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THE RELATIONSHIP BETWEEN ROLE SUPPLEMENTATION
AND THE LEVEL OF MARITAL FUNCTIONING
IN COUPLES LIVING WITH CARDIAC DISEASE

By

Laurie DeMull Bok

A THESIS

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ABSTRACT

THE RELATIONSHIP BETWEEN ROLE SUPPLEMENTATION AND THE LEVEL OF MARITAL FUNCTIONING IN COUPLES LIVING WITH CARDIAC DISEASE

By

Laurie DeMull Bok

The onset of heart disease brings about a physical and psychological insult that affects not only the patient but the spouse as well. Studies have described reactions by both patients and spouses and the effect of these responses on their relationship. Interventions in the past have focused primarily on treating the partners separately as patient or spouse. The intervention used in this study involved the patient and spouse as a couple in preparing them for role transition.

Eighteen couples experiencing the onset of heart disease (Myocardial Infarction or Coronary Artery Bypass Graft procedure) participated in this study. Nine couples were in the experimental group and participated in a role supplementation program. Role supplementation consisted of role modeling and role discussion. Role modeling was facilitated by exposure to a role model couple (living with heart disease) in a group situation. The role discussion component occurred the day after the role model session and utilized a tool that allowed each partner to identify his/her responsibility for the treatment plan.

The hypothesis of the study was that couples who participated in a role supplementation program would have a higher level of marital functioning than couples who did not participate in role supplementation. Couples in both groups completed a marital functioning questionnaire six weeks post discharge from the acute care setting. From this questionnaire a mutuality score was obtained. The experimental group was not found to have a higher level of marital functioning than the control group, therefore the hypothesis was not supported.

Dedication

This is dedicated to my husband, Tom, whose support, encouragement and understanding were the critical to the completion of this project.

A special thanks also goes to Kris McKay for her assistance and enthusiasm.

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Chapter 1

Introduction

The onset of heart disease is a direct insult to the physiological function of the body. The trauma is not limited to the physical function of the body but affects the psychological well-being of the patient. This overall injury not only affects the patient but has a direct effect on the spouse. The impact on the couple can be devastating; relationships can be strained and further physical and psychological trauma may result. Nursing intervention is indicated to prevent this trauma and facilitate recovery. One area of intervention may be that of helping the couple to deal with the role changes they experience as a result of the onset of heart disease. This study evaluates the effectiveness of nursing interventions which focus on these role changes (specifically, the discussion of role expectations prior to discharge and exposure to a role model couple) in the level of marital functioning for couples living with cardiac disease.

Emotional results of heart disease are directly linked to disability and mortality. Anxiety and depression have been determined to be barriers to rehabilitation and are a common cause of persistent invalidism (Stern, Pascale and Ackerman 1977; Wishnie, Hackett, and Cassem 1971). Another study found correlations between emotional adjustment and mortality (Farrity and Klein 1975). Patients are often unprepared for the

emotional reactions that can occur following elective cardiac surgery (Stanton, Jenkins, Savageau, Harkin, and Aucoin 1984).

The emotional reactions of the spouse can be as disabling as the patient's response. Skelton and Dominian (1973) reported that the period of convalescence was very stressful for the wife and was attributed to fears of recurrent infarction and tension in the relationship resulting from the husband's irritability and dependency. Mayou, Foster and Williamson (1978) reported that following their husbands' discharge from the hospital, wives experienced "anxiety, depression, fatigue, irritability, poor concentration and insomnia...as severe as in the patients" (p. 699). Spouses often anticipate problems in relation to compliance to the prescribed life style changes and feel they are responsible for the patients' adherence. They focus on how to alter the environment and protect the patient from further resentment and tension in the relationship.

The spouse has been determined as the most significant person in the success of the patient's recovery. Mayou, et al. (1978) found "attitudes, behaviors as well as the quality of family life were important determinants of the rate and extent of the patient's recovery" (p. 699). The spouse often must assume new roles to assist in the recovery process. Often she is overwhelmed by the demands placed on her and the lack of support in meeting all of her responsibilities.

The emotional reactions of the patient and spouse can cause problems in the relationship. Even the most secure relationship

will be tested with the change in life style that results from the transition of health to illness. The strain on the relationship is often the result of increasing dependency both physically and emotionally (Skelton and Dominian, 1973). Granger (1974) and Wishnie et al. (1971) both stated that much of the conflict centered around controversy over restrictions. Physicians orders were interpreted differently by each partner. The spouse's reaction to the overprotective wife was generally one of resentment. Mayou (1982) found "over-protectiveness in marital relationships to be a factor in determining poor emotional and social outcome" (p. 24)

Patients and spouses do not fully anticipate the changes that can occur post-discharge. Many of the men anxiously await their discharge and feel they have made a landmark in their recovery just by the fact that they made it home. They report they did not know what to expect on returning home and were surprised by their fatigue and depression. Spouses anticipated more problems in the changing life style but often are unsure as to how to react to the patient's behavior.

Problem Statement

Nurses have a responsibility in preparing both the patient and spouse for their return home and successful recovery. It is the nurse who can facilitate a recovery that produces satisfaction for both the patient and wife. Nurses are aware of the need to treat the total patient and family. Therefore, nurses can help prepare the patient and spouse for changes in

roles that result from the transition of a well state to an altered state of health. Spouse support group meetings allow for discussion of fears and anticipated problems but do not allow for the patient to validate his anticipated role change with his partner. Patients and spouses need an opportunity to become aware of the anticipated life style changes and to practice these roles before problems occur. While the patient is still hospitalized, the nurse has the opportunity to assist the patient and spouse in preparing for the recovery process.

Purpose

The purpose of this study is to evaluate the effectiveness of two interventions (role modeling and role discussion) which when combined together may positively impact the recovery process of both the husband and wife who have encountered heart disease. These interventions are aimed at treating the couple as opposed to dealing with each of the partners separately.

Chapter 2

Conceptual Framework

Role theory is an accepted psychosocial construct used in identifying nursing problems and developing interventions when working with families. The theory states that within a social situation each member fulfills roles according to his or her understanding and expectations of what the role entails. Roles do not occur as single subsets but involve interaction with significant others. Therefore, a change in one person's role will stimulate a reciprocal change in another's role in the social network where these roles are enacted.

Role transitions occur whenever there is a change in role relationships, expectations or in abilities to fulfill roles. "Role transitions require the person to incorporate new knowledge, alter his behavior, and thus change his definition of himself in his social context (Meleis, 1975, p. 265). In the life cycle, role transitions take place regardless of whether these changes are chosen. Developmental role transitions occur in the growth and development process. For example, when a child becomes an adolescent, he takes on a new set of behaviors that elicit a new set of responses from the parents. Situational transitions involve the gain or loss of a person to the established social system which can change the pattern and quality of interpersonal relationships. The birth of an infant brings the additional role of parents to the husband/wife

relationships. Change from a well state to one of illness necessitates a redefining of established roles for the couple. If the health-illness change occurs over a period of time, the transition will be gradual in redefining and accepting new roles. When a change occurs suddenly, as with the onset of heart disease, new roles must be identified and incorporated more abruptly in the social system.

Role insufficiency occurs when there are incompatible expectations for the same role. In a new role or in a change of role, each person in the social system will define what the expectations and functions of the role should be. With the onset of heart disease the patient will decide whether he is sick or well and will try to convince his partner of his assessment through actions and behaviors. If the family accepts the patient's conclusion, harmony can exist. If the family does not agree with the patient's assessment, conflict will result. When role insufficiency exists, the result can be a change in the satisfaction of the relationship. Role coercion often is used to deal with the role insufficiency. This process attempts to manipulate the partner by use of threats, guilt, or by overprotection which commonly occurs with the couple living with cardiac disease. This method is essentially ineffective and results in damage to the relationship (Roberts, 1983).

Role insufficiency results when a clear definition of the role is lacking, the interaction of the relationship is inflexible, or when there is a lack of knowledge of what the

behavior, feelings and goals of the role should be. When there is no previous knowledge or experience with a role, the interpretation is left with the individual. In contemporary society, sick individuals are cared for in an institutional setting away from the traditional family setting. In the past, individuals were more commonly cared for in the home and families learned how to adapt to the sick role of an individual member. When preparation for roles is lacking, there is greater probability that role insufficiency will result.

Role supplementation is the process of clarifying the expectations of a role and giving sufficient knowledge to function successfully in a role. "To enact a role, the individual ego needs a sense of the social boundaries of role as a unit, a clear idea about the sort of role behavior his significant others expect him to enact, and an awareness of mutual expectations in the complementary role. Role clarification requires that the person reduce the ambiguity and conflict involved in meeting and transmitting role expectations" (Meleis, 1975, p. 267).

The strategies used to clarify the role are role modeling and role discussion. Role modeling can be a learning process, "by observing significant others enacting and playing a certain role, an individual is able to understand and emulate the intricacies of behaviors in a particular role" (Meleis, p. 268). Role discussion is the opportunity to decide the

responsibility, behaviors and obligations of a specific role prior to enacting the role.

