INFLUENCE OF STRESS, COGNITIVE APPRAISAL, RESILIENCE, AND SOCIAL SUPPORT ON COPING OF OLDER WOMEN WHOSE SPOUSES HAVE UNDERGONE CORONARY ARTERY BYPASS SURGERY

by

Suzanne K. Marnocha

A Dissertation Submitted in

Partial Fulfillment of the

Requirements of the Degree of

Doctor of Philosophy

in Nursing

at

The University of Wisconsin-Milwaukee

May 2003

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ABSTRACT

INFLUENCE OF STRESS, COGNITIVE APPRAISAL, RESILIENCE, AND SOCIAL SUPPORT ON COPING OF OLDER WOMEN WHOSE SPOUSES HAVE UNDERGONE CORONARY ARTERY BYPASS SURGERY

by

Suzanne K. Marnocha

The University of Wisconsin-Milwaukee, 2003
Under the Supervision of Professor Jane Leske, PhD, RN

Purpose: To describe the influence of stress, cognitive appraisal, resilience and social support on coping of older women in relation to the coronary artery bypass graft surgery (CABG) of their spouse. Many older men are having coronary artery bypass graft surgery (CABG) and as the population ages these numbers are anticipated to increase. Surgery is a stressful experience and how the spouse of the patient appraises the surgical event may enhance her coping. Additionally, it is anticipated that resilience and social support will impact spousal coping.

Design: A survey assessing the influence of stress, cognitive appraisal, resilience, and social support on coping was distributed to all women 55 years or older, whose spouses underwent CABG in the previous three months within one of five Midwestern hospitals. The theoretical framework for this study combined Lazarus and Folkman's theory of stress and coping and Wagnild and Young's resilience theory.

Methods: Descriptive statistics and multiple regression were used to answer the research questions. Stress was measured by the Family Inventory of Life Events (FILE: McCubbin, Patterson & Wilson, 1983), cognitive appraisal by the Spouse Perception Scale (SPS: Palmer,

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1965; Silva, 1976) resilience by the Resilience Scale (RS: Wagnild & Young, 1993), social support by the Social Support Inventory (SSI: McCubbin, Patterson & Glynn), and coping was measured by the Ways of Coping Questionnaire (WCQ: Folkman & Lazarus, 1988).

Findings: The women were 55 – 81 years of age with a mean age of 66 years. In regression analyses seeking to predict different ways of coping, demographic variables had an unexpectedly strong role. Positive aspects of these female spouses, specifically resilience, positive CABG appraisal, and seeking social support, had most frequent and consistent positive correlations with positive reappraisal coping and distancing coping. Higher levels of these positive aspects were associated with lower levels of reported stress. Overall, ways of coping as measured by the WCQ were not strongly predicted by demographic variables or by the components of the stress and coping process measured in this study. While statistically significant, the amount of variance in ways of coping (WCQ) predictable by these variables was not large, never exceeding 20% in the regression analyses.

Conclusions: In a sample of 96 women whose spouse were undergoing CABG surgery, personal characteristics such as resilience and family characteristics predicted ways of coping with this particular stressful event. This study has implications for nursing practice to better identify and support the coping efforts of nonresilient women.

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CHAPTER I

INTRODUCTION

Problem

Coronary artery disease defines a debilitating illness accounting for over 950,000 adult deaths in the United States each year (Centers for Disease Control, 2002). The consequences of heart disease for patient's job loss, disability and reduced quality of life are well known (Ben-Zur, Rappaport, Ammar, & Uretzky, 2000). Less is known about the consequences for older women whose spouses have undergone coronary artery bypass graft (CABG). Spouses are often "forgotten" in an environment devoted to the patient. Knowledge about how older women cope after a spouse's coronary artery bypass surgery contributes to their welfare as well as to the survival of the coronary artery disease patients.

While a growing body of professional literature supports that CABG surgery is a stressful experience for the patient, the patient's spouse may be under more stress than the patient (Ben-Zur et al., 2000; Carbone, 1999; Crumlish, 1998; Gillis, 1984; Huerta-Torres, 1998; Kirkevold, Gortner, Berg, & Saltvold, 1996; Lamarche, Taddeo, & Pepler, 1998; McMurray, 1998; Oelofsen, Fullard, & Foxcroft, 1998; Redeker, & Brassard, 1996; Savage & Grap, 1999). The spouse may demonstrate poorer psychological adjustment than the patient following acute cardiac events, including acute myocardial infarction (AMI) and CABG surgery, as well as during the first three months after discharge (Artinian, 1989; Gillis, 1984; Yates, Bensley, Lalonde, Lewis & Woods, 1995).

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No individual study has investigated stress, cognitive appraisal, resilience, social support and coping;, however, several studies have investigated these variables separately in spouses of patients undergoing CABG, AMI or other cardiac interventions. For example, in their study comparing patient and spouse stressors (both male and female) during the first month of convalescence following acute myocardial infarction, Orzeck & Staniloff (1987) concluded that spouses were more concerned about the patient's well being than their own. Allen, Becker and Swank (1991) compared the psychological adjustment (stress, appraisal and coping) of patients and their spouses one month following CABG. The authors reported the spouses demonstrated more stress and lower psychological adjustment than the patient. Artinian (1991) studied the stress, cognitive appraisal, social support, role strain, marital quality and coping on spouses of CABG patients during hospitalization and 6 weeks after discharge. The author noted that CABG is more stressful for the spouse than it is for the adult children who are less affected by increased responsibilities, time demands, and fatigue. Yates and Booten-Hiser (1992) reported that during the first 3 months of recovery after CABG patients and spouses experience different kinds of stressors. The authors cited stressors as uncertainty about the possible recurrence of the illness, activities, diet, demands of relationships, and changes in roles within the family and spousal dyad. Although both patients and their spouses reported the possibility of illness reoccurrence as the single most stressful item, the results indicated that the uncertainty was significantly more stressful for the spouse than for the patient. While patients reported inability to participate in their usual work or retirement activities and adoption of a low cholesterol diet as two other stressful

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experiences, spouses reported increases in family demands and assuming unfamiliar tasks within the marital relationship as the most stressful experiences (Yates & Booten-Hiser).

The data on myocardial infarction (MI), or heart attacks, reflect a population similar to that discussed in the CABG literature. Family and spouse needs after myocardial infarction and CABG surgery are similar, in that information about surgical outcomes, patient improvement and survival are the most frequently cited (Forrester, Murphy, Price & Monaghan, 1990; Jamerson, Scheibmeir, Bott, Creighton, Hinton & Cobb, 1996; McRae, 1991; Moore, 1993; O'Malley, Anderson, Siewe, Deane & Keefer, 1991; Theobald, 1997; Warren, 1993; Woolley, 1990). The needs of families of critically ill patients also appear to be similar. In a meta-analysis of 905 families of patients with a variety of critical illnesses, Leske (1992) reported that the family identified information about the patient's health status as the highest need.

Purpose of the Study

Stress, cognitive appraisal, resilience, and social support, may all influence or impact the coping ability of an individual. A great deal of literature exists regarding the variables of interest in this study, however, the combination of these variables in older women whose spouses have undergone CABG surgery has not been addressed. The overall purpose of this study is to identify the effects of stress, cognitive appraisal, resilience, and social support on coping of older women whose spouses' have undergone coronary artery bypass surgery within the previous 3 months.

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Specific Aims of the Study

The specific aims of this study are to:

1. Describe the relationship between stress and coping of older women whose spouses have undergone CABG surgery.

2. Describe the relationship between cognitive appraisal and coping of older women whose spouses have undergone CABG surgery.

3. Describe the relationship between resilience and coping of older women whose spouses have undergone CABG surgery.

4. Describe the relationship between social support and coping of older women whose spouses have undergone CABG surgery.

5. Identify the effects of demographics, stress, cognitive appraisal, resilience and social support on coping of older women whose spouses have undergone CABG surgery.

Conceptual Framework for the Study

The nature of the study requires a conceptual framework to suggest the relationship of the variables. The conceptual frameworks of Lazarus and Folkman (1984) and Wagnild and Young (1993) were adopted to examine the relationships among the variables included in the study: stress, cognitive appraisal, resilience, social support, and coping of women whose spouses have undergone CABG surgery. The basis of this conceptual framework lies in combining the stress and coping model of Lazarus and Folkman (1984) with the resilience model of Wagnild and Young, (1990a). The Lazarus and Folkman (1984) model defines stress as a characteristic of the person-environment

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relationship in which the person perceives something as "taxing or exceeding his or her resources and endangering his or her well-being" (p. 21).

Stress is an individualized experience related to numerous and varied events. However, the individual's perception of the experience determines the significance of the event. The perception is defined in the present study as cognitive appraisal, a process through which the individual evaluates an encounter in terms of its relevance to his or her well being (Lazarus & Folkman, 1984). This perspective recognizes the importance of the subjective meaning attached to an event in terms of an individual's response to it. The manner in which individuals appraise an encounter has direct implications for their emotional reactions as well as how they will cope with the situation. Although appraisal can be viewed as a rational process, in reality it is influenced by a variety of factors, such as personality, that can lead to distorted or biased conclusions (Major, Richards, Cooper, Cozzarelli & Zubek, 1998; Silva, 1976).

Coping is a dynamic process of "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding (one's) resources" (Lazarus & Folkman, 1984, p. 141). Coping efforts are used to modify the circumstance creating the harm, threat, or challenge (problem-focused or active coping), or to regulate one's response to those demands (emotion-focused or avoidance-oriented coping). Problem-focused coping tends to occur when the circumstances giving rise to the distress are perceived as amenable to change, whereas emotion-focused coping comes into play when it is concluded that the conditions creating

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harm, threat, or challenge cannot be modified. In actuality, most coping efforts include aspects of both types (Lazarus & Folkman, 1984).

During the secondary appraisal process that initiates coping, the individual asks herself what she can do to address the stressful situation. Both the resources she possesses and the constraints that inhibit her from using these resources will influence responses. Coping resources include health and energy, positive beliefs (e.g. self-esteem and hope), problem-solving skills, social skills that enable one to use others as resources, social support, and material resources (Lazarus & Folkman, 1984). For example, if the woman experiences good health, social support from friends and family, and believes in her own abilities to solve problems, she will have identified coping resources. On the other hand, constraints might hinder a person's ability to use coping resources. Personal constraints are "internalized cultural values and beliefs that proscribe certain types of action or feeling, and psychological deficits that are a product of a person's unique development" (Lazarus & Folkman, 1984, p. 168). An example would be a woman having difficulty behaving independently due to traditional female gender-role socialization. Environmental constraints interfere with optimal use of resources by thwarting a person's coping efforts. An example might be when a woman's bank refuses to delay the house payment during the medical crisis of the CABG surgery, thereby thwarting her efforts in coping with the situation with less difficulty. A final constraint might be an extreme emotional reaction, such as fear or rage, that would interfere with the ability to enact effective coping (Lazarus & Folkman).

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Based on this theoretical framework, the stressors for the woman are the appraisals of the impact of the CABG surgery, personal health factors, and previous and current life events impacting the family. The spouse must appraise the meaning of this surgery (primary appraisal) in relation to her previous hardships, demands, and ability to cope, and must determine whether she has the available resources (secondary appraisal) to cope with the surgical and post surgical events. Social support and resilience will be assessed as they might impact the secondary appraisal of the spouse's ability to cope.

Wagnild and Young (1990a) developed the definition of resilience used in the current study. Resilience "connotes emotional stamina and has been used to describe persons who display courage and adaptability in the wake of life's misfortunes" (Wagnild & Young, 1990a, p. 252). Constructs within the resilience framework include equanimity, perseverance, self-reliance, meaningfulness, and existential aloneness. Equanimity is a balanced perspective of one's life and experiences; it connotes the ability to consider a broader range of experiences, to accept losses and take what comes, thus moderating extreme responses to adversity (Beardslee, 1989; Hamarat, 2002; Kadner, 1989; May, 1986; Wagnild & Young, 1993). For example, a woman might realize that people within her age group experience many losses and therefore she could cope with the event. Perseverance is the act of persistence despite adversity or discouragements; perseverance connotes a willingness to continue the struggle to reconstruct one's life and to remain involved and to practice self-discipline (Caplan, 1990; Druss & Douglass, 1988; May, 1986; Richmond & Beardslee, 1988; Wagnild & Young, 1993). Previous life events or hardships are included in the defining characteristics of perseverance. Self-reliance is

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defined as a belief in oneself and one's capabilities; self-reliance is the ability to depend on oneself and to recognize personal strengths and limitations (Caplan, 1990; Druss & Douglas, 1988; Richmond & Beardslee, 1988; Wagnild & Young, 1993). Meaningfulness is the realization that life has a purpose and the assessment of one's contributions; meaningfulness conveys the sense of having something for which to live (Bettelheim, 1979; Caplan, 1990; Frank, 1952; Frankl, 1985; Rutter, 1985; Wagnild & Young, 1993). Women may find meaning in everyday activities such as cooking for their family or community activities. Finally, existential aloneness is defined as the realization that each person's life path is unique. "Some experiences are shared but others remain that must be faced alone; existential aloneness confers a feeling of freedom and a sense of uniqueness" (Wagnild & Young, 1990, p. 254).

Specific Variables Examined in the Conceptual Framework

Stress

Prior and current life events, health status, environmental stressors, as well as financial and emotional concerns all play a role in the stress process (Tapp, 1995). Central to this view is the role of cognitive appraisal, a constantly occurring process that the spouse uses to evaluate an encounter and the implications for coping (Lazarus & Folkman, 1984). This perspective recognizes the importance of the subjective meaning attached to an event in terms of an individual's response to it. Studies have identified some of the stressors for the patient and family associated with CABG surgery (Knapp-Spooner & Yarcheski, 1992; Pennock, Crawshaw, Maher, Price, & Kaplan, 1994; Redeker, 1993; Yarcheski & Knapp-Spooner, 1994). It was found that previous and

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current life events as well as the appraisal of the impact of the CABG surgery potentially impact the family. Findings also show that stressful aspects include appraisal of the CABG surgery, loss of normal roles at home and at work, pain, sleep problems and eating changes (Knapp-Spooner & Yarcheski; Pennock et al., 1994). Results indicate that the first 6 weeks of recovery from CABG is the most difficult time for patients and families and is frequently associated with alterations in individual and family functioning (Knapp-Spooner & Yarcheski, 1992; Moore, 1992; Pennock, Crawshaw, Mahar, Price & Kaplan; 1994; Redeker, 1993). Spouses affect patient adjustment to and recovery from CABG (Artinian, 1991; Beach, et al., 1992; Beach, Nagy, Tucker & Utz, 1988). Therefore, knowledge about what stressors affect the spouses and how they adapt to partners' surgery is important. Beach et al studied married couples in which one person in the pair experienced an AMI. The authors reported a significant negative relationship between spouse stress, as measured by the Family Inventory of Life Events and Changes (FILE; McCubbin, Patterson & Wilson, 1983) and the patient's recovery at 3 and 6 months (1992).

Cognitive Appraisal

As stated above, cognitive appraisal is closely linked with stress. The manner in which individuals appraise an encounter has direct implications for their emotional reactions as well as how they will cope with the situation. Studies of women whose spouses have undergone CABG surgery indicate that the CABG surgery is appraised as stressful and of concern (Artinian, 1991; Miller, Wikoff, McMahon, Garrett & Ringel, 1990).

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Folkman and Lazarus (1984) advanced the concept of cognitive appraisal. Cognitive appraisal can be described in two basic ways: primary appraisal and secondary appraisal. Primary appraisal is used to determine whether an event is stressful or not and can result in three different conclusions: that the event is irrelevant, that it is benign-positive or that it is stressful (Carlson, 1997). Stress appraisals include harm/loss and threat. In harm/loss there has been some damage to the person such as in incapacitating illness or injury. Harm/loss also encompasses psychological damage, which may manifest as a change to self or social esteem or loss of a loved or valued person. The most damaging life events are those in which the central and extensive commitments are lost. Threat concerns harms or losses that have not yet taken place but are anticipated (Lazarus & Folkman, 1984).

When primary appraisal leads to the conclusion that an event is stressful, secondary appraisal comes into play to determine what can be done or how to cope. Secondary appraisal is a complex evaluative process that takes into account three factors: coping alternatives, the likelihood that a particular choice will accomplish its intended outcome, and the likelihood that the person can actually carry it out. Whereas primary appraisals look at what is at stake, secondary appraisals focus on what can be done (Lazarus & Folkman, 1984).

Resilience

Resilience has been studied in a variety of settings and populations. Some of these include children facing adversity (Masten, Best & Garmezy, 1990), families displaced during war or immigration (McCubbin & McCubbin, 1988; Christopher, 2000; Aroin &

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Norris, 2000), and minority women (Bachay & Cingel, 1999). There are only three studies found in the literature investigating resilience in older women, Felten (2000) and Wagnild and Young (1990b, 1991). The authors of the three studies investigated resilience in community dwelling people.

Felton used a qualitative design to interview 7 women aged 85 and older. She reported that despite many losses, as well as physical and financial concerns, the women were able to articulate the ways in which they were resilient. They described significant hardship in their lives and managed to "bounce back." These women approached their hardships with intention and purpose using a problem-focused approach (Felton, 2000).

