesses:

Cancer _____

Heart Disease _____

Diabetes _____

Kidney Disease _____

Hypertension _____

Arthritis _____

Other _____