Role modeling is an accepted method of learning roles. Parents generally learn how to be parents from the model their parents established. Significant people in a child's life are the models which they emulate in adult life. As stated previously, because of institutional settings, the model of how one acts or feels with chronic illness is seldom observed in today's society. Role modeling has been developed as a method of preparation for certain physical change problems which can alter role image. Patients who have had mastectomies are often visited by another person who has had a mastectomy. This program, called "Reach to Recovery", attempts to role model a positive adjustment for a woman who has experienced a traumatic insult to her physical and psychological self concept. Another example is a program where people who have had colostomies visit a patient with a new colostomy while still in the acute care setting. Expectant parent classes are also devised to assist the couple in preparation for the new roles of parents. This concept can be adopted in preparing the cardiac patient and spouse for the new roles they will encounter post-discharge. A couple who have successfully adjusted to their new life style could relay their experiences in making a satisfactory adjustment. This would entail relating the emotional feelings experienced along with the physical changes encountered.

In role discussion, communication is the key concept. In this situation each partner explores what his or her role expectations are. Simply stating what the role expectations are prior to enacting them may be sufficient to obtain agreement regarding role expectation. "Sometimes a person holding an expectation that is not congruent with the situation will recognize its incongruence and modify it after having stated it" (Roberts, 1983, p. 73). By asking each partner to identify his/her responsibility for the treatment regime and discussing expectations with one another, the nurse can assist the couple in communicating perceived roles. This process could clarify inconsistencies that might exist and also prepare the couple for changes in the relationship. Both role modeling and role discussion are methods which can assist in role clarification and are part of role supplementation.

In order for role supplementation to be effective the timing of the intervention must be considered. Crisis theory recognizes that there is an optimal time for intervention to occur for it to be most effective. During the period of disequilibrium the situation is acute and coping patterns have not yet been established. People are more apt to be open to suggestions from outside resources. This period of acute disequilibrium is from the immediate impact of the crisis to about six weeks afterward. During this period the feelings of pride, the need for privacy and feelings of self-sufficiency are lowered allowing for more openness in expressing problems and

concerns. This can override the fact that problem-solving abilities are limited due to the high state of anxiety (Leavitt, 1982).

Once the couple leaves the acute care setting, most are on their own to handle the problems they encounter. The physician will see them periodically for physical check-ups but the visit is often short and limited in interaction. Therefore, in order to prevent problems in roles after discharge, role supplementation needs to be done while the patient is still hospitalized.

It was assumed, then, based on crisis and role theory that interventions aimed at assisting couples to cope with changes in their relationship due to cardiac disease would be most effective during the immediate onset of the illness. Role supplementation strategies could be incorporated into the teaching program that is normally offered in the acute care setting for cardiac patients. In order for role modeling and role discussion to occur, both partners would need to be present. These techniques would change the focus of instruction from the patient to the partners. In order to validate the effectiveness of these strategies a role supplementation program was implemented in the acute care setting for cardiac patients and spouses. The following hypothesis was tested.

Hypothesis

Couples living with cardiac disease who participate in a role supplementation program will have a higher level of marital

functioning than couples who do not participate in a role supplementation program.

Theoretical Definitions

Role supplementation is defined as the clarification of roles by the process of role modeling and role discussion. Role modeling is the experience of having exposure to someone who has already experienced the role. Role discussion is the opportunity to decide responsibility for role expectations. Role modeling and role discussion strategies can be most effective in the period of disequilibrium.

Marital functioning is the measure of the individual's perception of the couple's internal resources (problem solving, cohesiveness, reciprocity), sexual relationships, and marital distress.

Cardiac disease is defined as either having suffered a myocardial infarction (MI) or having a significant percentage of coronary artery blockage requiring Coronary Artery Bypass Graft (CABG) surgery to be performed.

Couples in this study are those who are married and living together. The male partner is the person who has cardiac disease and was presently hospitalized receiving cardiac rehabilitation instructions.

Chapter 3

Review of the Literature

In reviewing the literature it is evident that emotional reactions toward heart disease significantly impact the lives of patients and spouses. Studies have focused on patient's reactions, spouses reactions, group interventions and the spouse as a support and his/her role in adherence to the treatment plan. Two of the studies were based on role supplementation theory. Only one study was found that actually measured the level of marital functioning between couples post myocardial infarction (MI).

Stanton, et al. (1984) studied 249 adult patients after elective cardiac surgery. The sample was from four different teaching hospitals. The purpose of the study was to find out whether there were common fears and adjustments during the first six months after surgery. The exact content taught in each institution was not described. Results of the study showed that "more than half of the patients felt that they had not been adequately prepared in two areas; possible emotional reactions that might be encountered (such as depression or irritability) and changes in their treatment by other people (such as overprotection)" (p. 527). Since the content of each program was not described, it is not known if the other half of the patients received specific instruction in this area, and if they did, how it was given. The study also showed that patients who

had severe angina and those who lacked a sense of well-being reported more fears and adjustments (p. 529). Fears were commonly expressed as worrying about paying medical bills, not completely recovering, becoming overly dependent, or having to undergo heart surgery again. Adjustments made were having to slow down and limit activities (p. 530).

Spouses' reactions have been studied at different intervals from the time of admission to one year post-op. Bedsworth and Molen (1982) investigated immediate stress reported by spouses of myocardial infarction patients following admission to a coronary care unit. This was a non-experimental design which utilized a semi-structured interview consisting of four open-ended questions. Analysis of the taped interviews of twenty subjects revealed that the primary threat at this time was loss of a healthy mate. Scorer reliability for the transcriptions was 93.05%.

Mayou, et al. (1978) and Skelton and Dominian (1973), studied spouses' reactions at the time of infarct and up to twelve months after. Skelton and Dominian studied sixty-five wives at three, six and twelve months following discharge. Information relating to wives' work, age, marital relations and affective state was obtained by direct questioning. The study did not describe what specific questions were asked nor did it state how the reactions were scored. Interviews were done at the subject's home without the patient present. In describing the effect on marital relations, this study stated that the

impact was dependent on the quality of marital relations prior to the onset of illness. This was based on the fact that there was "evidence of problems before the illness" but it did not describe what criteria were used to make this judgment (p. 103). At three months, twenty-seven wives reported a change in the relationship that resulted from "their husband's increased physical and emotional dependence on them and the difficulty in expressing feelings" (p. 103). At one year, only ten wives continued to express dissatisfaction in their relationship which was the result of their role becoming more of a manager, an overprotective reaction on their part.

Mayou et al. (1978) interviewed eighty-two wives two months and again one year post-discharge of their husbands' infarction. The purpose of the study was to provide a comprehensive and detailed description of the psychological impact on wives and the marital relationship. The method used was a semi-structured interview, tape-recorded at the homes with wives separate from husbands. Neither the interview procedure nor the rating scales were described. Deterioration was reported in 20% of the marriages in this study according to both the husband and wife. Stress, depression, frustration and irritability of the husband were cited as causes of marital discord. Significant correlations were found in determining the psychosocial adjustment of the wife. Continuation at work was related to previous work satisfaction and previous marital satisfaction. "Mental state was significantly related ($p < .05$) to the ratings of the

marriage and family life and to change in the marriage and in leisure activity." (p. 700). Leisure change at twelve months was dependent on the age, occupation and previous sharing of confidences between the couple.

Stern and Pascale (1978) examined anxiety and depression in spouses while patients were hospitalized and six months later. Twenty-five subjects completed the study which utilized the Zung Self-Rating Depression Scale and the Taylor Manifest Anxiety Scale. The reliability of these instruments was not stated. The sample was statistically small but it did reveal that 7 (28%) spouses were anxious or depressed at six months and had high scores on marriage friction and distress compared to other spouses who were not found to be anxious or depressed.

Gilliss (1984) studied spouses' reactions at the time of hospitalization and six months following coronary artery bypass surgery. The sample started with 71 couples of which 58% participated in follow-up. The follow-up visit consisted of an unstructured interview at the couple's home. In her description of the events in the recovery phase, Gilliss (1984) found conflict between the partners resulting from protecting the patient and resentment by the patient at being treated like a child. She described anxiety experienced by spouses as a result of their husbands' performing the different physical tests to prove their endurance. She stated that the spouse believed it was her responsibility to protect the patient from himself. When the spouse gave up this responsibility in frustration, the

result was anger which further alienated the spouses from one another.

Other studies have investigated the emotional reactions and effect on relationships from the patient's perspective. Garrity and Klein (1975) observed patients' behavioral reactions and rated the degree of anxiety, hostility and depression for the first five days of hospitalization after MI. Interrater correlation for raters was significant. At six months 41% of the non-adjustors had died compared to only 8% of the adjustors. The only other variable found to be significant was the extent of complications which increased the severity of heart disease. Psychosomatic theory applied to this situation gives credibility to the assumption that psychophysiologic arousal in patients with impaired hearts can potentiate the risk of reinfarction and death.

Wishnie et al. (1971) reported a follow-up study of 24 patients, three to nine months after discharge which was done at the patient's home. Eighteen patients reported major alterations in living plans after their attack. Family conflict over implications of the illness was present in all 18 of these families. This study concluded that the conflict was predominantly the result of the misunderstanding of coronary disease and misinterpreting physician's orders.

Group therapy for patients and spouses has been studied as an intervention for psychiatric morbidity following MI. Adsett and Bruhn (1968) conducted a group for patients and spouses.

They found no difference in the physiological parameters of blood pressure and pulse nor in anxiety or depression compared to the control group. However, the therapy group did have higher levels of serum cholesterol and uric acid than the controls. But whether this was a positive result is not known. It stated total cholesterol levels and not the percentage of HDL (high density lipoprotein) in relation to LDL (low density lipoprotein) which determines the risk factor for myocardial disease. The 10 couples selected for the group were one year post MI and were determined to be having difficulty in adapting to their cardiac disability. The specific test used to select this population was not stated. The observers in this study were the researchers not blind observers. No specific measurement was made for the outcome of spouses. Both patient and spouses expressed problems with relationships and interactions. However it cannot be concluded from this study that group therapy was effective in helping patients and spouses in adjusting to heart disease.