Wagnild and Young (1990b) also used a qualitative approach to study 24 women between 67 and 92 years. As found with Felton (2000), the women reported many losses, financial hardships, and physical ailments. Despite these adversities the women described themselves as resilient. Wagnild and Young constructed the Resilience Scale (RS) based on the qualitative themes. In the final study, Wagnild and Young (1991) psychometrically tested the RS. The majority of the sample was female (62.3%) and married (61.2%). The survey packet included a demographic questionnaire, the 25-item Resilience Scale (RS), the Life Satisfaction Index A (LSI-A) (Neugarten, Havighurst, & Tobin, 1961), Philadelphia Geriatric Center Morale Scale (PGCMS) (Lawton, 1975), Beck Depression Inventory (BDI) (Beck & Beck, 1972), and a single item, 5-point scale rating personal health. Results indicated positive correlations with adaptational outcomes (physical health, morale, and life satisfaction) and a negative correlation with depression, which supported concurrent validity of the RS (Wagnild & Young, 1991).

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Social Support

Social support is a multi-dimensional concept that has been identified as important for positive health-related outcomes (Kahn, 1994). There are many characteristics that influence the potential availability of support and whether one requests, needs, or receives support. Social support is influenced by personal characteristics of the individual, which are thought to have a "determining influence on both the structure and function of an individual's support network" (Antonucci, 1985, p. 25). Some of these characteristics include personality and roles, both cultural and social (Cohen & Syme, 1985). Kahn (1994) theorized "a person's requirements for support at any given time are determined jointly by enduring properties of that person (age, other demographic characteristics, personality, etc.), and by properties of the situation (expectation and demands of work, family, and other roles)" (p. 168). Social support is an interpersonal transaction involving one or more of the following: affect (liking, love, respect, and admiration); aid (goods, services, information, time); or affirmation (expressions of agreement or acknowledgement of the appropriateness of some act or statement of another person) (Kahn & Antonucci, 1980).

Social support has been studied extensively. Specifically, social support has been demonstrated to be both beneficial and stressful for spouses of CABG patients. This seemingly contradictory finding is related to having the demands of an increasing number of persons in the social network when a crisis event, such as CABG surgery, occurs. The spouse has to interact and deal with the increased demands of more people and thus experiences increased stress (Artinian, 1991; Artinian & Hayes, 1992; Dickerson, 1998;

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Nyamathi, Jacoby, Constancia, & Ruvevich, 1992). Dickerson (1998) investigated the phenomenon of help-seeking as a precursor to accessing social support. The author interviewed 26 spouses of AMI or CABG surgery patients and found when the spouse appraised the cardiac event as more serious, they were more likely to seek social support. The second finding was the spouse identified three time periods when help was needed most: diagnosis, hospitalization, and homecoming, with the latter being the time when the spouse needed the most social support. This information has direct implications for nursing because nurses need to provide support at the time of diagnosis, during discharge, and after discharge.

In addition, coping ability and the amount of distress may influence both the ability to request and accept social support (Dunkel-Schetter & Skokan, 1990). If an individual perceives that she is coping well in a situation, support may not be requested and, if offered, may be refused. On the other hand, a person who is in severe distress and unable to cope, may not be able to request support, and, by the inaction, may drive potential supporters away (Hupcey, 1998).

Coping

Coping is a dynamic process of "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding (one's) resources" (Lazarus & Folkman, 1984, p. 141). This definition allows for the individual to actually think and feel within the context of a stressful encounter and how these thoughts and actions unfold as the situation changes (Folkman & Lazarus, 1988). Coping is the individual's way of dealing with the stress of the situation.

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The cognitive appraisal model of coping suggests that persons who cope successfully are able to function effectively in various settings, and to attain positive morale or life satisfaction and somatic health (Lazarus & Folkman 1984). Coping appears to be the mechanism used to adapt to the stress of CABG surgery. Differences in coping may explain the discrepancy between positive and negative physiologic and psychosocial outcomes in certain individuals. Coping has been studied extensively but there is a dearth of studies on older women coping after the CABG of their spouse. Redeker (1992) studied (N = 129) patients recovering from their first CABG surgery. The majority of the sample was male (79%). The author used the Revised Ways of Coping Checklist (WCCL) (Vitaliano, 1987) to measure coping on the day of discharge. It is hardly surprising the most frequent coping strategy used was seeking social support.

Nyamathi, Jacoby, Constancia and Rudevich (1992) studied the coping adjustment of spouses (N = 100) of critically ill patients with cardiac disease. The investigators used the Spousal Coping Instrument (SCI) (Nyamathi, Dracup & Jacoby, 1988) which was based on Lazarus and Folkman's theory of stress and coping (1984). The instrument measured a variety of personality factors, social network, coping, and adjustment. Their results indicated a significant positive relationship between positive personality factors and problem-focused coping and between negative personality factors and emotion-focused coping and emotional and physical distress.

In a descriptive longitudinal study, Artinian (1991) studied female spouses between the ages of 32 and 74 years (N = 86). Her purpose was to describe the stress process variables in the spouses of men undergoing CABG at discharge and 6 weeks

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post-discharge. The variables of interest in the Artinian study included hardships and demands, cognitive appraisal of the CABG, social support, role strain, and marital quality. Additionally, Artinian used open-ended questions to elicit qualitative data. The investigator's results confirmed previous studies regarding high levels of social support being available during the crisis of the CABG surgery, which diminished 6 weeks after discharge and that a larger number of people in the support network added to their reported stress (Downe-Wamboldt, 1998; Stanley & Frantz, 1988; Tilden & Galyen, 1987). Artinian also described that spouse stress levels and appraisal of illness severity were high at discharge from the hospital with some reduction at 6 weeks. Her results described the variables of stress, cognitive appraisal, and social support as impacting the coping of women in her study.

Research Questions

The research questions are as follows:

1. What is the relationship between stress and the coping of older women whose spouses have undergone CABG surgery?

2. What is the relationship between cognitive appraisal of CABG surgery and coping of older women whose spouses have undergone CABG surgery?

3. What is the relationship between resilience and coping of older women whose spouses have undergone CABG surgery?

4. What is the relationship between social support and coping of older women whose spouses have undergone CABG surgery?

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5. What is the effect of selected demographic variables, stress, cognitive appraisal, resilience, and social support on the coping of older women whose spouses have undergone CABG surgery?

Assumptions

The following are assumptions that will guide this study:

1. Women whose spouses undergo CABG surgery will perceive the surgery as stressful.
2. Women whose spouses undergo CABG surgery affect patient recovery.
3. Changes in one member affects whole family.
4. Survey instruments are accurate methods to gather these data.
5. Self-report is an adequate method to measure variables such as demographics, stress, cognitive appraisal, resilience, social support, and coping.
6. Spouses can accurately self-report variables in the window of time of 3 months after CABG.
7. Research sites will distribute questionnaires face-to-face, consistent with the research protocol; such face-to-face contacts will be sufficient motivation for spouses to complete the packets.
8. Research instruments in the study (Demographic questionnaire, FILE, SPS, RS, SSI, and WCQ) are valid measures of the variables of interest.
9. Participants who complete the survey will not differ systematically from those who decline.
10. Women will answer survey questions honestly.

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Conceptual Definitions

Coronary artery bypass graft surgery (CABG) is a surgical procedure to correct the inability of the coronary arterial system to deliver a blood supply sufficient for the demands of the heart muscle. Myocardial perfusion is improved through a revascularization procedure, such as a saphenous vein bypass graft. In a saphenous vein graft, a segment of saphenous vein from the leg is anastomosed to the ascending aorta and the other side is attached beyond the obstruction thus creating a bypass of the obstructed vessel (Kidd & Wagner, 2001).

Older Women are defined by the International Classification of Diseases, Ninth Revision (ICD9-CM) as persons as 55 years of age and older (Furner & Kozak, 1992).

Stress is defined as a relationship between the person and environment that is appraised as relevant to well-being and taxing resources (Folkman & Lazarus, 1985). The person-environment context refers to current and previous life events and situations.

Cognitive Appraisal is a process through which the person evaluates whether a particular encounter with the environment is relevant to his or her well-being and, if so, in what ways (Lazarus & Folkman, 1984, p. 992). Cognitive appraisal can be described in two ways: primary appraisal determines whether an event is stressful or not and secondary appraisal occurs when the event is determined to be harmful. If primary appraisal determines the event is harmful, the person determines what is to be done next. Cognitive appraisal defines how stressful the spouse views the CABG surgery to be.

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Resilience is a personality characteristic that defines persons who approach hardships, such as spousal CABG, with intention and purpose (Wagnild & Young, 1990a).

Social Support is defined as emotional, esteem and network support available in the community and perceived as available to spouses of men undergoing CABG surgery (McCubbin, Patterson & Glynn, 1982).

Coping is defined as the cognitive and behavioral efforts to manage the demands of the CABG surgery appraised as taxing or exceeding the resources of the spouse (Folkman, Lazarus, Dunkel-Schetter, & Gruen, 1986).

Operational Definitions

Coronary Artery Bypass Graft Surgery (CABG) will be operationalized in this study as the patient having had a CABG, or CABG/valve surgery, either first or subsequent procedures, within the previous 3 months.

Older women will be operationalized in this study as women 55 years of age and older (Furner & Kozak, 1992).

Stress will be operationalized by the Family Inventory of Life Events and Changes Scale (FILE) (McCubbin, Patterson & Wilson, 1983).

Cognitive Appraisal will be operationalized by a revised version of the Spouse Perception Scale (SPS) (Palmer, 1965; Silva, 1976).

Resilience will be operationalized by the Resilience Scale (RS) (Wagnild & Young, 1993).

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Social Support will be operationalized by the Social Support Index (SSI) (McCubbin, Patterson & Glynn, 1982).

Coping will be operationalized by the Ways of Coping Questionnaire (WCQ)(Folkman & Lazarus, 1988).

Instruments were selected for the study because they were determined to be conceptually relevant, and able to yield data necessary to answer the research questions. Additionally, the instruments were mostly well established with known validity and reliabilities (FILE, RS, SSI & WCQ) with the exception of the Spouse Perception Scale (Palmer, 1965; Silva; 1976) and the demographic tool. It was determined that the instruments selected for the present study were appropriate for the study population and were also adaptable for ease of administration.

A spatial representation of the variables being studied is found in Figure 1. In the drawing, stress is conceived of as factors impacting the woman and her family during the previous twelve months and includes those incidents that can either positively or negatively impact families, such as births and deaths. In addition, stress is conceived to represent the CABG surgery and the woman's current health and financial status. Stress is thought to impact coping. Cognitive appraisal or how important the CABG surgery experience is directly affects coping. How resilient the woman sees herself and the amount of social support the woman perceives directly affects coping.

Significance

Surgical treatment for coronary artery disease has become quite common. In 1997, over 607,000 persons in the United States underwent CABG surgery for the

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treatment of coronary artery disease (American Heart Association, 1999). Of the 2,127,000 persons discharged from hospitals with the primary diagnosis of coronary artery disease, 58% were age 65 and older. Additionally, 74% of all coronary artery bypass surgeries in 1995 were performed on men (American Heart Association, 2002). Approximately 71% of elderly men are living with their spouse (Administration on Aging, 1998) and couples experience the stress involved in the treatment of coronary artery disease (Moser, Dracup & Marsden, 1993). These coronary artery disease demographics imply that approximately 30% of patients hospitalized with coronary artery disease and possible CABG will be older men living with a spouse.

The spouse's ability to deal in an optimal manner with their ill partner has a significant impact on the patient's physical and emotional adaptation to the cardiac surgery and myocardial infarction (Artinian, 1991; Beach, et al., 1992; Hilbert, 1994). These impacts have been reflected in the literature as reduced anxiety during hospitalization (Doerr & Jones, 1979), improved sexual comfort, marital satisfaction, and reduced family stress during recovery (Beach, et al. 1992). Hilbert (1994) reported that

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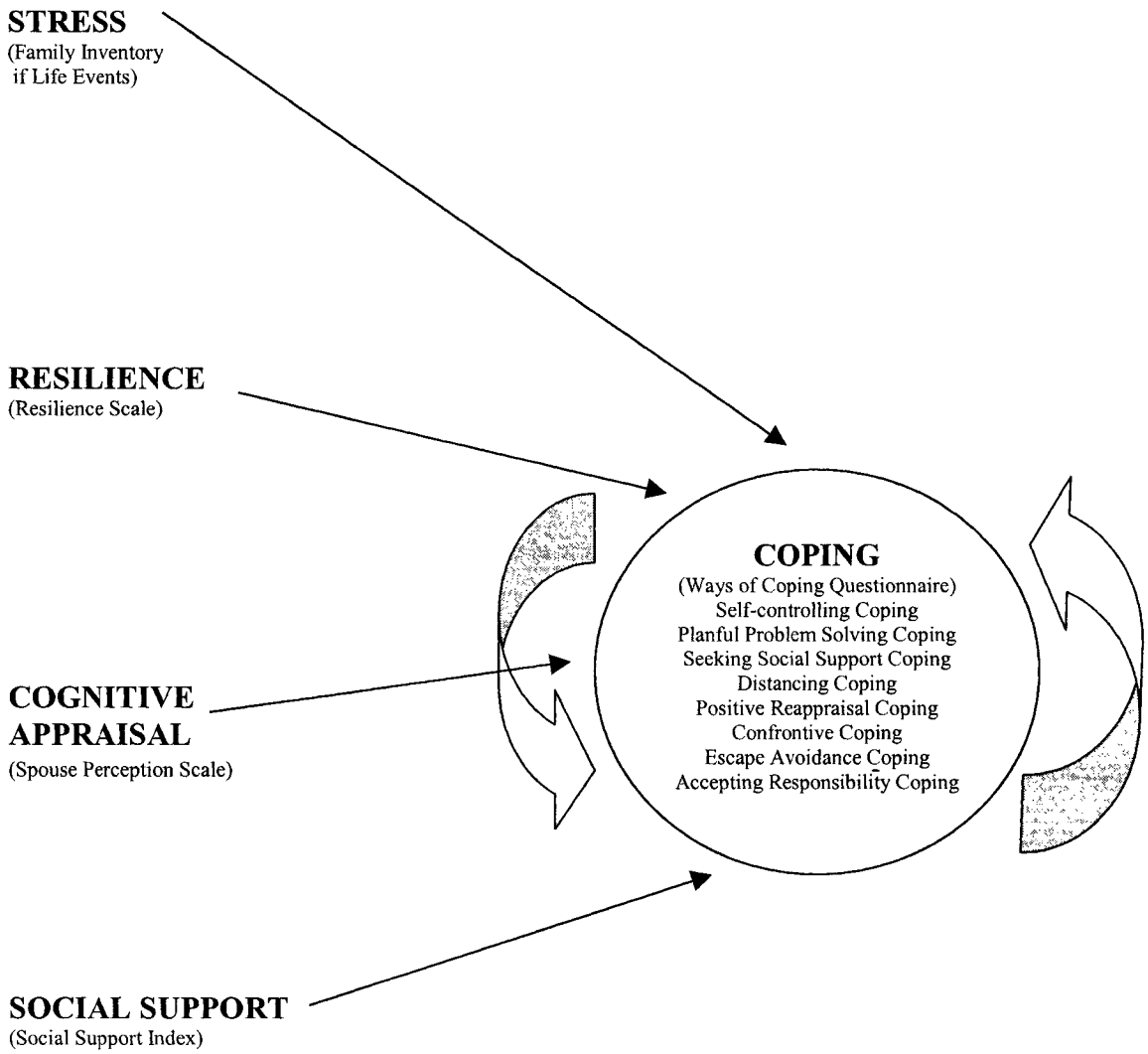

Figure 1. Hypothesized Influence of Stress, Cognitive Appraisal, Resilience, and Social Support on Coping of Older Women Whose Spouses Have Undergone Coronary Artery Bypass Surgery

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effective communication as opposed to ineffective communication between the married couple improved marital satisfaction after myocardial infarction.

Orzeck and Staniloff (1987) compared patients' and spouses' needs during the first month of convalescence. They concluded that patients and spouses experience similar reactions to the acute illness event and that both patients and spouses identified receiving information regarding the medical status of the patient as more important than receiving emotional support during this early recovery period. Moser, Dracup and Marsden (1993) also reported a similar finding. Orzeck and Staniloff stated that patients considered spouses needs to be more important than their [spouses] own. This suggests that spouses were more concerned about being helpful to the patient than they were about their own well-being. Despite data reflecting the importance of medical information, and status updates to the spouse, studies have reported that providing additional information to the spouse does not eliminate the stress of the recovery period after AMI or CABG (Rukholm, Bailey, & Contu-Wakulczyk, 1992; Sikorski, 1985; Thompson & Cordle, 1988).

The outcomes of long-standing coronary artery disease often occur at a developmental stage in the family when the children are older and have frequently left home. With the departure of other family members, the spouse remains the primary member in the family to bear the impact of the illness, surgery and recovery (Bedsworth & Molen, 1982; Chatham, 1978; Radley & Green, 1986). A frequently reported stressor is the assumption of additional household duties (Artinian, 1989; Gillis, 1984; Gillis, Sparacino, Gortner & Kenneth, 1985; Hilgenberg, Liddy, Standerfer, & Schraeder, 1992;

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Kirkevold, Gortner, Berg & Saltvold, 1996; McRae, 1991; Nyamathi, 1987b; Stanley & Frantz, 1988). Role reversal and spouse attempts to monitor noncompliance are consistently reported as a source of conflict within the marital dyad (Artinian, 1989; Hilgenberg, Liddy, Standerfer, & Schraeder, 1992; Kirkevold, Gortner, Berg & Saltvold, 1996; McRae, 1991; Nyamathi, 1987b). Spouses also report conflict avoidance or attempt to cover up conflict to prevent upsetting the patient and aggravating cardiac symptoms or triggering a recurrent infarction (Hilgenberg, et al, 1992; McRae, 1991; Mishel & Murdaugh, 1987; Nyamathi, 1987a). Spouses are often aware of their vigilant and protective behaviors but they view these actions as their responsibility and contribution to the recovery of their ill family member.