The wife's role in supporting the husband after an MI has recently been investigated, Bramwell (1986) incorporated the role model theory in attempting to identify what information was helpful in clarifying and taking on the support role. She also investigated the source of this information. The study consisted of semi-structured interviews with 82 wives two to three weeks post hospital discharge. The interview schedule was tested for content validity and pre-tested. Fifty-six percent

of the wives reported an understanding of the support role requirements. This was based on a series of questions regarding physical and emotional needs as well as how to attempt to influence the husband. The sources of helpful information were identified as written material (40%), nurses and other health professionals (30%) and the community health nurse (12%). The wives who reported that they were unclear about their role attributed it to insufficient information, especially concerning diet and exercise. Strategies identified for giving emotional support were described as "being a companion who was available to listen, acting as an emotional resource, or working together by talking things out and planning ahead" (p. 582). The author concluded that nurses should encourage an open sharing and partnership approach to rehabilitation.

Hilbert (1985) examined the influence of spouse support in relationship to compliance of male MI patients. Compliance was defined as the comparison between the patients behavior and clinical prescription. Spouse support was defined as objective psychological behaviors which consisted of certain actions which produced positive outcomes. The sample population consisted of 60 post MI patients and their spouses who were at least three months post hospitalization. The male patients were tested using a Compliance Questionnaire which was checked for content validity by a panel of experts. Interrater reliability was stated as .96. The subjects using this instrument indicated the degree to which they carried out therapeutic recommendations in

the past ten weeks. The spouses completed a Spouse Support Questionnaire which was developed for the study and pre-tested for content validity and reliability. The hypothesis that spouse support is related to compliance was not supported. Possible explanations for the results were attributed to marital interaction style, the husbands perception of supportive behaviors as non-supportive or over-supportive reactions by the wife.

McMahon, Miller, Wikoff, Ganet and Ringel (1986) investigated actual adherence to the recommended treatment plan in relationship to stated desire to follow the treatment plan. One hundred twelve patients (87 men and 25 women) from 5 different institutions were asked to identify their intentions to follow their treatment plan in four life situation categories (home, work, sports/recreation, and social activity). Six to nine months later, the actual adherence behaviors were identified by the patient and significant other. Findings showed that "actual adherence behaviors were less than original intentions" ($p < .05$). However, this study also showed that subject adherence was significantly related to their belief about what others thought they should be doing six to nine months post hospitalization (home $r = 0.68$, $p < 0.001$; work $r = 0.80$, $p < 0.001$, sports/recreation, $r = 0.67$, $p < 0.001$ and social $r = 0.62$, $p < 0.001$). These findings suggest that the significant other can have a positive influence in adhering to

the recommended treatment plan and emphasize the need to include significant others in rehabilitation.

Using specific role supplementation techniques, Dracup (1982) developed a 10 week cardiac rehabilitation program for patients and spouses based on interactionist role theory. In a 10 week session she used a variety of strategies (role modeling, role clarification, reference groups and role rehearsal) to assist in assimilating and integrating a new role for the cardiac couple. The study design was quasi-experimental with three groups (A = control, B = patient only and B₂=patient-spouse). Each group was tested prior to the sessions, immediately post completion of all 10 sessions and six months later. The patient-spouse group (B₂) spouses showed a greater decrease in anxiety, an increase in self-esteem and a reported decrease in depression and hostility. The patients in this group (B₂) also had higher self esteem scores and reported greater decrease in anxiety, depression and hostility than the patients in the other two groups. However neither of these findings remained significant ($p < .05$) over time. The questionnaires used for measurement were not stated but data were analyzed using repeated-measures analysis of variance and covariance.

A study which specifically examined the level of marital functioning post MI was conducted by Kline and Warren (1983). The study included 50 couples whose male partner suffered an MI in the past year. A marital functioning tool was developed to

measure the couple's perception of internal resources, sexual relationships and marital distress. This instrument was evaluated for internal consistency. The Cronbach's alpha was reported as .94 when data from husbands and wives were combined. Other instruments were used to measure adherence and responsibility for the post-myocardial infarction regimen. "The single variable which significantly predicted both husbands' and wives' scores was agreement about adherence to the treatment plan" (p. 279). The authors concluded that assisting the couple to determine which partner will assume responsibility for selected aspects of the treatment plan would be beneficial. The results support the potential for role supplementation having a positive influence on marital relationships post-myocardial infarction.

Summary and Implications for the Study

In summarizing the literature, it is evident that emotional reactions are common among couples whose lives are impacted by heart disease. These reactions make a significant impact on marital relations. One study suggested that role clarification concerning responsibility and adherence could positively impact marital relationships after myocardial injury.

Chapter 4

Methods

Design

The design used in this study was quasi-experimental. The experimental group received role supplementation consisting of exposure to a role model couple and a nurse facilitated role discussion between the couple. The control group did not have exposure to role supplementation (role model and role discussion).

Sample

A convenience sample was used at the time of the study. To control for possible differences in treatment both the control and experimental group were selected from the same institution. The institution is an acute care hospital that offers a cardiac rehabilitation program for patients who have suffered an MI or who have had Coronary Artery Bypass Graft (CABG) surgery. To avoid contamination of groups and to randomly assign couples, the experimental group consisted of nine couples who consented to be in the study and who were in even numbered rooms in the intermediate care unit. The control group consisted of nine consenting couples who were in odd numbered rooms. Assignment of rooms was determined by availability. The criteria for inclusion were: agreement by both partners to participate in the study, the male partner suffered an MI or had CABG surgery, they were married and living together, were between the ages of

45 and 75, could read and comprehend English and were receiving cardiac rehabilitation instructions during this hospitalization.

Procedure

Couples who met the criteria were given an explanation of the study and if they agreed to participate, were asked to sign the consent form. A consent form was signed by both partners. Consent to participate in the study was obtained protecting human rights, assuring them of confidentiality of information and permission to withdraw from the study at any time (Appendix A-1).

After consent was obtained the patient was asked to complete a questionnaire pertaining to socio-demographic information of the couple (Appendix A-2). The couple usually answered questions together. The investigator was present to answer any questions they had regarding the wording or relevancy of this information. The socio-demographic questionnaire was adapted from Kline and Warren (1980).

The experimental group then attended a session with a role model couple who had experienced an MI and CABG surgery and who related their emotional reactions and adjustments experienced during the recovery period. To prepare the role model couple for the session the investigator conducted a rehearsal session. In the rehearsal session, the investigator asked the role model couple to share feelings and emotional reactions they had while hospitalized and during the first two months after discharge. Next the investigator asked them to describe the most difficult

adjustment in daily routine resulting from heart disease. The couple was also asked to relate experiences centered on the recommended treatment plan (activity, stress, diet, etc.) that affected their relationship. The investigator then helped the couple summarize significant information helpful to other couples experiencing the onset of heart disease. The couple was asked to practice again at home, to make the session time no more than one hour including time for questions. The investigator met with the role model couple prior to the first group session for a second rehearsal.

The actual couple sessions took place in the evening in the classroom where cardiac rehabilitation classes are taught. The group sessions consisted of no more than five couples and no less than one. The classroom seating was arranged in a circle to encourage group participation. The invited couples were informed of the session at least 24 hours in advance so both partners could arrange attendance. All the sessions started with an introduction as to the nature of the group. The participants were told that the group was not "psychotherapy" but its purpose was to be supportive and educational in nature. The role model couple was then introduced and went on to describe their significant experiences with heart disease. The participating couples were encouraged to ask questions at any time. The investigator also asked questions for clarification or further discussion, if needed. The investigator kept

anecdotal notes on each session describing problems encountered and areas of concern discussed by the participating couples.

Each role model session uncovered different areas of concern for the attending couples. The groups were small which allowed ample opportunity to discuss frustrations and feelings. In all there were six role model sessions and no two were alike. A wide range of problems were discussed by the participants.

The spouses were often the first to verbalize concerns. One spouse brought up her frustration in her failure to institute changes in health behavior (lose weight, stop smoking, exercise) in her husband prior to his MI. Another spouse expressed her frustration in that her husband did not inform her of his increasing severity of angina pain because he did not want to "worry" her. The patients then had the opportunity to respond to these frustrations. The role model couple also acknowledged that they had encountered similar problems and discussed how they resolved them.

Sometimes the participants asked for specific help in problem solving. One patient discussed his concern on maintaining an exercise program because of his occupation as a truck driver which required long hours of sitting. The role model husband then shared how he managed to exercise when he took a long distance driving vacation to California.

Couples in the group would often share other personal experiences that required major adjustments in their lifestyle and relationship. These situations were often described as

being very stressful and connected with serious illnesses that have occurred with them or their families. One patient had become legally blind and could no longer drive which then required his wife to provide transportation for them. Another couple talked about sharing responsibility for the wife's elderly father in their home while another couple discussed their adjustment to retirement. These past experiences were viewed as positive indicators of their ability to handle change.

The day following the role model session, role discussion occurred. Couples in the experimental group completed a questionnaire for identifying responsibility (Appendix A-3). This questionnaire was adapted from Kline and Warren (1980). The adapted questionnaire lists eighteen questions related to rehabilitation for cardiac patients. The topics addressed are smoking, diet, medication, exercise, stress and sexual activity. Each question is followed by a four-point scale; (1) completely my responsibility, (2) even responsibility, (3) my spouse's responsibility and (0) not applicable to my treatment plan. There were separate questionnaires for spouse and patient but both contained the same questions. The questionnaire was administered by the researcher or cardiac rehabilitation educator. The cardiac educator is a nurse who does the teaching for all in-patients admitted to the cardiac rehabilitation program. In order to have all the couples who attended the role model session complete the role discussion component her assistance was needed. After completing the

questionnaire the partners were asked to share responses, one question at a time, with one another. If there was agreement, or if it was not applicable to their treatment plan, no discussion followed. If the couple's individual responses were not in agreement they were given the option to discuss the discrepancy. The option to decline a discussion was also accepted. The researcher noted on a separate record whether there was agreement, disagreement, discussion or solution for each statement on the questionnaire. This questionnaire was kept by the researcher and the couples also kept a copy. This portion of role supplementation allowed for role discussion between the couple.

The control group was not exposed to the role model couple nor were they given the questionnaire regarding responsibility. Spouses and patients had the opportunity to attend any other support meetings available to them at the hospital. No other support group meetings were attended by participants while hospitalized. Thank you notes were sent out to all couples in the study soon after discharge to remind them of their consent to participate in the study.

Couples in both the control group and the experimental group were mailed a marital relationship questionnaire along with a cover letter and a stamped, addressed envelope five weeks post discharge from the acute care setting. Crisis theory states that the immediate impact of the crisis is over after six weeks and the couple is less open for expressing problems and

concerns. Questionnaires were numbered and corresponding names were kept in a separate locked file to protect confidentiality. The cover letter asked respondents to fill out the questionnaires without the spouse present, reminding them of confidentiality and the importance of their contribution to the study (Appendix A-4). Separate questionnaires were used for husband and wife (Appendix A-5). Follow up phone calls were made a week following the mailing of the questionnaire to assist with returns.

Instrument

The marital functioning instrument (Appendix A-5) was developed and utilized by Kline and Warren (1980) to assess the individual's perception of the couple's internal resources (problem solving, cohesiveness, reciprocity), sexual relationship, and marital distress (p. 276). The questionnaire consists of 42 items followed by a 6 point Likert scale; strongly agree to strongly disagree. From this original questionnaire statistical evaluation resulted in a 24 item scale describing a mutuality score. The mutuality score measures "a sense of emotional closeness, joining or intimacy..." (p. 277). These items were evaluated using Cronbach's Coefficient Alpha and found to be internally consistent at .94 for combined husband and wife data. The remaining eighteen questions have not been scaled but were included in the marital functioning instrument to retain reliability.

To score the instrument, the patient and spouse's responses are subtracted from one another for each item. A difference between responses on each question is computed and the scores are reversed so that higher scores indicate maximum agreement. A mean item score was computed for each couple.

Chapter 5

Results

Statement of Purpose

The purpose of this study was to add to the body of knowledge that may assist nurses to prepare couples for the recovery process of heart disease. This study investigated an intervention which focused on the couple rather than each partner individually.

Characteristics of Subjects

Twenty couples consented to participate in the study but only eighteen couples completed all requirements. Two couples in the control group did not return final questionnaires. The total number in each group was nine couples. The range, mean and standard deviation of age in the control, experimental and combined group is shown in Table 1.

The age range of men subjects was from 51 to 74. The mean age of the men in the control group was 64.11. The control group mean age was significantly higher (at the .05 level) than the experimental group. A t test with 16 degrees of freedom was used to calculate the significance. Results can be seen in Table 2.

Table 1

Age Range of Subjects -- Patient (Males)

Group	Range	Mean	S.D.
Control Group	55-74	64.11	6.66
Experimental Group	51-70	58.44	6.89
Combined Group	51-74	61.27	7.19

Table 2

Significance of Age Variance -- Patient (Males)

Group	Mean	<u>t</u> -score	d.f.	Sig.
Control Group	64.11	1.78	16	.05
Experimental Group	58.44	--	--	--

Table 3 shows the spouses' ages range from 47 to 73 with a mean age of 59.16. The women in both groups had a slightly lower mean age than their male partners. Table 4 shows the control group again had a significantly higher mean than the experimental group in relation to the age difference between the groups.

Table 5 shows the average number of years couples in both groups were married to be 34.16. The range for the control group was wide since one of the couples was a second marriage. The husband from the first marriage had died of heart disease. There was no significant variation between the mean years of marriage for the groups.

All of the subjects in both the experimental and control groups stated their ethnic background as white.

The educational background of the men in both groups did vary somewhat. In both groups 2 had completed partial high school (grades 10-11). However, 2 from the experimental group had completed high school compared to 4 from the control group. There was no difference in the groups when examining trade school completion (1) and partial college education (1). A difference was noted in college completion, with 4 from the experimental group and 2 from the control group having completed a college degree. Table 6 shows the educational level of both groups.

Table 3

Age Range of Subjects -- Spouses (Females)

Group	Range	Mean	S.D.
Control Group	51-73	62.77	5.72
Experimental Group	47-63	55.55	5.48
Combined Group	47-73	59.16	6.58

Table 4

Significance of Age Variance -- Spouses (Females)

Group	Mean	t-score	D.F.	Sig.
Control Group	62.77	2.74	16	.01
Experimental Group	55.55	--	--	--

Table 5
Years of Marriage

Group	Range	Mean	S.D.
Control Group	6-52	35.44	12.77
Experimental Group	22-43	32.89	--
Combined Group	6-52	34.17	9.87

Table 6

Educational Levels of Patients and Spouses

Educational Level	Men			Spouse		
	Con	Exp	Tot.	Con.	Exp	Tot.
Part. H.S. (Grades 10-11)	1	1	2	--	--	0
Completed H.S. (Grade 12)	4	2	6	6	4	10
Completed Trade School	1	1	2	1	2	3
Part. College (3 yrs. or less)	1	1	2	--	2	2
College Education (4 yrs.)	2	4	6	1	--	1
Post-College (5 yrs. or more)	--	--	0	1	1	2

The spouses' educational pattern differed from their mates. None of the spouses had less than a high school education. The high school completion rate was 4 in the experimental group and 6 for the control group. In looking at education beyond high school, 2 (control group) and 1 (experimental) had completed some type of trade school. In the experimental group, 2 completed some college education. One spouse in the control group completed college and 1 in both groups had post-college education.

Table 7

Subjects and Spouses Working Outside the Home

Group	Work	Work		
		Don't Work	Full Time.	Part Time
Experimental Men	6	3	6	--
Control Men	4	5	4	--
Experimental Spouse	5	4	4	1
Control Spouse	1	8	1	--

When asked if the male subjects had been working prior to their hospitalization, 6 in the experimental group and 4 in the control group stated they were. All 10 had been working on a full time basis.

A greater number of spouses in the experimental group (5) were working outside the home compared to only 1 in the control group. The combined group showed that most of the women (6) were not working outside the home. Those who were working did so on a full time basis (5). Table 7 shows the work patterns of both the subjects and their spouses.

Table 8

Occupational Categories

Category	Men	Men	Spouse	Spouse
	Exp.	Con.	Exp.	Con.
Clerical	--	--	2	--
Professional	1	3	1	--
Executive	1	--	1	1
Skilled	2	1	--	--
Semi-Skilled	1	--	--	--
Business Owner	--	--	1	--
Retired	2	5	--	--
Unemployed	1	--	--	--

Occupation categories of those who were working showed 4 were professionals (3 in control and 1 in experimental group). One person in the experimental group was an executive of a business. The others rated themselves as either skilled (1 control and 2 experimental group), or semiskilled (1 from experimental group). One patient in the experimental group was unemployed but desired to work. Table 8 shows the actual distribution by occupation.

Table 9

Stress Level Perception

Level	Men	Men	Spouse	Spouse
	Exp.	Con.	Exp.	Con.
High	2	2	1	2
Moderate	3	1	3	2
Low	1	1	2	--
None	--	--	--	--

Table 9 shows the rating by members of the experimental and control groups of their work stress levels. In rating stress levels associated with their job, 4 (2 control and 2 experimental) stated they had a high stress level. Moderate stress was reported by 4 of the total group, three from the experimental group and one from the control. The experimental group had a higher number of participants stating they experienced stress from their employment. Their spouses did not have the same perception. The experimental group of wives rated their husbands stress in the following categories high (1) moderate (3) and low (2). In contrast the control group rated their husbands stress as either high (2) or moderate (2).

Table 10

Combined Annual Income

Level	Experimental	Control
\$ 0- 9,999	0	0
\$10,000-19,999	1	2
\$20,000-29,999	2	2
\$30,000-39,999	3	3
\$40,000-49,999	1	--
\$50,000-59,999	--	2
\$60,000-69,999	1	--

Table 10 shows the range of combined annual income which was from \$10,000 to \$69,000. The highest reported combined income was in the experimental group. The mean income for the control group fell in the \$20,000-\$29,999 group. The experimental group mean was in the \$30,000-\$39,999 group.

The number of children for both groups ranged from two to five. The couples in the experimental group had a mean of 3.111 children. The control group had a mean of 3.333 children.

Family constellations differed between the two groups. All of the couples in the control group were living alone. In the experimental group 33% had children who were still living at

home. In addition one couple in the experimental group had a sick, elderly parent who was living with them.