A majority of these studies have investigated the population of middle-aged women without targeting older female spouses of CABG patient. Although the literature describes experiences and stresses of middle-aged spouses during the first 6 weeks after AMI or CABG, little is known about the experience of older women. This study stands to have a significant impact because the occurrence of coronary artery disease and subsequent CABG is so great. CABG is a major life stressor for the family. Stress has deleterious effects on individual family members' psychological and physical health. A paucity of data exists on coping of older women. This study will focus upon the influence of selected demographic variables, stress, cognitive appraisal, resilience, and social support on older women's coping with their spouses' cardiac surgery. Partners affect patient recovery from CABG surgery, therefore knowledge about how older women cope with the spouses' surgery is important.

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Summary

Coronary artery bypass surgery has become a frequent treatment for persons with coronary artery disease. This experience is a major surgical event and carries many stressors, including disruption in family roles, fears of death, and family conflict. Often, children have moved away leaving the older woman to cope alone. Despite these issues, some women seem to successfully navigate this stressful time. Spouses of CABG surgery patients are often older and have been less studied. This frequently occurring situation suggests the need to research factors that affect the older female spouse's life, such as the influence of stress, appraisal of the CABG surgery, resilience, and social support on coping.

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CHAPTER II

REVIEW OF THE LITERATURE

This chapter presents, pertinent literature on the variables of stress, cognitive appraisal, resilience, social support and coping. Since there is a paucity of literature investigating coping in older, female spouses of CABG patients, studies involving the impact of the study variables on other critical illness events on spouses and others will be reviewed. The literature will be reviewed in the following order: stress, cognitive appraisal, resilience, social support and coping.

Stress

Stress is a relationship between the person and environment that is appraised as relevant to well-being and taxing resources (Folkman & Lazarus, 1985). Lazarus and Folkman note that individuals constantly evaluate the stream of events they encounter (1984). Stress is influenced by cognitive appraisal, accumulated life events and person-environment characteristics (Lovallo, 1997). Major changes, life events, or daily hassles are often cited as stimuli or stressors (Brodsky;1995; Cayse; 1994; Donnelly, 1994; Esparza, 1993; Fleury, Kimbrell, Kruszewski, 1995; Kinney, Stephens, Franks & Norris, 1995; Lazarus & Folkman, 1984; Leathem, Heath, & Woolley, 1996; Lovallo, 1997; McCubbin, Patterson & Wilson, 1981; McNaughton, Smith, Patterson & Grant, 1990). Health and financial concerns, life events and the CABG surgery, are considered stressors for the spouse.

The literature surrounding chronic illness identifies many factors that may influence family stress. Common concerns cited in the literature include financial

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concerns (Artinian, 1991; Starzomski and Hilton, 2000), role reversal, (Benson-Stanley and Frantz, 1988; McMurray, 1998), family concerns and chronic and acute health concerns (Starzomski and Hilton, 2000).

Stress and Life Events

Many life events produce stress including births, deaths, marriage and illness events, such as CABG surgery. In other words, stress seems to be more than a single event, such as CABG surgery or even the spouse's perception of its impact. The spouse is experiencing accumulated events in her life that may have been small or large. Studies will be reviewed that have examined accumulated life events in relation to adaptational outcomes, as well as studies that have examined life events and illness.

Family stress theory has been advanced as a framework for understanding why some families seem to adapt, survive and even advance in response to stress while other families, faced with similar transitions and stressors, seem to fall apart (McCubbin, 1995). Findings from the life-event literature studying adults support the existence of a positive relationship between demands and stress responses. Demands are hardships placed on the individual or family associated with a stressful event plus major life changes that occurred prior to the event that put strain on the person or family (McCubbin & Patterson, 1987). Stress responses, the response of the individual to the events in the environment (Artinian, 1988), have been studied in numerous ways, such as mood, psychological adjustment, physical symptoms, or social competence.

Beach, et al. (1992) examined a sample ($\underline{N}$ = 34) of married couples in which one of the pair experienced an acute myocardial infarction (AMI). In their longitudinal, descriptive

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study, Beach et al. reported that there were weak but statistically significant relationships between the Family Inventory of Life Events and Changes (FILE) of the spouse and the recovery of the patient at 3 and 6 months after AMI.

Leske and Jiricka (1998) conducted a multivariate descriptive study on the impact of family demands, strengths, and capabilities on well-being and adaptation after critical illness. A convenience sample ($\underline{N} = 51$) of adult family members of critically injured patients within the first 2 days of injury comprised the sample. Results indicated that family demands and prior stressors, rather than the traumatic injury, negatively impacted family adaptation to the event (Leske & Jiricka, 1998). In contrast, Starzomski and Hilton's study findings differ from those of Leske and Jiricka. Their sample of 20 renal transplant patients and their partners reported life event stressors were financial and family strains and adjustment to renal failure and kidney transplant itself. The difference may lie in the nature of the acute injury of Leske and Jiricka's sample of trauma victim's families versus the chronic nature of renal failure and subsequent transplant.

Using a retrospective, correlational design, Bigbee (1992) studied the relationship between family hardiness, stress, member illness and negative life events, on a sample ($\underline{N} = 105$) of families in which at least one child under the age of 18 was living at home. The head of the household was instructed to complete the survey. The correlational findings supported the hypothesis that family illness occurrence is positively related to family stress levels as a whole, as well as specific negative events.

One study was implemented with the explicit purpose of comparing life event stressors in older and younger adults. Folkman, Lazarus, Primley, and Novacek (1987)

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used a retrospective, repeated measures longitudinal design with a sample of (N = 141) adults in their late sixties and (N = 150) adults in their early forties. The study found a significant effect for age and the types of stressors endorsed by older versus younger adults. Older adults cited more stress related to environmental, social and health issues whereas younger adults reported significantly more stress related to domains of work, finance, home maintenance, family, friends, and personal life. Lazarus et al. concluded these differences were related to differing developmental tasks with older adults being concerned with broader environmental and social issues while younger adults focused on work, home and family concerns.

In summary, research related to life-events demonstrates that individuals and families are more likely to respond to multiple life changes simultaneously rather than a single event. The relationship between life events, and health outcome is a complex one. Some persons deteriorate rapidly under severe stress, others show minimal to moderate deterioration, and still others seem unaffected. As previously mentioned, there seems to be a modest relationship between stressful life events and a decreased level of emotional, physical, and/or social health.

Methodological Issues Related to Stress and Life Events Studies

Numerous methodological problems have been cited in the life events or life change literature (McCoy & Finkelhor, 1996). Problems have been identified involving reliance on statistical methods of a rudimentary nature to analyze the stress-illness relationship; correlations, when reported, are often low (around .12); reports range from .26 to .96 in test-retest reliability of the Social Readjustment Rating Scale. Also,

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respondents may exaggerate past events from a need to justify subsequent illnesses where a given life event and an illness perceived or reported shortly thereafter may be products of the same phenomenon, so that one cannot be said to distinctly precede or precipitate the other leading to retrospective contamination.

Methodological problems have also been reflected in questionable content validity. For example, various instruments have overlapping items, differ in length, content and relative number of positive and negative items. Finally, life event checklists may be largely irrelevant to certain groups or events in a life event inventory may not be applicable to individuals in a study population. Despite the methodological problems, findings have generally supported a weak, but statistically significant relationship between life events and illness onset (McCoy & Finkelhor, 1996). Research in family life stress has reflected numerous studies that support the notion that life events impact families in profound and often negative ways (McCubbin & Patterson, 1983). Rather than discard the stress-illness relationship, evidence suggests that life events are a worthy part of a constellation of environmental and person variables that conspire against health.

Cognitive Appraisal

Cognitive appraisal is an essential concept in the present study and in order to better understand the concept several historical references will be reviewed. Next, classical studies reporting cognitive appraisal and stress will be highlighted. One study will be examined from the more recent literature, and finally, cognitive appraisal will be reviewed as it relates to coping.

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Historical References of Cognitive Appraisal

Combs and Snygg (1971) postulated that behavior is not determined by an objective reality or by a reality as seen by others. Rather, an individual's perceptions provide the meaning and context within which behavior is enacted. Claus (1980) states that each individual has a different perceptual experience related to environmental stimuli and that is the reason why each individual reacts differently to the same stressor. Although certain environmental demands and pressures produce a stress response in a substantial number of people, individual differences in the degree and kind of reaction are always evident.

A number of psychologists have supported the fact that situations must be considered in terms of their significance to the individual (Lazarus, 1966; Endler & Magnusson, 1976; & Pervin & Lewis, 1978). Further, symbolic interactionists also espouse that, "humans do not respond to the environment as physically given, but to an environment that is mediated through symbolic processes, to a symbolic environment" (Stryker, 1969, p. 130). Persons frequently encounter problematic situations. Before they can act, they must define the situation, that is, represent themselves in symbolic terms. The products of this defining behavior are termed "definition of the situations" (Stryker, 1969, p. 130).

Classic Studies of Cognitive Appraisal

Historically, Lazarus (1966) and his colleagues defined cognitive appraisal as the process of categorizing an encounter and its various facets with respect to its significance for well-being (Lazarus & Folkman, 1984). In a classic study from the 1960s, Lazarus

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and his colleagues embarked on a systematic effort to study cognitive mediation using motion picture films to create a quasi-naturalistic way of generating stress. They studied the relationship of cognitive appraisal to the stress response. In their extensive research, subjective as well as autonomic disturbances were monitored while subjects watched films that showed people being mutilated. Several laboratory studies examined film-induced stress reactions in relation to the mediating role of cognitive appraisals by manipulating such appraisals experimentally (Folkins, Lawson, Opton, & Lazarus, 1968; Lazarus & Alfert, 1964; Lazarus, Opton, Nomikos & Rankin, 1965; Speisman, Lazarus, Mordkodd & Davidson, 1964). Their experiments showed that variations in appraisal were associated with concomitant degrees and kinds of stress reaction.

Another classic study demonstrated the importance of cognitive appraisal of situations to the final analysis. Speisman, Lazarus, Mordkoff and Davidson (1964) conducted an experiment employing a silent film demonstrating a rite of passage among Australian aborigines. The film displayed a series of crude operations on the penis and scrotum of adolescent boys to generate stress reactions. Three sound tracks that employed travelogue-like narratives were created for the film. The narratives included a trauma passage that focused on disease, pain and castration; a denial passage that characterized the procedures as harmless and not distressing; and an intellectualization passage communicating emotional detachment from the film events. The trauma sound track was found to enhance stress reactions (both subjective and autonomic) while both the denial and intellectualization sound tracks reduced it. In summary, the study demonstrated cognitive appraisal processes mediated stress response levels.

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Holmes and his colleagues (Bennett & Holmes, 1975; Bloom, Houston, Holmes & Burish, 1977; Holmes & Houston, 1974) continued the investigation of appraisal manipulation, with a series of painful electric shocks on the experimental group (threatened subjects) and with no manipulated threat on the control group. The threatened subjects were given two types of instruction: threat redefinition, in which they were told to reduce stress by thinking of the shock as an interesting new physiological sensation; and threat isolation, in which they were told to reduce stress by remaining detached and uninvolved. Pulse rate, skin conductance, and self-reports of anxiety provided evidence of the levels of stress response. Holmes and Houston reported that subjects who use redefinition and isolation showed smaller increases in stress response levels over baseline and control conditions than those who were not told of the cognitive reappraisal processes.

In summary, historical evidence seems to indicate a relationship between cognitive appraisal of a stressful event and stress response. Experimental studies have indicated the relationship between cognitive appraisal and the stress response. Clinical research is less well controlled and defined, but necessary for meaningful outcomes.

Recent Literature

Appraisal of the seriousness of heart disease and interventions can determine the willingness of patients to pursue recommended lifestyle changes to improve their health. Studies have demonstrated that patients suffering recent myocardial infarction or undergoing CABG appraise the experience as stressful (Knapp-Spooner & Yarcheski, 1992; Pennock, Crawshaw, Maher, Price, & Kaplan, 1994; Redeker, 1993; Yarcheski &

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Knapp-Spooner, 1994). However, Kimball (1998) proposed that since percutaneous transluminal coronary angioplasty (PTCA) is minimally invasive and may occur without subsequent MI the patient may not appraise the procedure as stressful enough to justify lifestyle modifications. Kimball defined coping as patients accurately following cardiac risk reduction behaviors after successful PTCA (invasive procedure to open occluded coronary arteries). A prospective, correlational design was used where subjects (N = 74) were interviewed three times; time one (within 24 hours prior to PTCA), time two (discharge from hospital) and time three (two weeks after discharge). Results indicated that subjects remained optimistic about their cardiac health. The findings support that patients perceived PTCA to be minimally invasive and beneficial, possibly "curing" their heart disease. Consistent with previous research (Gulanick & Naito, 1994), psychological distress was low both prior to and following the procedure. The subjects did not report high levels of threat perception of the PTCA procedure and therefore viewed cardiac risk reduction behavior as too difficult or unnecessary. None of the regression equations or the individual variables within the models was significant, demonstrating that treatment appraisal and heart disease threat were not related to cardiac risk reduction in this sample.

Cognitive Appraisal and Coping Responses

Several authors theorize that coping varies as life events are appraised (Folkman & Lazarus, 1985; Lazarus, 1966; Mikulincer & Florian, 1995; Scherer & Drumheller, 1993; Stone & Neale, 1984). In other words, how a person copes with an event depends on how that person perceives or defines that event. Evidence exists to support the

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relationship of perception and coping, however, it does not predict the nature of the relationship.

Kammer (1994) investigated the relationship among stress, appraisal, coping, and characteristics of individuals responsible for older adults recently placed in nursing homes. One hundred individuals completed an information form, stress appraisal, and a revised Ways of Coping instrument by mail. Multiple regression analysis of 16 respondent characteristics showed significant contribution of eight variables to four stress appraisal types (threat, harm, challenge, and benefit) and 11 variables to eight ways of coping. Visit frequency accounted for the highest degree of variance in all appraisals. Stress appraisal accounted for most variance in coping.

Downe-Wamboldt (1991) investigated coping strategies of 90 older women with osteoarthritis. Stress was measured with the Stress Questionnaire (Folkman, et al.,1986) and coping by the Jalowiec Coping Scale (Jalowiec, 1984). The impact of the physical discomforts of arthritis was measured with the Arthritis Impact Measurement Scales (Meenan, Gertman & Mason, 1980). The subjects described the physical and psychological impact of their arthritis in terms of coping behaviors. Coping behaviors reported most often included palliative (P), followed by confrontive (C) and then emotive (E). Strategies used most often included accepting the situation (98.9%) (P), resign self to the situation because it's your fate (97.8%) (P), daydream (96.7%) (E), think through different ways to solve the problem (96.7%) (C), resign yourself to the situation because things are hopeless (96.7%) (P), try out different solutions (94%) (C), let someone else solve the problem (93%) (P) and try to maintain some control over the situation (92%)

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(C). As women experienced increasing physical limitations reports of stress increased but the emotional responses linked with this increasing stress were inconsistent. The data demonstrated conflicting emotional responses of harm, threat, as well as challenge and benefit (Downe-Wamboldt, 1994). The author theorized that contradictory emotions were possibly related to the unpredictable nature of the disease. This study demonstrates a variety of coping responses in response to perceived stress in this sample of older women.

Nyamathi (1987a) studied the coping responses of spouses of participants with AMI during acute, early, and late convalescence periods of patients with myocardial infarction. Flexible, semi-structured interviews were conducted over a 3-month period with 40 spouses. Questions were structured by the behavioral (problem-focused), cognitive (changing the meaning of the situation by minimizing the seriousness of the illness) and intrapsychic (emotion-focused) forms of coping. It was found that behavioral responses were used by 100% of the women during the acute and convalescent time periods. Intrapsychic responses were used by 38% of the spouses. During the husband's hospitalization, 60% of the women used behavioral responses that were predominantly illness focused and aimed at preventing or reducing the perceived stressor. Seeking help was a significant behavioral response used by 80% of the women. Fifty-eight percent of the women sought physical help from friends and family and questioned doctors, nurses, and other individuals for information about the care of the patient. Cognitive responses that spouses found useful in reducing their fears involved controlling their thoughts,

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minimizing threat, and hoping and planning for the future. Denial/avoidance responses were used by 35% of the spouses.

During the convalescence phase many behavioral responses were directed toward monitoring or trying to control the long-term consequences of the heart attack. All 40 spouses reported monitoring the diet and activity levels of their husbands. Fifty percent observed the breathing patterns of the husband during convalescence. Thirty percent of the women used help-seeking strategies in results of cardiac catheterization, ways of dealing with the husband's lack of cooperation, and various issues dealing with diet and drug therapy. During early convalescence, 73% of the women sought emotional support from husbands, family and friends. This declined to 32% in later convalescence.

Both the literature reviewed and the past research by Artinian (1991, 1992) suggests that spouses of cardiac surgery patients have different things "at stake." These important outcomes are: termination of customary life style, loss of spouse, uncertain future, unable to carry out previously planned future goals, disruption of work and customary social roles and activities. Spouses may view their partners' illness as a punishment, a challenge, a sign of their failing, or an irreparable loss or damage all of which will affect perception of severity. It appears that it is the individual's perception or appraisal of a situation that affects coping. However, more knowledge is needed about perception and coping in situation-specific stressful encounters before directional relationships can be posed. Further investigation will provide knowledge for health care professionals about why clients cope in a certain way and yield information upon which to base interventions.

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In summary, variability in coping is at least partially a function of perception about what is at stake (primary appraisal) in specific stressful encounters and what individuals view as the options for coping (secondary appraisal). The studies discussed above addressed stressful encounters in people's day-to-day lives. The appraisal of stressors and coping responses in unusual or unexpected stressful encounters has yet to be investigated.