The two groups differed in previous hospitalization for either a MI or bypass procedure. In the control group 4 individuals had experienced a previous hospitalization for a MI. The length of time since the occurrence ranged from 7 years to 3 weeks. Two of the 4 had suffered a MI 5 years ago. Of the 4 with previous heart related conditions 3 were now hospitalized for bypass surgery while the other 1 suffered another MI. The remainder of the group were now experiencing a first time hospitalization for heart disease. Three of the first time patients were currently hospitalized for a MI and 2 had undergone bypass surgery.

The experimental group had 2 patients who had experienced previous hospitalizations for heart related problems. One of the two suffered two MI's, one 2 years ago followed by another 1 month prior to this admission for a bypass. The other patient had bypass surgery 8 years ago followed by a MI 3 years later and was now hospitalized with another MI. Three of the patients in this group had an MI followed by bypass surgery within a few hours to a week of the occurrence. Four of the patients were admitted for bypass surgery and had no previous heart related inpatient admissions. Table 11 shows the history of heart disease in both groups.

Table 11

Patient History of Heart Disease

Group	Prior	Prior	Present	Present
	MI	CABBG	MI	CABBG
Experimental	1	1	4	5
Control	4	--	4	5

Table 12 shows that a majority of the patients in the control group (14) reported some other chronic health problem as compared to only (5) in the experimental group. High blood pressure was the most frequently reported health problem for the control group. Also reported were diabetes (2), thyroid condition (1), ulcers (1) and removal of a benign tumor from a breast (1). In the experimental group the most commonly reported conditions were arthritis followed by hypertension and diabetes.

The couples in each group were asked to indicate on a checklist significant occurrences that had happened in the past year (Table 13). When asked if there was any other information that they would like to share with the investigator a few couples did respond. One couple talked about business concerns that had been troubling them, while a man who was fired from his

Table 12

Chronic Health Problems

Condition	Experimental	Control
High Blood Pressure	2	5
Arthritis	4	4
Diabetes	1	2
Thyroid Condition	--	1
Ulcers	--	1
Benign Tumor of Breast	--	1

job discussed the events surrounding the dismissal. One couple shared other major tragedies that had occurred years ago.

Subjects in the control group also experienced a number of significant events in the year prior to this hospitalization (Table 13). Additionally volunteered information revealed that this was a second marriage for two of the couples. The wife of one couple stated that her first husband died of heart disease. One couple talked about plans to retire early. Another patient talked about his anger at his boss.

Table 13

Significant Occurrences Within the Past Year

Condition	Experimental	Control
Menopause	1	0
Moving	2	1
Major Sickness or Injury in Family	3	4
Death of Friend or Family	3	3
Fired or Laid Off	1	--
Concern Over Parents	4	--
Change in Work Hours/Responsibility	3	1
Addition to Household	--	1
Children Leaving Home	--	1

The demographic characteristics of the couples in the two groups did differ on some aspects. The control group age (patient and spouse) was significantly higher than the group age in the experimental group. The annual combined income of the experimental group was higher than the income of the control group. Patients and spouses in the experimental group were mostly still employed whereas there was a higher retirement level in the control group. The patients in the experimental group reported a higher level of stress with their jobs. More patients in the control had a previous history of heart disease.

Analysis of the Research Hypothesis

The hypothesis that couples who participated in a role supplementation program would have a higher level of marital functioning than couples who did not participate in role supplementation was not supported ($t = 3.539$, $df = 16$, $p < .01$). A one tailed t test using the mean of the mutuality scores for both groups was performed using a computerized statistical package. The experimental group mean scores were 5.145 for marital functioning and 5.07 for mutuality. The control group mean (Table 14) for marital functioning was 5.242 with a mean mutuality score of 5.32. The t test measures the significance of differences between the means of both groups. The p score indicates the probability of statistical significance. A probability level of .05 was established for the study. Therefore, it can be concluded that couples who participate in role supplementation did not have a higher level of mutuality (emotional closeness, joining or intimacy) than couples who were not exposed to a role model couple or participated in role discussion.

Table 14

Couples' Mutuality Scores

Group	Mean	<u>t</u> test	d.f.	Sign.
Experimental	5.07	3.539	16	.05
Control	5.32	--	--	--

In addition to couple discrepancy scores, individual scores for mutuality were also determined for both the patient and spouse in each group. Each of the twenty-two mutuality questions were reviewed and served to give positive responses a higher number than negative responses. Therefore, some responses were reversed while others were not. This resulted in a score which when tabulated indicated the individual's feeling of closeness or intimacy with the partner. The higher the number score, the greater degree of positive feelings toward the partner (Table 15).

The spouse control group mean score was higher than the experimental group mean. This was significant at the .05 level using a two-tailed t test. The spouses in the control group had a greater degree of mutuality than the experimental group.

Table 15

Individual Scores of Mutuality - Spouse

Spouse Group	Mean	2-tailed		
		<u>t</u> test	d.f.	Sign.
Experimental	3.52	2.549	16	.05
Control	3.82	--	--	--

The men in the control group and experimental group had very close group mean scores (Table 16) with the experimental group mean slightly higher. However, this was not significant.

Individual scores for mutuality were not positively affected by role supplementation.

Table 16

Individual Scores of Mutuality - Patient

Patient Group	Mean	2-tailed		
		<u>t</u> test	d.f.	Sign.
Experimental	3.80	0.166	16	--
Control	3.78	--	--	--

Chapter 6

Discussion and Implications

Summary of Results

The hypothesis that role supplementation using the strategies of role modeling and role discussion would be helpful in assisting a couple adjusting to heart disease was not supported by this study. Individual scores of partners also did not show a significance in impacting the feeling of closeness and intimacy.

The participants in the study were typical for patients who are at risk for developing heart disease in relation to age, race and other risk factors. However, the two groups in the study did have some differences in demographic characteristics.

Members of the control group were older than the experimental group and were more likely to be retired. The patient and spouse of the experimental group were more often employed outside the home. The couples in the experimental group, therefore, had less time together to adjust to the impact of heart disease and to redefine their roles. The wives may have felt more of a burden with employment and having more responsibility at home. The men subjects in the experimental group also reported a higher level of stress with their jobs than the control group. The stress of their employment may have impacted the marital relationship prior to the onset of

hospitalization. No pretesting was done on the level of satisfaction in the marriage prior to participation in the study.

A greater number of patients in the control group had a previous episode of heart disease. Three of these patients had been living with heart disease from five to seven years. The marital adjustment for these couples may have been less traumatic than for couples who are having a first time occurrence with heart disease. Couples with prior history of heart disease may have already re-established their roles and identity in the marriage relationship.

Another difference in the groups was the family living arrangements. All of the couples in the control group were living alone while 33% of the couples in the experimental group had children or another relative living with them. These additions in the household may have created more stress and possibly less time for private discussion relating to change in roles.

Role supplementation consisted of role modeling and role discussion. These techniques bring the focus of heart disease on the partners rather than just the patient. Role supplementation is a teaching strategy that requires active participation of both patient and spouse rather than passive instruction which usually constitutes the bulk of cardiac rehabilitation instruction. Role modeling and role discussion were not shown to increase the level of mutuality in couples living with heart disease. However, there were other aspects of

these techniques that were discovered during their implementation.

Role modeling provided a unique opportunity for patients and wives to experience the support of another couple who understood the impact of this crisis on their lives. The willingness of all the couples to participate in the group discussion was evidence of the common bond that brought them together. In every group encounter, the participants shared similar situations or concerns in a non-judgmental atmosphere. After the formal group ended the participants always seemed to spend a few minutes talking to the role model partners individually. It was not unusual for the subjects to ask for the phone number of the role model couple the next day. When asked how they felt about the group, all responded positively.

Role discussion as a part of the role supplementation program brought up areas of concern that had not been previously addressed. Through these sessions with the couple the wife would often bring up an area that she was concerned about but was hesitant to discuss with her partner. These topics usually came up when discussing questions that centered around stressful situations. The wife, wanting to protect the husband, had not previously discussed the situation she felt was a potential problem. One wife brought up the problem of how to deal with friends she was sure would visit and stay much beyond their welcome. The couple decided how they would handle the situation

together. The wife then expressed her relief at not having to worry about it anymore.

Another couple discussed a family situation that the wife again felt was very stressful for her husband. A sister who had not talked with the patient after a falling out years ago had called him at the hospital. The wife felt that this renewed communication would only lead to problems. The wife admitted that she was contemplating calling the sister and asking her not to call anymore. The patient was totally against this idea and assured his wife that he could handle the situation and would not allow it to become a problem as in the past. The couple agreed that this situation could have become a problem for them in the recovery phase had they not discussed it.

Limitations of the Study

The sample size of this study was smaller than hoped for. Many patients who were initially interested in participating in the experimental group later decided that they were physically not feeling well enough to attend a role model session. Some patients asked if it would be possible to come back the week after discharge to attend a role model session. Others were more willing to participate because they were not required to return to the hospital after discharge.

It was not unusual for one partner to want to participate while the other did not. The wife was more often the more willing participant but was cautious in not pushing her partner into the study. On a few occasions a couple would discuss the

decision quite extensively and could not come to a decision. In those situations the researcher would come back at a later time so that the couple could make the decision alone. The researcher helped one couple reach a decision not to participate since they were unable to make this decision themselves.

The consent to participate in the control group was much more easily obtained since it required less effort of the couple. Some experimental group subjects declined to participate in the study because the wife would be required to return to the hospital at night. Some wives preferred not to return at night, or their husbands did not want them driving at night, or they did not drive themselves and did not have transportation available at night. This seemed to occur more often with an older population which might explain the slightly younger age group of the experimental population.