Methodological Issues in Cognitive Appraisal/ Perception

Nunnally and Bernstein (1994) discussed methodological issues related to measurement of perceptions. According to these authors, personal perceptions about certain events may be considered sensitive information, thus subject to response set bias. Response set bias refers to measurement error introduced by the tendency of some individuals to respond to items in characteristic ways, independently of the item's content (Nunnally et al.1994, p. 376). For example, one influence on responses is a person's tendency to present a favorable image of himself or herself. The social desirability response set refers to the tendency of some individuals to misrepresent themselves by giving answers that are consistent with the prevailing social mores. Subtle, indirect, and delicately worded questioning can help to relieve this type of response bias.

Resilience

Garmezy describes resilience as the power of "recovery" and the ability to "return to patterns of adaptation and competence that characterized the individual prior to the stressful period." She describes a resilient individual as one that can "bend, yet subsequently recover" (Garmezy, 1993, p. 129).

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Some others have described resilience as a process (Baumeister, 1982; Fine, 1991; Masten, Best & Garmezy, 1990; Staudinger, Marsiske & Baltes, 1993; Steele, 1993). However, for the purposes of this study, resilience will be identified as a personality trait. Resilience, a personality characteristic or trait that moderates the negative effects of stress and promotes adaptation, has been a topic of research for a number of years. Resilience is attributed to individuals who, in the face of overwhelming adversity, are able to adapt and restore equilibrium to their lives and avoid the potentially deleterious effects of stress (Beardslee, 1989; Bebbington, Sturt, Tennant, & Hurry, 1984; Block & Kremen, 1996; Byrne, Love, Browne, Brown, Roberts & Streiner, 1986; Caplan, 1990; Masten & O'Conner, 1989; O'Connell & Mayo, 1988; Richmond & Beardslee, 1988; Rutter, 1985; Wagnild & Young, 1990).

Resilience and Stress

In Older Women

There is a dearth of research regarding resilience and older women. Three studies were found that have evaluated older women's resilience. Wagnild and Young (1990a) studied elderly women adjusting to major loss. Twenty-four Caucasian women between 67 and 92 were interviewed. Resilience and coping were measured in a qualitative study using grounded theory. Participants were identified by directors of senior citizen centers as having adjusted well after a major loss. Criteria for inclusion were social involvement, a mid to high level of morale as measured by the Philadelphia Geriatric Center Morale Scale (Lawton, 1975) and self-reported successful adjustment. Losses included the death of a loved one, loss of employment, loss of health, and losses associated with relocation.

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Each participant was interviewed once in a semi-structured audiotaped session conducted in the participant's home. Descriptive data were obtained and participants were asked to respond to a series of questions about a particular loss within the last 5 years.

Wagnild and Young identified the following themes emerging from the data: (a) equanimity- a balanced perspective of one's life experience; (b) perseverance- persistence in spite of adversity, and a willingness to continue to struggle; (c) self-reliance- a belief in oneself and capabilities; (d) meaningfulness- the realization that life has a purpose and the value of one's contributions; and (e) existential aloneness- the realization that each person's life path is unique. The authors compared their findings to the available literature and noted congruence (Wagnild & Young, 1990a). Women referred to a variety of approaches and personal attributes to cope in difficult situations.

In a second study, Wagnild and Young (1993) developed and psychometrically evaluated the 25-item Resilience Scale (RS). The sample was derived from the readership of a major senior citizen periodical in the Northwest. The majority of the sample (N = 810) was female (62.3%) and married (61.2%). The survey packet included a demographic questionnaire, the 25-item Resilience Scale (RS), the Life Satisfaction Index A (LSI-A) (Neugarten, Havighurst, & Tobin, 1961), Philadelphia Geriatric Center Morale Scale (PGCMS) (Lawton, 1975), Beck Depression Inventory (BDI) (Beck & Beck, 1972), and a single item, 5-point scale rating personal health. Results indicated positive correlations with adaptational outcomes (physical health, morale and life satisfaction) and a negative correlation with depression, which supported concurrent

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validity of the RS. Additionally, the results supported internal consistency reliability of the RS to measure resilience.

In the final study of resilience in older women, Felton (2000) studied seven multicultural, community-dwelling women aged 85 and older. The researcher explored resilience in these women following a qualitative, interview approach using questions partially derived from Wagnild and Young's (1993) resilience scale. The findings indicate that the experience of resilience did not follow the themes of equanimity, self-reliance, existential aloneness, perseverance, and meaningfulness. Rather, participants were reported to speak of issues related to frailty, determination, previous experience with hardship in learning how to cope, access to care, culturally-based health beliefs, family support, and self-care activities.

Resilience in Children

The majority of studies of resilience have focused on children. Many of these studies have been efforts to understand how children that have undergone hardships and extremely stressful situations successfully avoid psychiatric disorders in later life (Byrne, et al., 1986; Howard & Dryden, 1999; Masten & O'Conner, 1989; Richmond & Beardslee, 1988; Smith, Smoll, & Ptacek, 1990). Resilient children seem to share several characteristics; a strong extra-familial support system, positive role-models, warm, loving family structure, social responsivity and social activity, autonomy, self-understanding and the ability to reflect (Beardslee and Podorefsky, 1988; Byrne et al., 1986; Calvert, 1997; Cowen and Work, 1988; Garmezy, 1993; Wyman, Cowen, Work & Parker, 1991).

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Resilience and Cognitive Appraisal

No studies were found in the literature investigating resilience and cognitive appraisal of older women. However, two studies were found that offer a perspective of resilience and cognitive appraisal in adults.

Major, Richards, Cozzarelli, Cooper and Zubek (1998) describe resilient younger women's appraisal of the experience of abortion as less stressful and had higher self-efficacy for coping. Personality attributes (high self-esteem, control and optimism) defined the resilient women. These women used reframing (problem-focused coping) and social support-seeking behaviors. The greater the woman's personal resilience, the lower their stress appraisals prior to abortion and the lower the stress appraisal, the more they used positive reframing to cope.

Rabkin, Remien, Katoff and Williams' (1993) conducted a survey of urban, gay men with AIDS. Like resilient children, the AIDS survivors had personal resources, intelligence, education, a wide range of interests and the ability to adapt to change. They had a positive outlook and could articulate goals for the future. Most of them had a confidant, and all had access to community resources, such as services and adequate housing.

Resilience and Social Support

The body of literature covering social support and resilience is vast, however, the majority of studies have focused on children. One study was found that investigated resilience and social support in adults and this, in addition to reviews and studies that address resilience and social support in children and adults, will be discussed. Overall, it

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appears that a person with a resilient personality is better able to access social support and one must have adequate social support to cope (Aroian & Norris, 2000; Benard, 1991; Dyer & McGuinness, 1996; Felton, 2000; Garmezy, 1991; Hawley & DeHaan, 1996, Jacelon, 1997; Masten, et al. 1988; Rak & Patterson, 1996; Wagnild & Young, 1990b, 1993).

Aroian and Norris (2000) included older women in their study (N = 450) of resilience and depression after immigrating to Israel. All instruments required translation into Russian and were administered in the subjects' homes by Russian immigrant data collectors. The instruments used were the Resilience Scale (Wagnild & Young, 1993), and the Demands of Immigration Scale (Aroian, Norris, Tran, & Schappler-Morris, 1998). Depression was measured with the Russian language version of the Symptom Checklist 90-R (SCL-90-R0) (Derogatis, 1992). Results indicated that social support by family and friends was related to lower levels of depression but there was no support for the hypothesis that resilience was a moderator of the demands of immigration. These findings do not support others' research where resilience is related to psychological outcomes. For example, resilient individuals would report lower demands of immigration in part because they are less likely to appraise immigration experiences as demanding or stressful (Aroian et al., 2000). Results indicated that the immigration experience is distressing for women regardless of personal coping resources, such as resilience (Aroian et al. 2000) and social support. Results may be affected by the fact the subjects were recent immigrants (less than 5 years), and had a low level of language proficiency (Aroian, 1990).

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Using secondary analysis of two studies, Liem, James, O'Toole and Boudewyn, (1997) studied (N = 687) adults with a history of childhood sexual abuse. Resilience was defined and measured as positive self-worth and absence of depression and found that depression and low-self worth are often the outcome of childhood sexual abuse (Liem, et al, 1997). If the adult had come through this experience successfully they would have positive self-worth and absence of depression. Instruments used included Life Experiences Survey (Boudewyn & Liem, 1995a; 1995b; Liem et al., 1997), Beck Depression Inventory (BDI) (Beck & Beck, 1972) and the Rosenberg Self-Esteem Scale (RSE) (Rosenberg, 1965). A subgroup of subjects (n = 249) additionally completed the Brief Symptom Inventory (BSI) (Derogatis & Melisaratos, 1983) and wrote stories to five cards selected for the Thematic Apperception Test (TAT-R) (McClelland, 1985). Results indicated that subjects from larger households with more siblings were more likely to be resilient. The importance of sibling support is key for making sense of these events. The authors indicated this offered protection against depression and low self esteem by a) providing increased support, b) distraction from the adverse events, and c) sharing family responsibilities and providing experiences that promote competence (Liem et al., 1997).

In a qualitative study of 28 multi-cultural women, Bachay and Cingel (1999) identified the importance of family support, religious affiliation, and ability to reframe crisis situations that reinforce resilient traits. The study is unique because it focuses on culturally diverse women. The results reinforce other research that speaks to the importance of support in the lives of the subjects.

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Resilience and Coping

One study was found measuring resilience and coping in older women. Wagnild and Young (1990a) studied elderly women adjusting to major loss. This study has been mentioned earlier and serves as guide for the current research project. Twenty-four Caucasian women between 67 and 92 were interviewed. Participants were identified by directors of senior citizen centers as having adjusted well after a major loss. The researchers identified the following themes emerging from the data: (a) equanimity - a balanced perspective of one's life experience; (b) perseverance - persistence in spite of adversity, and a willingness to continue to struggle; (c) self-reliance - a belief in oneself and capabilities; (d) meaningfulness - the realization that life has a purpose and the value of one's contributions and (e) existential aloneness - the realization that each person's life path is unique. These themes described how elderly women coped with loss of a child, spouse, sibling, or home.

Methodological Issues in Resilience

The majority of studies of resilience have focused on children and adolescents. Few studies have measured resilience in adults and fewer have studied older women. Also, there is debate about whether resilience is a personality trait or a process. Resilience has been studied as a personality trait in adults (Antoni & Goodkin, 1988; Rabkin, Ramien, Katoff, & Williams, 1993; Wagnild & Young, 1990b, 1993). The three studies of older people have used the Resilience Scale (Wagnild & Young, 1993) or questions derived from the Resilience Scale to answer the research questions. These are limited studies and, therefore, reliability is limited.

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Social Support

Social support has been identified as the family member's relationship to the community and each other to obtain emotional, esteem, and network support (Caplan, 1976). Families involved in recovering from cardiac events, including CABG, need a strong social network of family, friends, neighbors, and coworkers (McMurray, 1998). Kulik and Mahler (1993) indicate that higher levels of social support following CABG surgery significantly helped the individual and family to have a better emotional status. Dracup, Moser, Marsden, Taylor and Guzy (1991) found family and community support improved psychosocial recovery. Activities fostering social support may include building close relationships with people, or participating on a regular basis in planned activities conducted by others in a similar situation (Caplan, 1976; Glass, et al., 2000; Koopman, et al. 2001). Community-based social support is viewed as an important dimension and factor in resiliency. Studies have emphasized the importance of social support as a buffer against family crisis factors, a resiliency factor in recovery and as a mediator of family distress.

When social support was initially examined during the mid-1970s to early 1980s, the concept was used in concrete terms, referring to an interaction, person or relationship (Veiel & Baumann, 1992). Social support has been studied as both a main effect and a buffer effect on health. Studies of the main effect of social support have found that regardless of the level of stressors or rates of disease, stress responses increase as social support decreases (Dracup, et al, 1991; Knox, Siegmund, Weidner, Ellison, Adelman, & Paton, 1998; McMurray, 1998). The buffer effect studies of social support have shown

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social support to have no beneficial effect on health among persons with little stress (stress as stimuli) but the beneficial effects become increasingly apparent as stress increases.

Several authors have suggested that the manner in which social support is measured affects whether or not the buffering or main effect hypotheses are supported. It has been suggested that evidence for a buffering model is found when the social support measure assesses functions of support or perceived availability of interpersonal resources that help one to respond to stressful events. Three functions of support have been aid, affirmation support and affect support (House, 1981; Kahn & Antonucci, 1980; Knox, et al., 1998). Aid support describes an act of providing assistance with household chores, lending or donating money, running errands, or providing transportation, information, advice, or guidance. Affirmation support describes an interpersonal resource with a strong effect for counteracting self-esteem threats. Affect support is having someone available to talk to about problems (House, 1981; Knox, et al., 1998). Structural measures of social support are those that identify the existence of relationships. Social network measures are structural measures. Evidence for a main effect model is found when objective structural support is measured. A generalized beneficial effect of social support could occur because large social networks provide persons with regular positive experiences and a set of stable socially rewarding roles in the community. Integration in a social network may help to avoid negative experiences (Lubben & Gironda, 1998; Lugton, 1997; McCubbin, Patterson and Glynn 1982; Roberts, Dunkle, & Haug, 1994; Vrabec, 1997).

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Social Support and Older Adults

Social support is critical to the health and well being of older adults especially when faced with the illness of a spouse (Bowling, 1994). "Networks are the identified social relationships that surround a person, their characteristics and the individuals' perceptions of them" (Bowling, 1994, p. 1). Network size is dependent on socio-demographic as well as cultural and personality factors. Older people may have networks built over a lifetime and help is more accessible through telephone links and increased mobility that is accessible to most persons in the United States. The number of people in elderly networks has been reported to be, on average, between five and seven people (Wenger, 1987). Wenger reported from her longitudinal survey of 122 people aged 65 years and over, who were interviewed in 1979 and 1983, that three-quarters had a network size of five or more members.

A follow-up study at 2.5 and 3 years of over 600 people aged 85 and over at baseline was carried out by Bowling, Farquhar, Grundy and Formby (1992). The authors found that the network size remained unchanged in 42% of the sample. Decreases in network size have important implications for service provisions, especially in the elderly. Research on adults of all ages has linked larger network size to reduced mortality risk (Bowling, et al., 1992). Larger networks have the potential to offer more support, however, they create the potential for increased conflict (Dickerson, 1998) due to the pressures and responsibilities stemming from a larger number of relationships. Contact with relatives increases with age (Dickerson) and elderly people have networks which are

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composed mainly of relatives with some friends and neighbors with families providing most of the support during times of illness and crisis (Bowling, 1994).

Social support is influential for people of all ages but has been demonstrated to be especially important for older women (Hurdle, 2001; Vandervoort, 2000). Both authors indicated a critical link between social support and preventing a variety of health problems (Hurdle, 2001; Vandervoort, 2000). Additionally, there appears to be a link between social support, health maintenance and improved health in women (Glass, et al., 2000; Hurdle, 2001; Vandervoort, 2000).

Bowling and Grundy (1998) reviewed the literature on relationships between social networks and mortality among older people. Seventeen studies were reviewed from 1960 to 1994 and included data from greater than 46,000 older persons from America, Britain, Finland, Hong Kong, Sweden, and Japan. Despite inconsistencies related to control of extraneous lifestyle variables (e.g. cigarette smoking) fairly strong evidence appeared to exist for a relationship between social support, network structure and health status in older persons. In general, stronger social networks lead to better health outcomes. Bowling and Grundy (1998) also reported a difference between men and women. They concluded that social isolation is a better predictor of mortality in men and social activity is a better predictive factor of mortality in women (Bowling, et al., 1998).

Immune modulation has been linked with social support in older adults. Cytokine-induced natural killer cell activity in older adults has been studied by Esterling, Kiecolt - Glaser and Glaser (1996). Natural killer (NK) cell cytotoxicity is associated with chronic stress. The researchers investigated the impact of psychosocial modulation of the immune

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system in older adults by addressing the cellular and psychological mechanisms. The authors compared 28 current and former spousal caregivers of patients with Alzheimer's disease (AD) and 29 control subjects. They found higher E-NK cell responses to each cytokine were associated with heightened levels of positive emotional and tangible social support independent of levels of depression. Their preliminary results concurred with other studies regarding the role of social support in immune modulation (Esterling, Kiecolt -Glaser & Glaser, 1996).

In summary, social support in the form of a network is important. The network of friends, family, and community relationships has the potential to be a source of support during crisis and may play an important role in stabilizing the spouse during the CABG surgery and the long period of recovery. One must be cognizant that the ill husband may be a critical part of that network, which may place more burdens on the spouse.

Social Support and Stress

In a study by Koopman, et al. (2001) stress, coping, and social support were examined in the context of a recent diagnosis of primary breast cancer. Results of this longitudinal study (N=100) indicate that social support was viewed as a critical component of coping, however, there was great variation among the women in their actual social support group and types of social support sought. The most frequent groups providing social support were churches and spiritual support was viewed as the most important. However, women also reported the family unit was extremely important and found a great deal of instrumental, informational, and emotional support from them.

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Social Support and Cognitive Appraisal

Social support may also function by influencing appraisal of the stressfulness of a situation. Potentially stressful events could be assessed as less stressful if support affected interpretation of the stressor. Support may reduce the importance of the perception that a situation is stressful. In other words, support may intervene between the stressful event and a stress reaction by attenuating or preventing a stress appraisal response (Cohen & Wills, 1985; Ergh, Raapport, Coleman & Hanks, 2002; Schmitz, Schroeder & Schwarzer, 1998).