This study did not examine the level of marital functioning prior to this hospitalization. Experimental couples who consented to participate in the study were obviously willing to risk. These couples were willing to be open and to share themselves in a group situation when they were physically and mentally not at top performance. They also risked revealing aspects of their relationship which may otherwise never be known. Couples who were feeling less secure in their relationship may not have chosen to attend or participate when given the choice. The couples in the experimental group may have possessed qualities in their relationship that existed

prior to the study and were significant in the outcome of their mutuality scores.

Another limitation of the study was the fact that there was only one session with the role model couple. It is possible that had there been more interaction between the subjects and the role model couple the identification would have been greater. However it was not possible to schedule multiple sessions with an inpatient population.

The marital functioning instrument has some interesting characteristics. The last question on the marital functioning instrument asked each partner if they make a good couple. The mutuality score which measures emotional closeness and intimacy gave high scores to couples who felt that they did not make a good couple. This happens when the couple is in total agreement because the scores are subtracted from one another and then given a reversed score so that higher scores indicate maximum agreement. Therefore whenever a couple is in total agreement they are given a high score even when the question seems to point to a negative quality. This was the result when both partners strongly disagreed with the statement "I feel we make a good couple."

In order to offset the problem with the marital functioning instrument, another measurement could be taken to evaluate the level of satisfaction in the marriage. It is possible with the marital functioning instrument to determine that the partners are close and know each other intimately but they also may be

incompatible or dissatisfied in the relationship. These factors need to be identified when evaluating the effectiveness of a role supplementation program. It is not known if role supplementation can improve satisfaction in a marriage if it was not present prior to the onset of heart disease.

Implications for Nursing Practice

Role supplementation using role modeling as one of the techniques may not be of benefit to patients and spouses in the crisis phase of heart disease. The timing of the introduction may be a factor that can be varied according to the desires of the couple. An introduction to a role model couple may be more appealing to couples after discharge when they are further into the recovery and away from the hospital. The role modeling session could take place within a week or two of discharge. Individual couples may also want to have a choice of meeting with a group or in a private session. However, couples meeting together should be of more benefit since it offers the opportunity to hear what the other couples are experiencing.

In order to more closely match the couple, a number of different couples could be trained to provide role modeling and assigned according to demographic characteristics. This service could be offered through a community organization such as the Concerned Hearts Club or the Heart Association. This is similar to the process used by other organizations that offer role modeling visits such as the Ostomy Association or mastectomy visits arranged by the American Cancer Society.

Role discussion is a strategy that can easily be used to prepare a couple for discharge. The instrument is easy to administer and can be shared with the couple in a non-threatening way. Couples can exchange questionnaires and discuss issues in private or the facilitator can quickly compare answers and focus discussion on areas which are not in agreement. Many times the couples interpreted questions differently resulting in disagreement in answers. This type of discussion also leads to clarifying expectations of their roles. Couples can also be given the questionnaire to take home for further use. Situations may arise which neither of them had anticipated and which need to be clarified in relationship to their stated roles. The questionnaire could then be used as a guide for coming to an agreement as previously discussed.

Recommendations for Future Research

This study should be repeated with a larger sample. Due to the physical limitations of the patients and other circumstances concerning the spouses' availability, some changes in protocol may be needed to increase the population size. Patients and spouses could have the option of returning to the acute care setting a week after discharge if the patient was not feeling physically able to attend while hospitalized. This may be an option for couples who do not live far from the acute care setting. Another option may be to offer a role model session during the afternoon. These sessions may be more accessible for

wives with transportation problems during the evening. Both these changes in method may increase the population size.

Another measurement tool should be considered in repeating this study. The mutuality score may not be a reliable indicator of the value of these techniques. Other characteristics of the relationship may need identification to effectively assess if these techniques ease the transition into the new roles accompanied by heart disease.

The protocol should be expanded to include other role modeling techniques not included in this study. Dracup, Meliss, Baker and Edlefsen (1984) developed a 10 week session based on role supplementation theory for cardiac patients and spouses. The protocol for these sessions included other techniques like role rehearsal and reference groups. The effectiveness of such techniques could be compared to role modeling and role discussion in relationship to a control group.

The opportunity for couples to participate in a role supplementation program can be of help in preparing for a change in lifestyle and values. This study did not examine adherence to the treatment plan but may have impacted it. It is assumed that patients would be influenced and encouraged by the healthful look and appearance of the role model patient and his continued active participation in the treatment plan. His wife's attitude of support while allowing independence may also be a factor in supporting compliance. Studies should be

designed to evaluate adherence to treatment regime in relation to role model techniques.

Female patients were excluded from the study since the role model couple used would not match this group. Another study could use two groups of couples, one with female patients and spouses the other with male patients and spouses. This would help to determine if the same techniques are of value to opposite couple groups.

Conclusion

The onset of heart disease is accompanied by a major adjustment in the marital relationship of the couple. The psychological impact of the disease on the partners has been documented in the literature. Numerous interventions have been studied to help the patient and spouse deal with this adjustment. The techniques used in this study were role modeling and role discussion. These techniques did not appear to be helpful in the adjustment as measured by a mutuality score within a marital functioning instrument. Two limitations on the study were the small sample size and the measurement tool which may not effectively evaluate the techniques used. This study needs to be repeated with a larger sample and with an alteration in the initiation of these strategies.

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APPENDICES

Appendix A-1a
Patient Consent Form

I am willing to participate in a research study being conducted by Laurie DeMull R.N. B.S.N., concerning the impact of heart disease in our marital relationship. The purpose of this study is to obtain information that will enable nurses to better assist couples in adjusting to the impact of a heart attack or bypass surgery.

I understand that I and my spouse may be asked to attend a special session with other couples who are now hospitalized with either a heart attack or bypass surgery, along with a couple who in the past experienced a heart attack or bypass surgery.

I understand that I and my spouse may be asked a series of questions regarding our rehabilitation responsibilities prior to my discharge. This will be conducted by the investigator or another nurse appointed by the investigator.

I understand that six weeks after my discharge my spouse and I will receive a questionnaire. This questionnaire will ask each of us to respond to 42 statements relating to changes in our relationship since the heart attack or bypass surgery. This will take approximately one half hour to complete.

The possible benefits of participating in this study are that I and my spouse may be more aware of what to expect after I am discharged. A possible risk of participation in this study is that I or my spouse may experience some uneasiness in discussing questions regarding responsibilities and roles with my treatment plan for discharge.

In addition, I understand that:

- 1) Participation in this study will in no way interfere with the care received in the hospital or doctor's office.
- 2) There will be no expense to me.
- 3) I can ask questions now and throughout the study.
- 4) I can contact the researcher at any time regarding this study and she can be reached at the following numbers. 454-8509 or 774-1412.
- 5) I can withdraw from the study at any time without jeopardizing my care.
- 6) Question responses from me and my spouse will be kept confidential.
- 7) Responses will not be revealed to my spouse or physician.
- 8) My anonymity will be insured by placing a coded number rather than my name on any questionnaires I complete. The list of coded information will be kept in a locked file which only the researcher has access to.

9) A summary of the findings of this study is available to me on request.

I agree at this time to participate in this study as signified below.

Date: _____

Signature of Patient _____

Witness _____

Appendix A-1b
Spouse Consent Form

I am willing to participate in a research study being conducted by Laurie DeMull R.N. B.S.N., concerning the impact of heart disease in our marital relationship. The purpose of this study is to obtain information that will enable nurses to better assist couples in adjusting to the impact of a heart attack or bypass surgery.

I understand that I and my spouse may be asked to attend a special session with other couples who are now hospitalized with either a heart attack or bypass surgery, along with a couple who in the past experienced a heart attack or bypass surgery.

I understand that I and my spouse may be asked a series of questions regarding our rehabilitation responsibilities prior to patient discharge. This will be conducted by the investigator or another nurse appointed by the investigator.

I understand that six weeks after discharge my spouse and I will receive a questionnaire. This questionnaire will ask each of us to respond to 42 statements relating to changes in our relationship since the heart attack or bypass surgery. This will take approximately one half hour to complete.

The possible benefits of participating in this study is that I and my spouse may be more aware of what to expect after discharge. A possible risk of participation in this study is that I or my spouse may experience some uneasiness in discussing questions regarding responsibilities and roles with the treatment plan for discharge.

In addition, I understand that:

- 1) Participation in this study will in no way interfere with the care received in the hospital or doctor's office.
- 2) There will be no expense to me.
- 3) I can ask questions now and throughout the study.
- 4) I can contact the researcher at any time regarding this study and she can be reached at the following numbers. 454-8509 or 774-1412.
- 5) I can withdraw from the study at any time without jeopardizing my spouse's care.
- 6) My and my spouse's responses to any questions will be kept confidential.
- 7) Responses will not be revealed to my spouse or physician.
- 8) My anonymity will be insured by placing a coded number rather than my name on any questionnaires I complete. The list of coded information will be kept in a locked file which only the researcher has access to.

9) A summary of the findings of this study is available to me on request.

I agree at this time to participate in this study as signified below.

Date: _____

Signature of Spouse _____

Witness _____

Appendix A-2

Sub. No. 1-2-3
 Date 4-5
 Card No. 6-7

SOCIO-DEMOGRAPHIC

The following questions describe general things about yourself and your spouse. Please answer all the questions to the best of your ability. There are no right or wrong answers. All information will be confidential!