Few studies were identified which examined the relationship between social support and stress appraisals or social support in relation to a person's perception of the stressful event. One study examined predictors of family dysfunction and caregiver distress among 60 pairs of persons who sustained traumatic head injury and their caregivers. The study employed a hierarchical multiple regression analyses to evaluate data concerning the neuropsychological state of the patient, appraisal of the neurological deficit and perceived social support. Social support was responsible for 52% of the variance in family dysfunction and 39% in caregiver distress. Appraisal of the neurological deficit was linked with social support indirectly. There is evidence for the link between social support and stress responses. However, most of the empirical data available is in relation to social support and the physiological and self-concept components of the stress response.

In summary, the empirical information indicates that there is probably a negative relationship between social support and stress response, although this may be dependent

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on research design. The studies give some indication that the relationship may be of moderate strength. Unfortunately, the studies lack comparability, due to different designs and different conceptualizations of social support.

Social Support and Coping

The process by which supportive functions work to have an effect on health outcomes may vary from individual to individual. Supportive functions may facilitate different coping strategies, such as getting persons to focus on more positive aspects of the troubled situation (Pearlin & Schooler, 1978). Supportive functions may convince persons that their present coping abilities are adequate to respond to a particular situation. Cobb (1976) has proposed that social support plays a major role in the coping process by keeping the person's affect under control, thereby allowing the person to focus attention on the tasks necessary to deal with the objective situation. In summary, support may bolster one's perceived ability to cope with imposed demands.

In many situations, the provision of instrumental support (e.g., money, task assistance) may lessen the load of coping with the stressor or alter the nature of the stressor itself (such as when the stressor involves a loss of material resources). Information support (advice or information) can facilitate coping by encouraging forms of cognitive or behavioral coping which might increase stress resistance, redirect inappropriate coping activities and result in the ability to tolerate increased levels of stress (Koopman, et al. 2001). Appraisal support (feedback relevant to self-evaluation) may, like emotional support, result in enhanced self-esteem which can facilitate coping in a variety of ways (Ergh, Raapport, Coleman & Hanks, 2002)..

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Numerous other literature sources advance a theoretical relationship between social support and coping (Ergh, Raapport, Coleman & Hanks, 2002; Schmitz, Schroeder & Scharzer, 1998; Thoits, 1986). However, few investigators have examined the ways in which social support facilitates a person's ability to cope. One study discussed specific types of coping in realtion to a cancer diagnosis.

Zabalegui (1997) investigated perceived support, coping and psychological distress in a sample of 132 persons with advanced cancer. Data were collected from persons ranging in age from 33 to 83 years of age. Their cancers were breast (30%), ovarian (20%), lung (13%), colorectal (10%), and other (27%) cancers. Results indicated perceived social support interacted with behavioral escape-avoidance. High psychological distress occurred when advanced cancer patients had high levels of behavioral avoidance, especially when they perceived social support to be low. The coping strategies did not mediate the effect between perceived social support and psychological distress.

Methodological Issues in Social Support

Numerous authors have cited methodological issues in relation to the study of social support (Gilbar, 2002; Hupcey, 1998; Schmidt, Nachtigall, Wuethrich-Martone,& Strauss, 2002; Tower, Kasl & Darefsky, 2002). Some of the issues that have been identified are: lack of support and/or consensus of how social support should be defined and operationalized; and conclusions about social support have been based on correlational data collected at a single point in time. Correlational cross-sectional designs are vulnerable to important threats to their internal validity. Of the various threats to

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internal validity, two are most prominent in correlational research: spuriousness and reverse causation. An association between two variables is said to be spurious when it is produced by a third variable. Reverse causality occurs when the observed association is causal but the direction of causation is opposite from that hypothesized (Polit & Hungler, 1999). Another problem that has been identified is that most of the available research merely documents a relationship between social support and health outcome. The question of how or why social support influences health outcomes has received little attention (Wortman, 1984; Hupcey, 1998). Much of the social support research of the past has not been theory-driven, and thus the factors responsible for health have not been carefully noted. The basic mechanism through which social support operates needs better theoretical descriptions (Knox, Siegmund, Weidner, Ellison, Adelman & Paton, 1998).

Coping

There is a fair amount of empirical evidence supporting a relationship between coping behaviors and responses to stress (Folkman & Lazarus, 1985; Lazarus, 1966; Mikulincer & Florian, 1995; Scherer & Drumheller, 1993; Stone & Neale, 1984). Coping, as a process, has been discussed throughout this literature review. The following content will provide additional information to improve the perspective on coping.

Coping Strategies

Research indicates that spouses use varied coping strategies when facing critical illness in their partner and increased numbers of coping strategies are beneficial. Both problem-focused and emotion-focused coping have been associated with fewer stress responses. Coping repertoires include: active cognitive, active behavioral, and avoidance

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strategies. Increased stress responses were associated with avoidance coping and emotional discharge coping. Research focused on coping strategies in relation to one dimension of the stress response, the psychological stress response. Finally, in some studies, gender and socioeconomic status significantly influenced use of coping strategies.

Studies of coping from 1980 to 2002 revealed when the threat to self-esteem was high, subjects used more confrontive coping, more self-control, accepting responsibility, escape-avoidance and sought less social support (Ben-Zur, Rappaport, Ammar & Uretzky, 2000; Billings & Moos's, 1981; Folkman, Lazarus, Dunkel-Schetter, et al 1986; Sanders-Dewey, Mullins, & Chaney, 2001). When a loved one's well-being was at stake, subjects used more confrontive coping, more escape-avoidance, less planful problem solving, and less distancing than when a loved one's well-being was not at stake (Billings & Moos's, 1981; Folkman, Lazarus, Dunkel-Schetter, et al 1986; Sanders-Dewey, Mullins, & Chaney, 2001).

Coping also varied with secondary appraisal, or perceived options for coping. Subjects accepted more responsibility and used more confrontive coping, planful problem solving, and positive reappraisal in encounters appraised as changeable, whereas subjects used more distancing and escape-avoidance in encounters appraised as having to be accepted (Ben-Zur, Rappaport, Ammar & Uretzky, 2000). Ben-Zur et al, (2000) reported coping strategies for a sample of ($\underline{N}$ = 171) post CABG patients. Those who reported low postsurgery functional capacity also reported more emotion-focused coping strategies.

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Reports of high personal distress were significantly correlated ($p < .0001$) with emotion focused coping and pessimism.

Before concluding this section of the literature review on coping, it is important to note other information related to coping. First, coping may be a source of stress. McCubbin, Thompson and McCubbin (1996) cite three ways in which coping can be an additional hardship: a) indirect damage to the family system, e.g., in order to cope the family member may choose to make a change in the use of the family resources which may place the family in a disadvantageous position; b) direct harm to the family system, e.g., family members may choose to abuse alcohol as an effort at personal coping which also may bring additional hardships; and c) by interfering with additional adaptive behaviors.

Other research has linked general or personal resources with coping efforts. Parkes (1984) evaluated the relationship between locus of control and three kinds of coping: general coping, direct coping and suppression. Using factor analysis of data of female nursing students, the author discovered that the coping of subjects classified as having an internal locus of control was sensitive to appraisals of coping options. In other words, they used less coping resources overall in situations that were clearly changeable or clearly not changeable than did those with an external locus of control. In situations where the coping options were ambiguous, there was no difference between the two groups. Those subjects with internal locus of control also used high levels of direct coping and low levels of suppression in situations perceived as changeable, whereas those with an external locus of control reported the opposite pattern. Internal locus of

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control is closely related to the resilient personality and external locus of control is related to low levels of resiliency (Jew, Green & Kroger, 1999).

Methodological Issues in Coping

Several authors cite methodological issues relevant to coping research. First, coping outcomes can be measured on three different levels: physiological, psychological and social. Salient information about a specific coping strategy may be lost if only one of these levels is assessed since coping may result in positive outcomes on one level and negative outcomes on another (Brailey, 1984; Folkman & Lazarus, 1985; Panzarine, 1985).

Another issue to be considered is the time at which coping effectiveness should be measured. It is likely that a particular coping strategy with satisfactory short-term results may have very different effects on a long-term basis (Panzarine, 1985). Conclusion about effectiveness may depend entirely on the time frame used for evaluation. Long term effects of coping are unknown with cross-sectional designs. Cross-sectional designs also prevent any determination of causality between variables. In addition, without a longitudinal design, identification of patterns of coping strategies could not be determined.

Evaluation of coping efficacy seems to be another contention although there is some consensus that coping should be judged on the basis of outcome criteria (Brailey, 1984). Hamburg and Adams (1967) highlight the following four standards in judging coping effectiveness: (a) how well the personal distress is relieved; (b) how well the sense of personal worth is maintained; (c) whether the coping strategy allows for

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rewarding continuity of interpersonal relationships; and (d) how well the requirements of the stressful tasks are met. Pearlin and Schooler (1982) agree that the effectiveness of coping behavior should be judged on outcome criteria. Lazarus and associates state that coping behavior can be evaluated along two dimensions: a) the effectiveness of which a task is accomplished and b) the cost of this effectiveness to the individual (Brailey, 1984).

Furthermore, conclusions about the effectiveness of coping may vary depending on the choice of outcome criteria (Mennaghan, 1983, p. 160). For example, Stern and Pascale (1979) found that heart attack patients who denied the seriousness of their illness were overtly less anxious, less depressed, and more likely to resume their role responsibilities, but their wives were more prone to depression. Another choice of outcome criteria may have given different results.

For all levels of coping it is important to ask whether the impact of coping may vary systematically either at different levels of situational stressfulness or for people in different situational contexts. Such interaction might take a variety of forms (Mennaghan, 1983). A given coping strategy may have a great impact in low stress situations but become increasingly impotent as troubles mount. Additionally, coping efforts could be maximally effective only at some moderate levels of stress.

Summary of Literature Review

The stress and coping responses can be categorized according to the theoretical constructs of Lazarus and Folkman (1984) and Wagnild and Young (1990a). Research related to accumulated life events supports the concept that persons do not respond to a

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single stressor event alone but frequently respond to multiple life changes simultaneously. Variability in coping is at least partially a function of the cognitive appraisal of stressful encounters and what the individual views as options for coping. The appraisal of stressors and individual's coping responses seem to be an important variable in the formula.

The literature also supports resilience as a personality construct that allows an individual to effectively adapt and restore equilibrium in their lives and thus avoid the deleterious effects of stress. One key component of the resilient person is the ability to use personal resources and seek social support effectively to adapt to change. The resilient person maintains a balanced perspective of their experience with stress. They view themselves as individuals with their own unique path and persist on that path despite adversity. Additional qualities of the resilient personality reflect they believe they can cope effectively with the stressful situation and ultimately identify some meaning in the experience. Non-resilient persons are unable to identify or utilize social support resources. Additionally, they feel victimized and powerless, and may be overwhelmed both psychologically and physically by the stressful situation.

This chapter reviewed literature and discussed methodological issues related to the study variables. In chapter three, the design of the study, sample, and data collection methods and analysis will be presented. The literature reflects that spouses exhibit a wide-range of coping responses to a stressful event.

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CHAPTER III

RESEARCH DESIGN AND METHODS

The purpose of this study was to identify the effects of demographic variables, stress, cognitive appraisal, resilience, and social support on coping of older women whose spouses had undergone CABG surgery within the previous 3 months. This chapter describes the design of the study, setting, sample, instruments, data collection procedures, and data analysis procedures.

Design

A descriptive, correlational survey design was used to answer the research questions. The aim of descriptive correlational design is to describe the relationship among variables rather than infer cause-and-effect relationships. Descriptive correlational designs allow for the collection of a large amount of data about a problem area.

Sample

The target population for this study was all females 55 years of age or older whose spouses had CABG surgery with the previous 3 months. The sample for this study was a convenience sample of female spouses who met the eligibility criteria and whose spouse was post-operative CABG surgery. Inclusion criteria guiding selection of participants for the sample were: (a) women: (b) whose spouse had undergone coronary artery bypass grafting surgery (CABG) within the previous 3 months; (c) who were 55 years of age or older; (d) who were able to speak, read, and understand English; (e) who were willing to participate in the study as demonstrated by returning their completed questionnaires.

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The sample was obtained from all female spouses in the cardiovascular surgical offices, cardiac PREP departments (pre-surgical interview and information services), nursing units housing CABG patients prior to discharge from the hospital and cardiac rehabilitation programs of two large Midwestern communities. The study sample consisted of 96 women who met the criteria for inclusion in the study.

Setting

The primary setting for the study was five hospitals and three cardiothoracic surgical offices located within two large Midwestern suburban areas. Each of the five hospitals has between 120 and 250 beds, and has annual combined open-heart surgeries ranging from 200-350 cases. During the study period (8/2001 - 8/2002) there were 523 CABG surgeries of patients (both men and women) 55 years of age and older in the study hospitals. Three corporations manage the five hospitals and three groups of cardiac surgeons performed the open-heart surgeries.

Measures

Six instruments were used in this study. All instruments were selected after an extensive review of the literature. The chosen instruments were congruent with the conceptual definitions of the study and would yield high-quality data. Several of the instruments were normed with older people and seemed appropriate for the study sample. A demographic instrument (Appendix A) was developed by the investigator to obtain demographic data of the participants. Stress was measured by the Family Inventory of Life Events and Changes (1983) (McCubbin, Patterson, & Wilson, 1981) (Appendix B). Cognitive appraisal was measured by the Spouse Perception Scale (SPS) (Palmer, 1965;

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Silva, 1976) (Appendix C). Resilience was measured by the Resilience Scale (RS) (Wagnild & Young, 1990a) (Appendix D). Social support was measured by the Social Support Index (SSI) (McCubbin, Patterson & Glynn, 1982) (Appendix E). Coping was measured by the Ways of Coping Questionnaire (WCQ) (Folkman & Lazarus, 1985) (Appendix F).

Demographic Data Collection Instrument

An instrument was developed from the relevant literature to collect demographic data regarding: the participants' age, ethnicity, religious activities, educational level, number of years married, number and location of children, employment status, family income, comprehensive health insurance, and financial strain. In addition, participants were asked to report whether the spouse had a previous myocardial infarction or previous open-heart surgery, date of current CABG, cardiac rehabilitation phase, participation in pre-CABG class, and the participant's health concerns during the past twelve months.

A pilot study was performed to determine if the instrument packets would be returned and to identify any areas of concern. The pilot study consisted of distribution of five survey packets within one clinical site later used in the present study. The pilot results were analyzed and those data were included in the total sample because the only change in the procedure involved a single item within the demographic instrument. During the pilot study one participant wrote that her ethnicity was of "German heritage" and did not mark the instrument. To avoid similar confusion, the ethnicity wording was changed to "Caucasian" from "European-American." An adapted version of the instrument was used for all other subjects in the present study.

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Family Inventory of Life Events and Changes (FILE).

The FILE (McCubbin, Patterson, & Wilson, 1983) is a 71–item instrument (Appendix B) designed to assess both normative and situational life change stresses a family might have experienced in the past year. Item number 22 was omitted in this study because it reflected unwanted or difficult pregnancy of the spouse and it was inappropriate in the study sample. Therefore, the instrument contained 70 items. The responses were rated as Yes (it happened during the past year) or No. The Yes scores were assigned a number 1 and summed to obtain a total score. Higher scores were indicative of increased life change stress.

Internal consistency reliability of the FILE total score for two samples of adults with spouses undergoing CABG was demonstrated by coefficient alphas of .86 (N = 86) and .82 (N = 49) (Artinian, 1991; Artinian & Hayes, 1992). Validity assessments were made by correlating the scales from FILE with a measure of family functioning, and the Family Environment Scales (FES) (Moos, 1976). McCubbin and Patterson (1987) hypothesized that a pile-up of life changes would be negatively correlated with desirable dimensions of the family environment and positively correlated with undesirable characteristics of the family environment. As predicted, total recent life changes correlated negatively with the FES dimensions of cohesion (- .24), independence (- .16) and organization (- .14), and correlated positively with conflict (+. 23) (McCubbin, Thompson & McCubbin, 1996, pp.109 –110). In the present study, reliability was .78 for the total score on the FILE.

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Spouse Perception Scale

Cognitive appraisal was measured by the Spouse Perception Scale (SPS) (Palmer, 1965; Appendix C). The SPS is a 46 item, self-report questionnaire, and it was used to measure the spouse's appraisal of the impact of their husbands' CABG surgery. Responses are on a 5-point Likert scale with choices of 5 (strongly agree), 4 (agree), 3 (undecided), 2 (disagree) and 1 (strongly disagree). Possible scores range from 46 to 230. According to Palmer (1965) and (Silva (1976), a score of 184 to 229 indicates "favorable" appraisal of the patients' surgical experience. A score of 46 to 91 represents "strongly unfavorable" appraisal, indicating that the spouse appraised the surgery as more stressful. Therefore, higher scores are indicative of more positive appraisal of the surgical experience.

The instrument was originally adapted from Palmer's Perception Scale (1965), used in her doctoral dissertation research. The tool was revised by Silva (1976) by changing pronouns from "I" (the patient) to "my spouse" designating the husband or wife scheduled for surgery. Content validity was established through Palmer's method (Palmer, 1965) of developing the instrument.

The instrument was further modified (M. Silva, personal communication, July 7, 2001) for the present study to reflect past tense (where appropriate), reflecting that the spouse has undergone the surgery already. For example, in question 24, the words were altered from "My spouse is receiving the best possible care," to "My spouse has received the best possible care." Additionally the words 'his/her' were changed to his to reflect the study population.

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The SPS was pilot tested by Silva with 44 married students (N = 19 women and 25 men) enrolled in four different classes of a large southeastern university (1976). The split-half (odd-even) coefficient of reliability obtained using the Spearman-Brown Prophecy Formula was .90 for the complete instrument. Reliability of the SPS was also calculated on spouses (N = 36) (24 pretested and 12 posttested control spouses; 14 females and 22 males). Within Silva's 1976 sample, the split-half coefficient of reliability obtained by the Spearman-Brown Prophecy Formula was .89 for the complete test. The reliability estimate for the total scale in the present study was .94.

The Resilience Scale

Resilience was measured by the Resilience Scale (RS) (Wagnild & Young, 1993; Appendix D). The RS is a 25-item scale and consists of all positively worded responses that measure general characteristics of resilience. Items are rated on a 7- point Likert scale ranging from 1, "strongly disagree" to 7, "strongly agree." Possible scores range from 25 to 175. Higher scores indicate a high degree of resilience. Wagnild and Young identified but did not separately measure the following themes emerging from the RS: (a) equanimity – a balanced perspective of one's life experience; (b) perseverance - persistence in spite of adversity, and a willingness to continue to struggle; (c) self-reliance – a belief in oneself and capabilities; (d) meaningfulness – the realization that life has a purpose and the value of one's contributions and (e) existential aloneness – the realization that each person's life path is unique.

Wagnild and Young (1988) pilot tested the instrument on 39 undergraduate nursing students and after refinement a mail survey was conducted. Questionnaires were

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mailed to 1500 older adults in the Pacific Northwest of which 810 (54%) were returned. Scores from the RS were compared with well-established instruments including the Life Satisfaction Index (LSI), Philadelphia Geriatric Center Morale Scale (PGCMS), and the Beck Depression Inventory (BDI). The RS correlating with these scales demonstrated validity. Reliability of the RS was reported to be high, with coefficient alpha of 0.91, and inter-item correlations ranging from .37 to .75 with the majority falling between .50 and .70. In the present study, the reliability of the total scale was .94.

Social Support

Social support was measured by the Social Support Index (SSI) (McCubbin, Patterson, & Glynn, 1982; Appendix E). The SSI is a 17-item, self-report instrument that uses a 5-point Likert scale ranging from 0 (Strongly Disagree) to 4 (Strongly Agree). The SSI measures the degree to which families are integrated into the community, view the community as a source of support, and feel that the community can provide emotional, esteem and network support.

Scoring involves summing the respondent's ratings (0 = Strongly Disagree, 1 = Disagree, 2 = Not Sure, 3 = Agree, 4 = Strongly Agree) for all 17 items, with 6 of the items (7, 9, 10, 13, 14, and 17) reverse-scored. Possible scores range from 0 – 68, with higher scores indicating higher levels of social support (McCubbin, et al., 1982; McCubbin, Thompson, McCubbin, 1996). Lavee, McCubbin, & Patterson (1985) reported internal consistency reliability of .82 from their study of 1000 families in Western Europe faced with impending war, in which social support was positively correlated with the family's sense of fit within the community and was significantly

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related to successful family adaptation in the foreign environment (Lavee, McCubbin, & Patterson, 1985). Internal consistency reliability was .86 in the present study.

The Ways of Coping Questionnaire

Coping was measured by the Ways of Coping Questionnaire (WCQ) (Folkman & Lazarus, 1988; Appendix F). This is a 66-item, self-report questionnaire, which examines eight coping strategies. Participants were asked to respond to the questionnaire by thinking of their spouse's CABG surgery and how they coped with the events during and after the surgery. The WCQ uses a 4-point Likert scale ranging from 0 (Does not apply or not used) to 3 (Used a great deal) to describe the coping strategies used by the subject for a particular situation. There are eight scales, which include confrontive coping, distancing, self-controlling, seeking social support, accepting responsibility, escape-avoidance, planful problem solving, and positive reappraisal coping. Higher raw scores in each of the scales indicate that the person more often used the behaviors described by that scale in coping with the stressful event. Scale lengths vary from 4 to 8 items, therefore maximum raw scores, obtained by summing scale items, vary from 12 to 24 (Folkman & Lazarus, 1988). A total score was calculated in the current study with a possible range of 0-198.

The WCQ is based on the definition of coping as a "cognitive and behavioral effort to manage specific external and/or internal demands appraised as taxing or exceeding the resources of the individual" (Folkman & Lazarus, 1985, p.152). Coping is considered a process and, as such, is characterized by "dynamics and changes that are a function of continuous appraisals and reappraisal of the shifting person-environment

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relationship" (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986, p. 572). To demonstrate factorial validity, two data sets were factor analyzed (one from community-residing married couples coping with activities of daily living and one from college students coping with an examination) and were used as the basis for the coping scales. The items were analyzed using alpha and principal factor with oblique rotation. A conclusive principal factor analysis was performed on 750 observations with the final 50 items to provide an estimate of each item's factor loading. This analysis yielded eight factors, which are individual scales within the WCQ: confrontive coping, distancing, self-controlling, seeking social support, accepting responsibility, escape-avoidance, planful problem solving and positive reappraisal. Internal consistency reliability in a sample of older, middle-class community residents (Folkman, Lazarus, Primley, & Novacek, 1987) was demonstrated via coefficient alphas of .61 to .79 for raw scores on the eight coping scales. Other reliabilities including recent nursing studies are presented in Table 3.1.

Folkman and Lazarus (1988) do not provide any reliability, validity or interpretive data for WCQ total score and only one nursing study included calculation of a total score for the WCQ. The best subscale reliabilities in previous nursing research ranged from .71 to .91, while the weakest subscale reliabilities ranged from .21 to .77 for the WCQ. Santavirta, Kettunen and Solovieva (2001) excluded WCQ subscales with reliabilities of .40 or lower.

Folkman (2002) has pointed out that coping subscales will have lower internal consistency reliabilities.

> Unfortunately it is difficult to achieve high levels of internal consistency with coping scales because of the nature of coping. If a specific coping strategy, e.g.,

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> turning to another task to get ones mind off the problem, is successful the person does not have to turn to other strategies within that category. The one strategy worked, and therefore there is no need to do more. This quality lowers the likelihood that an individual will check multiple strategies within a given category, thereby lowering the internal consistency of the measure of that category. This can be a problem because the coefficient that describes the internal consistency puts a ceiling on the strength of the correlation that measures can attain with any variable (Folkman, 2002, p. 2).

Evidence of construct validity was demonstrated by results of studies consistent with the stress and coping theoretical framework: (1) coping consists of both problem-focused and emotion-focused strategies, and (2) coping is a process (Folkman & Lazarus, 1988). In the present sample, the eight coping scale raw score reliabilities were all similar to or above the original reliabilities with the exception of escape-avoidance, for which the reliability was .49, in contrast to the published value of .72.

Procedures for Data Collection

The survey method has several advantages. Surveys provide for anonymity for research subjects, allowing them to provide more socially unacceptable responses, and preventing possible interviewer bias (Polit & Hungler, 1999). Questionnaires were distributed to the ten clinical sites including pre-surgical prep departments (PREP, PREPARE or PACE), cardiac surgeon offices, cardiac rehabilitation departments, and the intensive care and post surgical nursing units. A total of 106 surveys were distributed to potential study participants.

The staff associated with each hospital was trained by the researcher to distribute questionnaires to women who met the selection criteria. The staff (RN, LPN, or exercise physiologist) were instructed to ask if the woman was 55 years of age or older and would be willing to participate in a mailed survey. If the woman agreed to participate, the staff

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Table 3.1

Ways of Coping Reliabilities

Study	Total Score	Subscale Reliability Ranges	N	Sample Characteristics
King , R. et al. (2001)	--	.50 - .72	136	Stroke survivor support persons
Azar, R., & Solomon, C. (2001)	.90[1]	.77 - .91	60	Parents of children with diabetes mellitus (50% female)
Santavirta, N., Kettunen, S., & Solovieva, S. (2001).	--	.21 - .71[2]	57	Spouses of AMI patients (50% female)
Wineman, N., Durand, E., & McCulloch, B. (1994)	--	.61 - .79	690	Multiple sclerosis or spinal cord injured (55% female)
Mischel, M., & Sorenson, D. (1993)	--	.49 - .79	231	GYN cancer (100% female)

1 Included additional 16 non-scored items to compute total score.
2 Retained subscales for analysis that had reliabilities $\geq$ or = to .42.

member was instructed to hand her a survey packet containing a letter describing the rights of study participants, risks and benefits of participating, anticipated time to complete the survey (50 minutes), and the right to withdraw at any time (Appendix G). The survey packet also contained the research instruments, a stamped, self-addressed return envelope and an inexpensive ballpoint pen. In the introductory letter, subjects were instructed not to put their name on the survey. The subject was enrolled in the study

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when the researcher received the completed mailed survey. The researcher contacted the ten clinical units weekly to be certain the staff had enough packets to distribute and to answer any questions that might have arisen. The sites were encouraged to contact the researcher by telephone at any point.

Data obtained from the study were kept in a locked file cabinet in a locked office. A report of general study results was shared with the cardiovascular surgical offices, hospitals, and cardiac rehabilitation programs. Participants were offered feedback after the study was completed, to be obtained via a typed newsletter summarizing the results of the study and placed at each site used in data collection for all interested persons to pick up. The newsletter let respondents know that their efforts were appreciated and that the researcher is committed to providing information to women regarding stress and coping during and after the CABG surgery of their spouses.

The cardiovascular surgical offices, hospitals, and their surgical pre-teaching and rehabilitation programs will benefit from evidence-based data regarding stress and coping of older women whose spouses have undergone CABG surgery. Therefore, future women whose spouses undergo CABG surgery may also benefit from the information obtained from this study.

Several methods were used in an effort to increase the response rate of this study (Dillman, 1978):

1. Close contact with clinical sites, which included discussing the importance of this research to each distribution site, meeting with leaders in person, and conducting weekly telephone calls and weekly face-to-face contacts with the sites.

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2. Special consideration of the aesthetics of the survey packet, which included use of colored paper, professional mailing labels, and clear instructions, bolding important words, typing all materials in at least a 14 font and using large self-addressed, postage paid envelopes for the questionnaires to lie flat in.

3. Clear communication with participants, which included a two page introductory letter describing the study and its importance, discussing confidentiality, indicating that participation was voluntary, describing what the participants needed to do and how much time it would take, emphasizing the importance to women in the future. Each scale within the packet had an encouraging statement at the end emphasizing that the participant had done well and to continue when able (Dillman, 1978).

4. Personalization of materials, which included the dating of all letters and a personal signature of the researcher (Dillman, 1978).

5. Nonmonetary incentives, which included an inexpensive pen in each packet for ease of survey completion.

Protection of Human Subjects and Ethical Considerations

Permission to conduct the study was obtained from the Institutional Review Board for the Protection of Human Subjects at the University of Wisconsin-Milwaukee (Appendix H) and the three research review committees of participating institutions, which consisted of the five hospitals, owned by three corporations.

Subjects were informed of their right to participate, their right to withdraw from the study without penalty, and the confidentiality and anonymity of responses. Subjects' identities remained anonymous to the researcher; all data collected were given a code

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number and could not be linked by the researcher to the individual to safeguard the identity of the subject. There were no anticipated risks or additional costs associated with participation in this study. The surveys were returned to the researcher in a self-addressed stamped envelope. The approved study procedure included data summaries to be shared with the agencies after the study was completed in several formats. The newsletter for study participants was written in lay terms and placed in the cardiovascular surgical offices and cardiac rehabilitation offices. This document had been proposed to describe the study purpose, sample, and results in a meaningful way for the individual participants, and to provide the researcher's name, telephone number, address, and e-mail address. Subjects were invited to contact the researcher if they are interested in participating in further research. Inservice presentations have been offered in the participating agencies to disseminate the results and answer questions regarding the study and to provide the researcher with ideas for future studies.

Data Analysis

Questionnaires were coded and data were entered into SPSS-PC for Windows, version 11.0 (SPSS, Inc., 2002). The data file included responses to all individual items; total scores were calculated from individual item responses and subscale scores were calculated on the WCQ. All scores were computed and all data were analyzed using SPSS 11.0. Data were analyzed using both descriptive and inferential statistics. Appropriate analyses were conducted for specific research questions as described below. Ambiguous responses were recorded as accurately as possible or omitted. Variable relationships were analyzed using Pearson product-moment correlation coefficients, with

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a two-tailed significance level set at $p < .05$. Regression analyses were conducted via a backward multiple regression technique (SPSS, Inc., 2002). All variables were in the initial equation, subsequently all those without significant contribution to the predicted variance were dropped in a stepwise fashion.

Analysis of Research Questions

1. What is the relationship between stress and coping of older women whose spouses have undergone CABG? The relationship between stress and coping was analyzed via correlation of stress (FILE) and ways of coping (WCQ total and raw subscales).

2. What is the relationship between cognitive appraisal and coping of older women whose spouses have undergone CABG? The relationship between cognitive appraisal and coping was analyzed via correlations of spouse perception/ appraisal (SPS) and ways of coping (WCQ total and raw subscales).

3. What is the relationship between resilience and coping of older women whose spouses have undergone CABG? The relationship between resilience and coping was analyzed via correlations of resilience (RS) and ways of coping (WCQ total and raw subscales).

4. What is the relationship between social support and coping of older female spouses of CABG patients? The relationship between social support and coping was analyzed via correlations of social support (SSI) and ways of coping (WCQ total and raw subscales).

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5. What are the effects of selected demographic variables, stress, cognitive appraisal, resilience, and social support on coping of older women whose spouses have undergone CABG? Multiple regression analysis was used to identify the combined effects on coping (WCQ total and raw subscales) of stress (FILE), cognitive appraisal (SPS), resilience (RS), and social support (SSI). The multiple regression coefficient $\underline{R}$ was examined with statistical significance set at $\underline{p} < .05$. Simple linear analysis was used to estimate the effect of each independent variable on the dependent variable of coping (Polit, 1996).

Summary of Methods

The study investigated stress, cognitive appraisal, resilience, and social support of older women whose spouses have undergone CABG surgery within the previous 3 months. A descriptive, correlational survey design was used to examine the research questions. The instruments have demonstrated acceptable levels of validity and reliability. Descriptive and inferential statistics were used to examine the data and correlational methods evaluated relationships between the independent variables and the dependent variable.

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CHAPTER IV

FINDINGS

A descriptive profile of the demographic data will be presented, followed by descriptive statistics for the instruments used in this study. The research questions, which concerned relationships among the study variables, will be addressed via correlations, and multiple regression analyses. A total of 96 usable surveys, out of 106 distributed, were completed and returned, yielding a 91% response rate. There is no data on those who did not return their surveys due to the anonymous nature of the study. An original power analysis calculation determined a sample size of 65 would be sufficient to detect a Pearson correlation of .35 (two tailed alpha of < .05) with a power of .80 (Hulley & Cummings, 1988; Polit, 1996). With the sample size of 96, the study has a power of .81 to detect a statistically significant (two tailed alpha of < .05) result for correlations as small as .28.

Demographic Data

The 96 female participants in this study were mostly Caucasian (91%), with an age range of 55 – 81 years ($\underline{M}$ = 65.78, $\underline{SD}$ = 7.18). Participants were married for between 1 and 63 years with the majority of participants married between 33 and 55 years (72%), with a mean of 40.4 years. The majority of the sample had children (96%), with most (83%) having at least one child living nearby. Most of the participants (67%) were unemployed with 32% of the participants reporting a household income of $10,000 – $29,999 annually. The poverty level for a two person household is $11, 859 annually (U.S. Census Bureau, 2001). In the current sample, 4.2% were clearly below the poverty

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level with a household income of less than $10, 000. In addition, an unknown percentage of the 12 women indicating income between $10,000 - $19, 999 may have fallen below the poverty level. The modal income range was $20, 000 – $29,000 annually. Despite the majority of participants reporting having comprehensive health insurance (96%), slightly over one-third (35%) reported that the CABG surgery had caused a financial strain on the household. The participants most frequently reported participation in religious activity as weekly (57%), with 19% reporting daily religious activity. Most of the participants (96%) had completed high school, with less than one-quarter (23%) having some level of college education. Four participants reported completing less than the 12^{th} grade, eight participants completed undergraduate studies, and three participants completed graduate degrees. The mean length of time between the spouse's CABG surgery and completion of the survey was 39 days, with a range from 1 – 90 days and a median of 28 days. A quarter of the participants reported their spouse had a previous myocardial infarction and 10% reported their spouse had prior CABG surgery. Better than half (51%) reported no pre-surgical preparatory class before the CABG surgery. Slightly more than one-third (37%) of the participants completed the item asking what cardiac rehabilitation phase the spouse was currently in. Of the participants completing this item, responses varied from words such as "home" written along the side of the form to numbers such as "2." This item was not included in further analysis. The participants themselves reported a range of 0 - 7 illnesses in the past twelve months with 29% reporting no illnesses. There was no significant correlation between number of illnesses in the past 12 months and increasing age ($\underline{r} = .05$; $\underline{p} > .6$). The most frequently occurring illnesses were hypertension (41%)

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and arthritis (35%). Smaller numbers of participants reported the presence of ulcers (4%), asthma (5%), dizziness (6%), severe back pain (8%), bronchitis (8%), heart trouble (9%) and diabetes mellitus (9%). No more than 3% of participants reported the following chronic illnesses: cancer (3%), liver disease (2%), kidney disease (1.0%) and stroke (1.0%). No participants reported the presence of anemia or tuberculosis. Table 4.1 summarizes these results.