1. Age 8-9
2. Ethnic background: (Please check (X) the appropriate category.) 10
- | | |
|-------------------|---------------------------|
| <u>1</u> White | <u>4</u> Black |
| <u>2</u> Oriental | <u>5</u> Mexican-American |
| <u>3</u> Indian | <u>6</u> Other |
3. Age of your spouse: 11-12
4. How long have you been married to your spouse? 13-14
5. Your educational level: (Please check (x) highest grade completed.) 15
- | |
|--|
| <u>1</u> fewer than seven years of school (grades 1-6) |
| <u>2</u> junior high school (grades 7-9) |
| <u>3</u> partial high school (grades 10-11) |
| <u>4</u> high school (completed 12th grade) |
| <u>5</u> trade school completed |
| <u>6</u> partial college education (3 years or less) |
| <u>7</u> college education (4 years) |
| <u>8</u> beyond 4 years of college |

-2-

The following questions describe general things about yourself and your spouse. Please answer all the questions to the best of your ability. There are no right or wrong answers. All information will be confidential!

6. Spouse's level of education: (Please check (X) highest grade completed.) 16
fewer than seven years of school (grades 1-6)

- 1
junior high school (grades 7-9)
- 2
partial high school (grades 10-11)
- 3
high school (completed 12th grade)
- 4
trade school completed
- 5
partial college education (3 years or less)
- 6
college education (4 years)
- 7
beyond 4 years of college
- 8

7. Had you been working outside the home 1 Yes 2 No 17

A) If yes, are you working: full time Part-time 18

B) What is your current occupation (check (X) one)?

- 0 clerical
- 1 professional
- 2 executive in large-to medium sized business
- 3 skilled worker
- 4 semiskilled or unskilled worker
- 5 owner of business establishment
- 6 retired
- 7 currently unemployed, but looking for work
- other (please specify): _____

- 3 -

C) How would you rate the stress associated with your job (check (X) one)? 20

 1 high stress

 2 moderate stress

 3 low stress

 4 no stress

8. Is your spouse currently working outside the home? 1 Yes 2 No 21

A) If yes, is your spouse working: 1 full time 2 part-time 22

B) What is your spouse's current occupation (check (X) one)? 23

 0 clerical

 1 professional

 2 executive in large-to medium sized business

 3 skilled worker

 4 semiskilled or unskilled worker

 5 owner of business establishment

 6 retired

 7 currently unemployed, but looking for work

 other (please specify): _____

C) How would you rate the stress associated with your spouse's job (check (X) one)?

24

 1 high stress

 2 moderate stress

 3 low stress

 4 no stress

-4-

9. What is your combined annual income? 25
- | | |
|-----------------------------|----------------------------------|
| <u> 0 </u> 0-9,999 | <u> 5 </u> 50,000-59,999 |
| <u> 1 </u> 10,000-19,999 | <u> 6 </u> 60,000-69,999 |
| <u> 2 </u> 20,000-29,999 | <u> 7 </u> 70,000-79,999 |
| <u> 3 </u> 30,999-39,000 | <u> 8 </u> greater than 80,000 |
| <u> </u> 40,000-49,999 | |
10. How many children do you have? _____ 26-27
11. How many children do you have living at home? _____ 28-29
12. Living arrangement: (please check (X) the description which best fits your current living arrangement) 30
- | |
|---|
| <u> 1 </u> married, living with spouse alone |
| <u> 2 </u> married, living with spouse and children |
13. Have you been hospitalized more than one time for a heart attack or bypass surgery? 31
- | | |
|------------------|-----------------|
| <u> 1 </u> Yes | <u> 2 </u> No |
|------------------|-----------------|
14. How long ago did you have your last heart attack or bypass surgery? 32
- | | |
|------------------------------|-------------------------------|
| <u> 1 </u> Number of years | <u> 2 </u> Number of months |
|------------------------------|-------------------------------|
15. Do you have any chronic health problems? Yes 1 No 2 33
- A) If yes, please check (X) all that apply:
- | | |
|-----------------------------------|----|
| <u> </u> arthritis | 34 |
| <u> </u> cancer | 35 |
| <u> </u> high blood pressure | 36 |

-5-

<input type="checkbox"/>	lung disease (asthma, bronchitis, emphysema)	37
<input type="checkbox"/>	sugar diabetes	38
<input type="checkbox"/>	other (please specify): _____	39

16. Below is a list of things which happen in many families. Which of these have you experienced in your family during the past year? Please check (X) all that apply.

<input type="checkbox"/>	menopause	40
<input type="checkbox"/>	pregnancy	41
<input type="checkbox"/>	an addition in the household	42
<input type="checkbox"/>	retirement (<u> </u> your retirement <u> </u> your spouse's retirement)	43
<input type="checkbox"/>	moving	44
<input type="checkbox"/>	marital problems	45
<input type="checkbox"/>	divorce or separation from your spouse	46
<input type="checkbox"/>	major sickness or injury in your family other than your heart problem	47
<input type="checkbox"/>	death of a close friend or family member	48
<input type="checkbox"/>	children left home	19
<input type="checkbox"/>	got laid off or fired from work	50
<input type="checkbox"/>	concern over aged parents or inlaws	51
<input type="checkbox"/>	change in work hours or responsibility	52
<input type="checkbox"/>	other	53

-6-

17. Is there anything about yourself or your spouse not covered in this questionnaire that you would like to tell the investigators? 54

 1 Yes

 2 No

If yes, please describe below.

YOU HAVE COMPLETED THE QUESTIONNAIRE. PLEASE CHECK AND MAKE SURE YOU HAVE ANSWERED ALL QUESTIONS. THANK YOU!!!!

Appendix A-3

Pt. No. _____ H. _____
 1-2-3-4
 Date _____
 5-6-7
 Card No. _____
 8-9

PATIENT QUESTIONNAIRE

Since your heart attack or bypass surgery, you may have been told to follow a treatment plan by doctors, nurses and other health professionals. The treatment plan you were told to follow may include some of the activities listed below. We are interested in learning more about who (you, your spouse or both) assumes responsibility for different parts of your treatment plan.

For this questionnaire, please indicate the extent to which you or your spouse are responsible for different parts of the treatment plan. Do this by circling the most appropriate response after each statement. You will be using the following scale:

1. completely my responsibility
2. even responsibility
3. completely my spouse's responsibility
0. not applicable to my treatment plan

Remember, there are no right or wrong answers.

- | | | | | | | |
|----|---|---------------------------------|--------------------------|---|---|----|
| 1. | Changing smoking habits. | 1 | 2 | 3 | 0 | 10 |
| | | completely my
responsibility | even responsi-
bility | completely my
spouse's
responsibility | not applicable
to my treatment
plan | |
| 2. | Reducing weight. | 1 | 2 | 3 | 0 | 11 |
| | | completely my
responsibility | even responsi-
bility | completely my
spouse's
responsibility | not applicable
to my treatment
plan | |
| 3. | Following a special diet while at home. | 1 | 2 | 3 | 0 | 12 |
| | | completely my
responsibility | even responsi-
bility | completely my
spouse's
responsibility | not applicable
to my treatment
plan | |

-2-

- | | | | | | |
|-----|---|---------------------|---------------------------------------|-------------------------------------|----|
| 4. | Preparing foods according to dietary restrictions. | | | | 13 |
| | 1 | 2 | 3 | 0 | |
| | completely my responsibility | even responsibility | completely my spouse's responsibility | not applicable to my treatment plan | |
| 5. | Selecting foods when we are away from home (i.e., restaurant or friend's home). | | | | 14 |
| | 1 | 2 | 3 | 0 | |
| | completely my responsibility | even responsibility | completely my spouse's responsibility | not applicable to my treatment plan | |
| 6. | Taking the right amount of medicine. | | | | 15 |
| | 1 | 2 | 3 | 0 | |
| | completely my responsibility | even responsibility | completely my spouse's responsibility | not applicable to my treatment plan | |
| 7. | Remembering to take medicine(s) at the prescribed time(s). | | | | 16 |
| | 1 | 2 | 3 | 0 | |
| | completely my responsibility | even responsibility | completely my spouse's responsibility | not applicable to my treatment plan | |
| 8. | Keeping an adequate supply of medicine available. | | | | 17 |
| | 1 | 2 | 3 | 0 | |
| | completely my responsibility | even responsibility | completely my spouse's responsibility | not applicable to my treatment plan | |
| 9. | Organizing a schedule to include a planned time for exercise. | | | | 18 |
| | 1 | 2 | 3 | 0 | |
| | completely my responsibility | even responsibility | completely my spouse's responsibility | not applicable to my treatment plan | |
| 10. | Watching for symptoms which indicate poor toleration of an activity. | | | | 19 |
| | 1 | 2 | 3 | 0 | |
| | completely my responsibility | even responsibility | completely my spouse's responsibility | not applicable to my treatment plan | |