Table 4.1

Selected Demographic Data Describing Sample

Variable	Ranges	n	Percent
Age in years	55-63	46	47.9%
$\underline{x}$ = 65.8	64-71	25	26.4%
$\underline{SD}$ = 7.18	72-81	25	26.4%
Income (thousands/year)	<$10,000	4	4.2%
	$10,000 - $19,999	12	12.5%
	$20,000 - $29,999	31	32.3%
	$30,000 - $39,999	12	12.5%
	$40,000 - $49,999	14	14.6%
	$50,000 - $59,999	8	8.3%
	$60,000 - $69,999	4	4.2%
	$70,000 - $79,999	4	4.2%
	$80,000 or more	7	7.3%
Number of illnesses reported by wife in past 12 months	None	28	29.2%
	1-2	55	57.3%
	3-7	13	13.5%

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Participants' Responses on Individual Study Variables

The formal study instruments used in this study included the Family Inventory of Life Events and Changes (FILE; McCubbin, Patterson & Wilson, 1983), the Spouse Perception Scale (SPS; Silva, 1976), the Resilience Scale (RS; Wagnild & Young, 1987), the Social Support Index (SSI; McCubbin, Patterson & Glynn, 1982), and the Ways of Coping Questionnaire (WCQ; Folkman & Lazarus, 1985). Descriptive statistics for all instruments are summarized in Table 4.2, including ranges, means, standard deviations, and internal consistency reliability estimates. Total scores and/or subscales demonstrated adequate internal consistency estimates, consistent with reliabilities in the literature with the exception of the escape-avoidance subscale on the WCQ. WCQ Reliabilities are discussed further in the section pertaining to WCQ results.

Family Inventory of Life Events (FILE)

The FILE measures stress via a total score that is the number of life events experienced by the participant within the previous 12 months. Total FILE score reliability was .78, somewhat higher than the .72 reported previously (McCubbin, Thompson, & McCubbin, 1996). The FILE lists 70 stressful events that may have happened in the last 12 months. The mean FILE total score for the present study was 5.41, with a standard deviation of 4.58. The items rated most highly on the FILE are listed in Table 4.3.

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Table 4.2

Summary of Study Instruments

Scale		Number of Items	Potential Range	Actual Range	Mean	SD	Cronbach's Alpha
FILE		70	0 – 70	0 – 20	5.40	4.57	.78
SPS		46	46 – 230	122 – 229	178.90	21.31	.94
RS		25	25 – 175	54 – 175	139.36	20.73	.94
SSI		17	17 – 85	27 – 68	51.22	8.41	.86
WCQ (total score)		66	0-198	9-128	61.15	26.32	.94
WCQ Subscales							
Confrontive	Sub 1	6	0 – 18	0 – 14	2.89	2.68	.69
Distancing	Sub 2	6	0 – 18	0 – 13	4.44	2.74	.62
Self-controlled	Sub 3	7	0 – 21	0 – 11	7.17	4.13	.70
Seeking social support	Sub 4	6	0 – 18	0 – 15	7.15	3.46	.67
Accepting responsibility	Sub 5	4	0 – 12	0 – 9	1.30	2.11	.72
Escape-avoidance	Sub 6	8	0 – 24	0 – 11	3.68	2.79	.49
Planful problem solving	Sub 7	6	0 – 18	1 – 16	7.13	3.62	.65
Positive reappraisal	Sub 8	7	0 – 21	1 – 21	9.42	4.16	.70

Table 4.3

Most Frequently Occurring Life Events

Life Event Item (FILE)	Rate of Occurrence in Past 12 Months
Parent/spouse became seriously ill or injured.	44%
A member purchased a car or other major item.	38%
Change in agriculture market, stock market, or land values, which hurts family investments or income.	33%
Change in conditions (economic, political, weather), which hurts the family investments.	28%
Close relative or friend of the family became seriously ill.	28%
Increased strain on family "money" for medical/dental expenses.	26%
Increase in number of tasks or chores, which don't get done.	24%
A member stopped working for extended period.	21%
Increased difficulty with sexual relationship with spouse.	20%
Death of husband's or wife's parent or close relative.	17%
Close friend of the family died.	16%

These items are listed from high to low and are > 1 SD above the mean for all items.

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Spouse Perception Scale (SPS)

The SPS measures spouses' appraisal of the impact of their husbands' CABG surgery. The instrument had been previously constructed for a dissertation and has not been widely utilized. It was modified for use in the present study to reflect a CABG surgery that had already occurred and a male spouse who underwent the surgery.

The mean SPS score was 178.91 with a standard deviation of 21.31. The actual range observed (122 - 229) was narrower than the potential range (46 – 230). Individual means for the 46 items, each rated 1-5, ranged from 2.37 – 4.59. The mean for all items across all subjects in this sample was 3.89 with a SD of .46. Total score means are not available from prior uses of the instrument. The observed reliability of .94 is comparable to the value of .89 observed by Silva (1976).

Those aspects of the surgical experience with the most positive appraisals included items at least one standard deviation above the mean, and are listed in Table 4.4. In general, the 10 items that were ranked the most highly included belief in God (one item), confidence in the healthcare system (six items) and family strengths and support (three items). Likewise, those aspects of the surgical experience with the most negative appraisals included items one standard deviation below the mean, listed in Table 4.5. In general, the eight items that were ranked the lowest and had most negative appraisals included pain control (two items), presence of a surgical incision (one item), psychological stress (four items), and length of recovery time (one item).

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Table 4.4

Items Most Positively Appraised on the SPS

Item	Mean Rating
With God's help this operation is going to restore my spouse's health	4.59
Surgery is much safer today than it was before.	4.56
My spouse received the best possible care.	4.52
The staff helps make people comfortable when they have pain.	4.50
Surgery is necessary to my spouse's future health and well-being.	4.48
I had confidence in the skill of the hospital staff.	4.46
A scar from surgery does not matter.	4.41
The immediate family knows how to manage while my spouse is recovering.	4.40
The immediate family is able to take care of itself while my spouse is recovering.	4.38
The people closest to me understand how I feel about my spouse's surgery.	4.35

Items above are those which were >one SD above the mean for all items.
Items are ranked from highest to lowest.

Table 4.5

Items Most Negatively Appraised on the SPS

Item	Mean Rating
There is no need to worry about one's spouse being operated upon.	2.37
The pain after the operation did not amount to much.	2.69
The experience of my spouse's surgery is like an adventure to me.	2.78
Medical science takes the chance out of an operation today.	2.88
It is a relief I have no more decisions to make.	3.20
Incisions are not very noticeable these days.	3.22
Although serious, open heart surgery is a quick way to get well.	3.40
Pain can be overcome in a situation like this.	3.42

Items above are those which were > one SD below the mean for all items.
Items are ranked from lowest to highest.

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Resilience Scale (RS)

The RS measures general characteristics of resilience via a total score, which can range from 20 to175. The resilience scale has been used in large samples of older adults but norms and validated cutoffs have not been published. The actual mean total score of the RS for this sample was 139.36, with SD 20.73, median of 139.0, range from 54 to 175, and a 95% CI of 135.2 – 143.6, which was comparable to the mean score of 138.4 in a group of older Alzheimer's caregivers (N = 39; 100% female; Wagnild & Young, 1988) and 141.1 in a group of older public housing residents (N = 43; 84% female; Wagnild & Young, 1991). Wagnild and Young (1993) studied community dwelling older adults (N = 810; 62% female) and reported RS scores with a range of 75 – 175 with a mean of 147.91; SD 16.85. Wagnild and Young reported reliability of .91, while in the present sample the reliability estimate was .94.

Social Support Index (SSI)

The SSI measures the degree to which families are integrated into the community, view the community as a source of support, and feel that the community can provide emotional, esteem, and network support. Table 4.2 reviews scale results in this sample. The observed mean total score on the SSI was higher (51.23; SD = 8.41) than the mean total score (43.37) in a sample of (N = 596) Caucasian females from military families (McCubbin, McCubbin, Thompson, & Thompson, 1995), presumably younger than the present sample.

Means for individual items were compared with the overall mean for all items. Two item means on the SSI fell one standard deviation above and two item means fell one standard deviation below, and all four extreme items are listed in Table 4.6. The two

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items rated most highly on the SSI deal with constructive family support and involvement. The two items rated lowest include one family item that concerns making members unhappy, and an item about having friends being part of everyday activities.

Ways of Coping (WCQ)

The WCQ measures eight coping strategies, each based on four to eight Likert items; a total of 50 items are utilized in subscale scoring, while an additional 16 items are filler items, not used in the formal WCQ subscale scoring. All 66 items were summed to obtain a total score, identical to the procedure of Azar and Solomon (2001). When completing the survey, participants were instructed to think of their spouse's CABG surgery and rate each item pertaining to how they coped with the events during and after

Table 4.6

Items Above and Below the Mean on SSI

Item	Mean Rating
The things I do for members of my family and they do for me make me feel a part of this very important group. (above mean)	3.60
The members of my family make an effort to show their love and affection for me. (above mean)	3.51
My friends in this community are a part of my everyday activities. (below mean)	2.48
There are times when family members do things that make other members unhappy. (below mean; reverse-scored)	1.54

The items are listed from high to low. Items are either one SD above or below the mean for all items.

the surgery. The reliability for escape-avoidance was .49 and, therefore, the subscale was not used. WCQ subscale reliabilities ranged from .62 to .72 for the other seven subscales.

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Reliability of the WCQ total score was .94. The summary of WCQ total score and subscale results is listed in Table 4.2.

Coping within the sample was examined also via consideration of coping items rated as most or least utilized. Table 4.7 presents the 16 items rated most highly by this sample, at least a standard deviation above the mean for all items. In similar fashion, Table 4.8 lists 21 items that were rated at least a standard deviation below the mean for all items. Eight of the sixteen highest rated items were included in one of the five WCQ subscales. However, eight of the highest rated coping items were filler items and, therefore, not included in WCQ subscales. Filler items which were frequently used by participants included analyzing the problem, preparing for the worst, maintaining pride, accepting situation, seeing from other's point of view, telling self positive things, turning to work or activity, and reminding self it could be worse.

Research Questions

Descriptive statistics and correlations were used where appropriate in addressing the research questions. Other research questions were addressed using linear regression analysis.

Research Question One

What is the relationship between stress and the coping of older women whose spouses have undergone CABG surgery?

The first research question examines the relationship of stress, as measured by the FILE, with coping, as measured by the WCQ total score and subscales. All correlations were statistically nonsignificant. There was no significant relationship between FILE and WCQ total or subscales.

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Table 4.7

Highest Rated Items for the WCQ for 96 Women

Item (subscale)	Mean Rating
I prayed (PR)	2.68
I just concentrated on what I had to do next—next step (PPS)	2.22
I looked for the silver lining, I tried to look on the bright side (DC)	2.09
I rediscovered what is important in life (PR)	2.01
I reminded myself how much worse things could be (FI)	2.01
I tried to analyze the problem to understand it better (FI)	1.87
I talked to someone to find out more about the situation (SSS)	1.85
I accepted sympathy and understanding from someone (SSS)	1.73
I drew on my past experiences; I was in a similar situation (PPS)	1.55
I prepared myself for the worst (FI)	1.54
I maintained my pride and kept a stiff upper lip (FI)	1.44
I accepted the situation, since nothing could be done (FI)	1.44
I tried to see things from the other person's point of view (FI)	1.44
I told myself things that helped me feel better (FI)	1.43
I tried to keep my feelings from interfering with other things (SC)	1.40
I turned to work or another activity to take my mind off things (FI)	1.38

All items are one SD above the mean. All items are listed from high to low. CC = confrontive coping, EA = escape-avoidance, DC = distancing coping, AR = accepting responsibility, SSS = seeking social support, PPS = planful problem solving, SC = self-controlling coping, PR = positive reappraisal coping, FI = filler item

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Table 4.8

Lowest Rated Items for the WCQ for 96 Women

Item	Mean Rating
I went along with fate; sometimes I have bad luck (DC)	.52
I made light of the situation; I refused to get too serious (DC)	.52
I came up with a couple of different solutions to the problem (PPS)	.48
I went on as if nothing had happened (DC)	.46
I critiqued or lectured myself (AR)	.45
I apologized or did something to make up (AR)	.39
I did something I didn't think would work, but at least I was doing something (CC)	.38
I promised myself that things would be different next time (AR)	.32
I tried to get the person responsible to change his or her mind (CC)	.31
I slept more than usual (EA)	.31
I tried to get away from it for awhile by resting or taking a vacation (FI)	.28
I generally avoided being with people (EA)	.27
I expressed anger to the person(s) who caused the problem (CC)	.25
I daydreamed or imagined a better time or place than the one I was in (FI)	.25
I tried to make myself feel better by eating, drinking, smoking, using drugs or medications (EA)	.21
I got professional help (SSS)	.18
I tried to forget the whole thing (DC)	.17
I realized I had brought the problem on myself (AR)	.17
I refused to believe that it happened (EA)	.17
I took a big chance or did something very risky to solve the problem (CC)	.06
I took it out on other people (EA)	.01

All items are one SD below the mean. All items are listed from high to low. CC = confrontive coping, EA = escape-avoidance, DC = distancing coping, AR = accepting responsibility, SSS = seeking social support, PPS = planful problem solving, SC = self-controlling coping, PR = positive reappraisal coping, FI = Filler item

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Research Question Two

What is the relationship between cognitive appraisal and coping of older women whose spouses have undergone CABG surgery?

The second research question examined the relationship of perceived stress of the CABG surgery and recovery as measured by the SPS, with coping, as measured by the WCQ total and subscales. Correlation of total SPS score with WCQ subscales appear in Table 4.9. More positive spouse appraisal of the CABG surgery correlated significantly with more use of distancing coping (r = .28; p = .005) and positive reappraisal coping (r = .28; p = .007). Total scores on the SPS did not correlate significantly with total score or subscale scores on WCQ measuring confrontive coping, self-controlling coping, seeking social support, accepting responsibility, or planful problem solving.

Research Question Three

What is the relationship between resilience and coping of older women whose spouses have undergone CABG surgery?

The third research question examines the relationship of general resilience, as measured by the RS, with coping, as measured by WCQ. The correlations of total score on the RS with WCQ subscales are listed in Table 4.10. Increased resilience correlated significantly with more use of planful problem solving (r = .30; p = .003), positive reappraisal (r = .22; p = .032) and distancing coping (r = .21; p = .038). The RS did not significantly correlate with WCQ total score, or subscales including confrontive coping, self-controlling coping, seeking social support, or accepting responsibility.

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Table 4.9

Correlation of Total SPS with WCQ

Confrontive	-.04
Distancing	.28**
Self-Controlling	.01
Seeking Social Support	.10
Accepting Responsibility	.08
Planful problem Solving	.15
Positive Reappraisal	.28**
Total Score	.15

All p's for two-tailed tests of significance; Pearson correlations.
*p < .05
**p < .01

Table 4.10

Correlation of Total RS with WCQ

Confrontive	.04
Distancing	.21*
Self-Controlling	-.03
Seeking Social Support	.15
Accepting Responsibility	.00
Planful Problem Solving	.30**
Positive Reappraisal	.22*
Total Score	.15

All p's for two-tailed tests of significance; Pearson correlations.
*p < .05
**p < .01

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Research Question Four

What is the relationship between social support and coping of older women whose spouses have undergone CABG surgery?

The fourth research question examines the relationship of perceived social support as measured by the SSI, with coping, as measured by the WCQ. The correlations of total score on the SSI with WCQ subscales are listed in Table 4.11. There were no significant correlations between the SSI and WCQ total score or subscale scores for confrontive coping, distancing coping, self-controlling coping, accepting responsibility, or planful problem solving. Increased social support correlated significantly with more use of positive reappraisal ($r = .24$; $p = .019$).

Table 4.11

Correlation of Total SSI with WCQ

Confrontive	-.00
Distancing	.07
Self-Controlling	-.03
Seeking Social Support	.17
Accepting Responsibility	.02
Planful Problem Solving	.07
Positive Reappraisal	.24*
Total Score	.11

All p's for two-tailed tests of significance; Pearson correlations.
*$p < .05$; ns = nonsignificant

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Research Question Five

What is the effect of selected demographic variables, stress, cognitive appraisal, resilience, and social support on the coping of older women whose spouses have undergone CABG surgery?

Research question five examines the relationships among demographic variables, stress (FILE), perceived stress of the CABG surgery and recovery (SPS), resilience (RS) and social support (SSI) as they relate to coping (WCQ). Correlations among FILE, SPS, RS, and SSI total scores are first considered. Correlations of demographics with FILE, SPS, RS, SSI total and WCQ total and subscales will then be considered. Multiple linear regression analyses, predicting WCQ total score and each subscale by use of the FILE, SPS, RS, and SSI, and demographics will then be presented.

The FILE, SPS, RS and SSI were all significantly correlated, as indicated in Table 4.12. Resilience (RS), social support (SSI), and spouse perception (SPS) were all positively correlated. All three showed significant negative correlations with stress (FILE).

Table 4.12

Correlations Among FILE, SPS, RS and SSI

	RS	SPS	SSI
FILE	-.37***	-.38***	-.34 **
RS	-	.46***	.39 ***
SPS	-	-	.35**

All p's for two-tailed tests of significance; Pearson correlations.
**p < .01
***p < .001

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Correlations were calculated between demographic variables and stress (FILE), cognitive appraisal (SPS), resilience (RS), and social support (SSI). Table 4.13 summarizes these results. Older subjects reported significantly more social support and less stress. Better-educated wives scored significantly higher on the resilience scale.

Four demographic variables showed significant correlations with WCQ total or subscales. Frequency of religious activities was positively correlated with self-controlling coping, while more children nearby was negative correlated with seeking social support coping. Higher level of education was associated with higher WCQ total and more use of confrontive, accepting responsibility, and positive reappraisal coping. Higher number of children was correlated negatively with WCQ total, and use of confrontive, seeking social support and positive reappraisal coping. These results are presented in Table 4.13.