-3-

- | | | | | | |
|-----|--|---------------------|---------------------------------------|-------------------------------------|----|
| 11. | Following activity restrictions. | | | | 20 |
| | 1 | 2 | 3 | 0 | |
| | completely my responsibility | even responsibility | completely my spouse's responsibility | not applicable to my treatment plan | |
| 12. | Modifying daily work activities to reduce stress. | | | | 28 |
| | 1 | 2 | 3 | 0 | |
| | completely my responsibility | even responsibility | completely my spouse's responsibility | not applicable to my treatment plan | |
| 13. | Deciding when to deal with a stressful situation. | | | | 21 |
| | 1 | 2 | 3 | 0 | |
| | completely my responsibility | even responsibility | completely my spouse's responsibility | not applicable to my treatment plan | |
| 14. | Deciding which situations should be avoided to prevent stress. | | | | 22 |
| | 1 | 2 | 3 | 0 | |
| | completely my responsibility | even responsibility | completely my spouse's responsibility | not applicable to my treatment plan | |
| 15. | Taking steps to reduce stress and tension. | | | | 23 |
| | 1 | 2 | 3 | 0 | |
| | completely my responsibility | even responsibility | completely my spouse's responsibility | not applicable to my treatment plan | |
| 16. | Using medically recommended positions during intercourse. | | | | 24 |
| | 1 | 2 | 3 | 0 | |
| | completely my responsibility | even responsibility | completely my spouse's responsibility | not applicable to my treatment plan | |
| 17. | Postponing sexual intercourse when I am tired, upset or after heavy meals. | | | | 25 |
| | 1 | 2 | 3 | 0 | |
| | completely my responsibility | even responsibility | completely my spouse's responsibility | not applicable to my treatment plan | |
| 18. | Limiting alcohol intake to two drinks a day or less. | | | | 26 |
| | 1 | 2 | 3 | 0 | |
| | completely my responsibility | even responsibility | completely my spouse's responsibility | not applicable to my treatment plan | |

Appendix A-3

Pt. No. _____ H. _____
 1-2-3-4
 Date _____
 5-6-7
 Card No. _____
 8-9

SPOUSE QUESTIONNAIRE

Since your spouse's heart attack of bypass surgery your husband, may have been told to follow a treatment plan by doctors, nurses and other health professionals. The treatment plan you were told to follow may include some of the activities listed below. We are interested in learning more about who (you, your spouse or both) assumes responsibility for different parts of the treatment plan.

For this questionnaire, please indicate the extent to which you or your spouse are responsible for different parts of the treatment plan. Do this by circling the most appropriate response after each statement. You will be using the following scale:

1. completely my responsibility
2. even responsibility
3. completely my spouse's responsibility
0. not applicable to my treatment plan

Remember, there are no right or wrong answers.

- | | | | | | | | | | | |
|---------------------------------|---|---|---|---|---|---------------------------------|--------------------------|---|---|--|
| 1. | Changing smoking habits. | 10 | | | | | | | | |
| | <table border="0" style="width: 100%;"> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">0</td> </tr> <tr> <td>completely my
responsibility</td> <td>even responsi-
bility</td> <td>completely my
spouse's
responsibility</td> <td>not applicable
to my treatment
plan</td> </tr> </table> | 1 | 2 | 3 | 0 | completely my
responsibility | even responsi-
bility | completely my
spouse's
responsibility | not applicable
to my treatment
plan | |
| 1 | 2 | 3 | 0 | | | | | | | |
| completely my
responsibility | even responsi-
bility | completely my
spouse's
responsibility | not applicable
to my treatment
plan | | | | | | | |
| 2. | Reducing weight. | 11 | | | | | | | | |
| | <table border="0" style="width: 100%;"> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">0</td> </tr> <tr> <td>completely my
responsibility</td> <td>even responsi-
bility</td> <td>completely my
spouse's
responsibility</td> <td>not applicable
to my treatment
plan</td> </tr> </table> | 1 | 2 | 3 | 0 | completely my
responsibility | even responsi-
bility | completely my
spouse's
responsibility | not applicable
to my treatment
plan | |
| 1 | 2 | 3 | 0 | | | | | | | |
| completely my
responsibility | even responsi-
bility | completely my
spouse's
responsibility | not applicable
to my treatment
plan | | | | | | | |
| 3. | Following a special diet while at home. | 12 | | | | | | | | |
| | <table border="0" style="width: 100%;"> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">0</td> </tr> <tr> <td>completely my
responsibility</td> <td>even responsi-
bility</td> <td>completely my
spouse's
responsibility</td> <td>not applicable
to my treatment
plan</td> </tr> </table> | 1 | 2 | 3 | 0 | completely my
responsibility | even responsi-
bility | completely my
spouse's
responsibility | not applicable
to my treatment
plan | |
| 1 | 2 | 3 | 0 | | | | | | | |
| completely my
responsibility | even responsi-
bility | completely my
spouse's
responsibility | not applicable
to my treatment
plan | | | | | | | |

-2-

4. Preparing foods according to dietary restrictions. 13
- | | | | | |
|---------------------------------|--------------------------|---|---|--|
| 1 | 2 | 3 | 0 | |
| completely my
responsibility | even responsi-
bility | completely my
spouse's
responsibility | not applicable
to my treatment
plan | |
5. Selecting foods when we are away from home (i.e., restaurant or friend's home). 14
- | | | | | |
|---------------------------------|--------------------------|---|---|--|
| 1 | 2 | 3 | 0 | |
| completely my
responsibility | even responsi-
bility | completely my
spouse's
responsibility | not applicable
to my treatment
plan | |
6. Taking the right amount of medicine. 15
- | | | | | |
|---------------------------------|--------------------------|---|---|--|
| 1 | 2 | 3 | 0 | |
| completely my
responsibility | even responsi-
bility | completely my
spouse's
responsibility | not applicable
to my treatment
plan | |
7. Remembering to take medicine(s) at the prescribed time(s). 16
- | | | | | |
|---------------------------------|--------------------------|---|---|--|
| 1 | 2 | 3 | 0 | |
| completely my
responsibility | even responsi-
bility | completely my
spouse's
responsibility | not applicable
to my treatment
plan | |
8. Keeping an adequate supply of medicine available. 17
- | | | | | |
|---------------------------------|--------------------------|---|---|--|
| 1 | 2 | 3 | 0 | |
| completely my
responsibility | even responsi-
bility | completely my
spouse's
responsibility | not applicable
to my treatment
plan | |
9. Organizing a schedule to include a planned time for exercise. 18
- | | | | | |
|---------------------------------|--------------------------|---|---|--|
| 1 | 2 | 3 | 0 | |
| completely my
responsibility | even responsi-
bility | completely my
spouse's
responsibility | not applicable
to my treatment
plan | |
10. Watching for symptoms which indicate poor toleration of an activity. 19
- | | | | | |
|---------------------------------|--------------------------|---|---|--|
| 1 | 2 | 3 | 0 | |
| completely my
responsibility | even responsi-
bility | completely my
spouse's
responsibility | not applicable
to my treatment
plan | |

-3-

- | | | | | | |
|-----|--|---------------------|---------------------------------------|-------------------------------------|----|
| 11. | Following activity restrictions. | | | | 20 |
| | 1 | 2 | 3 | 0 | |
| | completely my responsibility | even responsibility | completely my spouse's responsibility | not applicable to my treatment plan | |
| 12. | Modifying daily work activities to reduce stress. | | | | 21 |
| | 1 | 2 | 3 | 0 | |
| | completely my responsibility | even responsibility | completely my spouse's responsibility | not applicable to my treatment plan | |
| 13. | Deciding when to deal with a stressful situation. | | | | 22 |
| | 1 | 2 | 3 | 0 | |
| | completely my responsibility | even responsibility | completely my spouse's responsibility | not applicable to my treatment plan | |
| 14. | Deciding which situations should be avoided to prevent stress. | | | | 23 |
| | 1 | 2 | 3 | 0 | |
| | completely my responsibility | even responsibility | completely my spouse's responsibility | not applicable to my treatment plan | |
| 15. | Taking steps to reduce stress and tension. | | | | 24 |
| | 1 | 2 | 3 | 0 | |
| | completely my responsibility | even responsibility | completely my spouse's responsibility | not applicable to my treatment plan | |
| 16. | Using medically recommended positions during intercourse. | | | | 25 |
| | 1 | 2 | 3 | 0 | |
| | completely my responsibility | even responsibility | completely my spouse's responsibility | not applicable to my treatment plan | |
| 17. | Postponing sexual intercourse when your spouse is tired, upset or after heavy meals. | | | | 26 |
| | 1 | 2 | 3 | 0 | |
| | completely my responsibility | even responsibility | completely my spouse's responsibility | not applicable to my treatment plan | |
| 18. | Limiting alcohol intake to two drinks a day or less. | | | | 27 |
| | 1 | 2 | 3 | 0 | |
| | completely my responsibility | even responsibility | completely my spouse's responsibility | not applicable to my treatment plan | |

Appendix A-4

Laurie DeMull R.N. B.S.N.
1111 Powers N.W.
Grand Rapids, MI 49504
Phone: Home 454-8509
Work 774-1412

Date

Hello:

I hope your recovery from your recent hospitalization is going well. During your hospitalization you and your spouse agreed to participate in a research study. The information obtained from this study will help nurses to better prepare and educate families who are living with heart disease. In addition your participation in returning these questionnaires will help me to complete my graduate studies in nursing. I sincerely thank you for your time consideration in this project.

Following this letter you will find two (2) questionnaires. One is marked patient and is to be completed by the partner who was recently hospitalized with a heart attack or had bypass surgery. The other is to be completed by the other partner. The questions are about you and the relationship with your spouse. Each should take about 20 minutes to complete.

PLEASE DO NOT CONSULT YOUR SPOUSE WHILE YOU ARE FILLING OUT THE FORMS.

Please return the questionnaires in the enclosed, addressed envelope. Remember your answers are confidential and will not be shared with anyone.

Thank you again! If you have any questions or comments, feel free to contact me.

Sincerely,

Laurie DeMull, R.N. B.S.N.

encl.