The relationships of participant illness status and prior spousal CABG with WCQ score were examined. Relationships were analyzed via use of independent-sample t-tests comparing means for those with and those without specific conditions. Only statistically significant results are reported. Significant WCQ differences were noted for participants with asthma compared to those without asthma, and are summarized in Table 4.14. Participants with asthma reported significantly more use of seeking social support, accepting responsibility, planful problems solving, and positive reappraisal coping, as well as demonstrating higher WCQ total score. Participants whose spouses had a previous CABG reported significantly less use of seeking social support and positive reappraisal coping as summarized in Table 4.15.

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Table 4.13

Correlations of Demographic Variables with Other Variables

	Age	Number of Children	Children Nearby	Level of Education	Frequency of Religious Activities
FILE	-.23*	-.12	-.12	-.01	-.14
SPS	.19	.05	.10	.18	.13
RS	.12	.08	.04	.24*	-.00
SSI	.33**	.15	.16	.03	.25*
WCQ (total)	.00	-.24*	-.05	.25*	.15
Confrontive	-.06	-.20*	-.03	.22*	-.04
Distancing	.08	-.15	.03	.15	.07
Self-controlling	.07	-.16	.02	.12	.20*
Seeking social support	-.04	-.30**	-.24*	.18	.16
Accepting responsibility	.03	-.12	.05	.22*	.08
Planful problem solving	-.08	-.19	-.07	.18	.13
Positive reappraisal	.08	-.21*	-.11	.24*	.16

* $p < .05$
** $p < .01$
***$p < .001$

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Table 4.14

Significant Relationship of Asthma and WCQ

	Asthma (n = 5)		Non-Asthma (n = 91)			
	Mean	SD	Mean	SD	t	df
WCQ Total	88.4	25.2	59.6	25.7	2.44*	94
Seeking Social Support	10.2	2.2	7.0	3.4	2.06*	94
Accepting Responsibility	3.2	2.9	1.2	2.0	2.10*	94
Planful Problem Solving	10.6	3.8	6.9	3.5	2.25*	94
Positive Reappraisal	14.0	4.5	9.2	4.0	2.61*	93[1]

[1]Positive Reappraisal: n's for asthma/non-asthma = 5/90.

Table 4.15

Significant Relationship of Previous CABG and WCQ

	CABG Previously			No Previous CABG				
	n	Mean	SD	n	Mean	SD	t	df
Seeking Social Support Coping	10	3.8	2.6	86	7.5	3.3	-3.41***	94
Positive Reappraisal Coping	10	6.6	3.2	85	9.8	4.1	-2.32*	93

* $p < .05$
** $p < .01$
***$p < .001$

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Eight multiple regressions were performed, each in turn using the total WCQ coping score or one of the WCQ coping subscales as a dependent variable, and demographic characteristics along with stress (FILE), cognitive appraisal (SPS), resilience (RS) and social support (SSI) as independent variables. Individual analyses are presented in descending order of proportion of variance accounted for.

The regression analysis for the positive reappraisal coping score yielded a final model in which the number of children along with the level of education, social support (SSI), and cognitive appraisal (SPS) accounted for 19.3% of the variation in the total score (F=5.37, df=4,90, p=.001). The multiple regression results are summarized in Table 4.16.

The regression analysis for the seeking social support coping score yielded a final model in which the number of children, and social support (SSI) accounted for 14.2% of the variation in the total score (F=7.70, df=2,93, p=.001). The multiple regression results are summarized in Table 4.17.

The regression analysis for the planful problem solving coping score yielded a final model in which the number of children along with resilience (RS) accounted for 13.6% of the variation in the total score (F=7.34, df=2,93, p=.001). The multiple regression results are summarized in Table 4.18.

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Table 4.16

Summary of Multiple Regression for Variables Predicting Positive Reappraisal Coping

Regression ANOVA

Source	Sum of Squares	df	Mean Squares	f	p
Regression	312.5	4	78.1	5.36	.001
Residual	1310.6	90	14.6		
Total	1623.1	94			

Standardized Beta Coefficients

Variables	Beta	t	p
Level of Education	.175	1.79	.034
Number of Children	-.220	-2.26	.043
Cognitive Appraisal	.191	1.88	.064
Social Support	.211	2.08	.041

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Table 4.17

Summary of Multiple Regression for Variables Predicting Seeking Social Support Coping

Regression ANOVA					
Source	Sum of Squares	df	Mean Squares	f	p
Regression	161.3	2	80.7	7.70	.001
Residual	974.6	93	10.5		
Total	1136.0	95			

Standardized Beta Coefficients			
Variables	Beta	t	p
Number of Children	-.338	-3.48	.001
Social Support (SSI)	.226	2.33	.022

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Table 4.18

Summary of Multiple Regression for Variables Predicting Planful Problem Solving Coping

Regression ANOVA

Source	Sum of Squares	df	Mean Squares	f	p
Regression	169.4	2	84.7	7.34	.001
Residual	1073.1	93	11.5		
Total	1242.5	95			

Standardized Beta Coefficients

Variables	Beta	t	p
Number of Children	-.221	-2.29	.025
Resilience (RS)	.315	3.26	.002

The regression analysis for the distancing coping score yielded a final model in which the number of children along with cognitive appraisal (SPS) accounted for 10.7% of the variation in the total score (F=5.58, df=2,93, p=.005). The multiple regression results are summarized in Table 4.19.

The regression analysis for the total WCQ score yielded a final model in which the number of children along with the level of education accounted for 10.3% of the

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variation in the total score (F=5.34, df=2,93, p=.006). The multiple regression results are summarized in Table 4.20.

Table 4.19

Summary of Multiple Regression for Variables Predicting Distancing Coping

Regression ANOVA					
Source	Sum of Squares	df	Mean Squares	f	p
Regression	76.2	2	38.1	5.58	.005
Residual	635.4	93	6.8		
Total	711.6	95			

Standardized Beta Coefficients			
Variables	Beta	t	p
Cognitive Appraisal (SPS)	.291	2.96	.004
Number of Children	-.166	-1.69	.094

The regression analysis for the accepting responsibility coping score yielded a final model in which the number of children, number of children nearby and the level of education accounted for 8.8% of the variation in the total score (F=2.96, df=3,92, p=.036). The multiple regression results are summarized in Table 4.21.

The regression analysis for the self-controlling coping score yielded a final model in which the number of children along with number of children nearby, and stress (FILE) accounted for 8.3% of the variation in the total score (F=2.72, df=3,90, p=.049). The multiple regression results are summarized in Table 4.22.

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Table 4.20

Summary of Multiple Regression for Variables Predicting Ways of Coping (WCQ) Total Score

Regression ANOVA					
Source	Sum of Squares	df	Mean Squares	f	p
Regression	6789.3	2	3390.1	5.34	.006
Residual	59019.6	93	634.6		
Total	65799.9	95			

Standardized Beta Coefficients			
Variables	Beta	t	p
Level of Education	.214	2.15	.034
Number of Children	-.205	- 2.05	.043

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Table 4.21

Summary of Multiple Regression for Variables Predicting Accepting Responsibility Coping

Regression ANOVA					
Source	Sum of Squares	df	Mean Squares	f	p
Regression	37.4	3	12.5	2.96	.036
Residual	386.9	92	4.2		
Total	424.2	95			

Standardized Beta Coefficients			
Variables	Beta	t	p
Level of Education	.215	2.13	.036
Number of Children	-.246	- 1.81	.073
Children Nearby	.244	1.81	.074

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Table 4.22

Summary of Multiple Regression for Variables Predicting Self-Controlling Coping

Regression ANOVA

Source	Sum of Squares	df	Mean Squares	f	p
Regression	132.0	3	44.0	2.72	.049
Residual	1457.3	90	16.2		
Total	1589.3	93			

Standardized Beta Coefficients

Variables	Beta	t	p
Number of Children	-.214	-2.15	.034
Children Nearby	.237	1.74	.086
Stress (FILE)	.177	1.74	.085

The regression analysis for the confrontive coping score yielded a final model in which the level of education accounted for 4.7% of the variation in the total score (F=4.65, df=1,94, p=.034). The multiple regression results are summarized in Table 4.23.

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Table 4.23

Summary of Multiple Regression for Variables Predicting Confrontive Coping

Regression ANOVA

Source	Sum of Squares	df	Mean Squares	f	p
Regression	.89	1	.89	4.65	.034
Residual	18.04	94	.19		
Total	18.94	95			

Standardized Beta Coefficients

Variables	Beta	t	p
Level of Education	.217	2.16	.034

Summary of Results

This sample was comprised of 96 Caucasian, high school educated women, in long-term marital relationships. Most had children, with at least one child living nearby. Multiple regression analyses were used to predict WCQ scores from the independent variables and demographic characteristics. Overall, regression analyses did not predict a large amount of variance in measures of different ways of coping, with actual percentages ranging from 4.7 to 19.3.

As independent variables, measures of stress, spouse perception, resilience, and social support performed relatively weakly in multiple regressions, not appearing in more

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than 2 of the 8 analyses. In contrast, number of children appeared in seven of eight regression analyses. Education appeared in 4 of 8 analyses, and children nearby appeared in 2 of 8. Various demographic variables showed incidental but statistically significant relationships with WCQ scores. Relationships among the independent variables suggested that resilience, spouse perception, and social support were all positively related, while all three had a negative correlation with higher levels of stress. Independent variables showed statistically significant but modest correlations with WCQ scores, with the exception of the FILE, which did not show any relationships.

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CHAPTER V

DISCUSSION

In this chapter the study's findings are examined in relation to the research questions and the previous research literature. The purpose of this study was to identify the effects of stress, cognitive appraisal, resilience, and social support on coping of older women whose spouses have undergone coronary artery bypass surgery within the previous three months. Conclusions, limitations of the study, implications for nursing practice and recommendations for future research will be discussed. As all research questions are based on the WCQ as the dependent variable, limitations in its reliability and validity will affect results and subsequent conclusions. Therefore, discussion will begin with the WCQ. However, additional concerns about stressful circumstances after 9/11/01 and their possible impact on study validity will be reviewed.

The WCQ is a 66-item instrument that is intended to measure ways of coping. This instrument had several drawbacks, including unacceptable reliabilty of the escape-avoidance subscale in the current sample. In addition, of the 66 items, 16 were filler items not scored in any of the 8 coping scales, but selected by many of the current sample as describing their coping style during and after their husband's CABG surgery. Many of the filler items appeared to measure meaningful aspects of the coping styles of the current sample, and included items rated highest on the WCQ (refer to Table 4.7). Of the 16 most frequently selected coping strategies fully one half were filler items. Filler items included reminding myself how much worse things could be, trying to analyze the problem to understand it better, preparing myself for the worst, maintaining pride and keeping a stiff upper lip, accepting the situation, trying to see things from the other person's point of

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view, telling myself things that helped me feel better, and turning to work or another activity to take my mind off things. While the WCQ's consideration of 8 ways of coping is useful, there is no reliability or validity data for the analysis of relative use of different ways of coping. In addition, the WCQ manual does not define methods for measuring problem-focused versus emotion-focused coping, even though this distinction had been an important part of the WCQ's forerunner, the Ways of Coping Checklist. Although the WCQ has been used in aged and medical samples, its original development was in a relatively small sample of middle-aged married couples.

In spite of the limits of this instrument, there were some meaningful relationships between the predictors and specific WCQ subscales. Positive reappraisal coping, seeking social support, and planful problem solving showed the highest predictability in the current study with 13.6% to 19.3 % of the total variance accounted for. However, some of the predictor variables were unexpected in their degree of contribution and other predictors did not remain in the final equations perhaps, in part, due to limitations in validity for this sample. Issues with specific instruments will be discussed in each research question. However, the unexpected power of demographic variables to predict the use of coping strategies could be a product of widespread political stress affecting coping within this sample, which would bring into question internal study validity. Polit and Hungler (1999) note that "history" can be a threat to internal study validity. They describe history as the "occurrence of external events that take place concurrently with the independent variable that can affect the dependent variables of interest" (pp. 227 – 228). This definition matches closely the circumstances of the present study. To the extent that stress affects coping, one must assume 9/11/01 stress might have a powerful

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impact on coping throughout the entire sample.

In retrospect, this study might be comparable of studying the coping style of older Americans in the year following Pearl Harbor, during which the entire population would have been affected by major historical circumstances. Surveys in the current research were received postmarked between 9/24/01 and 7/21/02. According to postmarks and time between survey and CABG, no more than 3 participants coped with a CABG prior to 9/11/2001, and all spouses postmarked surveys well after 9/11. Therefore, most participants gave a retrospective account of their coping after 9/11/2001 had occurred, with both immediate coping and the recollection of coping potentially influenced by these historically traumatic events. The results of this sample are entirely confounded with the life stress impacts of 9/11/01. Silver, Holman, McIntosh, Poulin and Gil-Rivas (2002) have indicated that traumatic stress symptoms from 9/11/01 were affected by coping strategies and by perceived impact/threat of these events. In addition to limitations of the FILE that will be discussed subsequently, there is the additional limitation that the FILE examines family events that have already happened versus the ongoing and continuing uncertainty which affects society since 9/11/01. The WCQ asked about coping with CABG, but there was no measure of the impact of coping with fears of nuclear or biological attack on one's county. In light of terrorist concerns, the events surrounding CABG surgery may seem less important and require less overall perceived coping effort. If this sample, indeed, turned to family and immediate community after 9/11, as recommended and described by various sources (Gil-Rivas, 2002; Silver, et al., 2002), then simply having larger families may have strengthened overall social coping and reduced reported use of CABG-specific coping as measured by the WCQ.

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There appear to be items in the FILE that mirror some of the impacts of 9/11/01 specifically items number 27, (changes in conditions, economic or political) and 28, (change in stock market which hurts family investments or income). Nearly 40% of the sample reported that one or both of these items applied to them during the past year. During the course of this study the Dow Jones Industrial Average (Yahoo Finance, 2003) market twice lost 15 to 20% of its value in the span of approximately a month. Appendix I examines some possible links among FILE responses, WCQ scales, and external stressful circumstances at the time of survey completion. However, FILE items 27 and 28 address only the presence or absence of financial concerns and economic impacts, not the appraisal of such events, and not the more pervasive experiences of anxiety, depression and post traumatic stress (Schuster et al., 2001; Silver et al., 2002). The potential impacts of these historical events will be discussed further within the individual research questions.

Research Question One

What is the relationship between stress and the coping of older women whose spouses have undergone CABG surgery?

The first research question examines the relationship between life events stress, as measured by the FILE, and coping, as measured by the WCQ total score and subscales. Life events are those occurrences that impact all people at various times and those life events produce stress. It was theorized that the accumulation of life events within the past year leading up to the CABG surgery would produce additional stress for the participants. However, the impact of 9/11 likely affected stress for all participants. As mentioned previously, the FILE was used to measure life events in the sample and the most

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frequently occurring life events are listed in Table 4.3, though none of the FILE items directly inquired about political upheaval, threats of war, or concerns about terrorist events. Overall FILE reliability was adequate but the range of scores was narrow (0-20) in this sample. This might suggest that as a group, older adults have less life change stress, or that the FILE did not assess stress adequately for elders, or for subjects in the current sample's circumstances. Beach et al. (1988) reported low scores on life events using the FILE in their sample of older persons experiencing their first myocardial infarction and attributed these to fewer life changes (Beach et al., 1992).

Several highly rated items in the present study included parent or spouse becoming seriously ill and a close friend or relative became seriously ill or injured. It is not possible to establish what the participant intended, however, it is possible that some but not all respondents thought of their husbands' CABG when answering, while others excluded it and considered only other illnesses within the year prior to the CABG. Also rated highly were four items addressing finance and business strains. As these women were mostly retired, or unemployed with lower incomes the items discussing changes in the stock market, increased strain on family household money due to medical expenses and political changes negatively affecting family investments made clear sense. All participants would have been impacted by the events of 9/11/01 as they occurred within one month of the initiation of the study, the earliest survey being postmarked 9/24/01. These events, along with the subsequent economic downturns that occurred during the period of data collection, were stressors to the participants. Several studies as well as reviews of research on traumatic events (World Trade Center and Pentagon attacks of 2001; Murrah Federal Building Oklahoma City Bombing of 1995) have reported that the

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combined effects of the traumatic event and pecuniary sequela affected the population adversely, with reports of mild to severe stress (Beaton & Murphy, 2002; Silver, Holman, McIntosh, Poulin & Gil-Rivas, 2002). In the present study, one item frequently reported in the finance and business strains included a member purchasing a car or other major item. If this purchase occurred in relation to other downward turns in household income this also would have been seen as stressful. Similar to results of previous studies, participants reported difficulty accomplishing tasks or other chores (Artinian, 1991), difficulty with sexual relationships with spouse (Beach, et al. 1992), and changes in work and financial security (Lovallo, 1997). Also, as would be expected with the sample age group, death of parents and close friends were also frequently reported on the FILE. Overall, it is unclear whether certain FILE items measured other family issues, or reflected increased stress for the participant directly related to their husband's CABG and its outcomes.

In a sample of wives (N= 987), McCubbin, Thompson and McCubbin (1996) reported a higher FILE mean score of 9.2. The mean from the present study was 5.4 for the FILE total score. Beach, Nagy, Tucker and Utz (1988) found low scores in their sample of older persons experiencing their first myocardial infarction. These results were attributed to older persons experiencing fewer life changes.

In this sample, life change stress as measured by FILE total score was uncorrelated with ways of coping (WCQ) total and subscales. It may be that patterns of coping are well established and will be utilized regardless of preexisting stress levels. On the other hand, the FILE may be inadequate to measure stress in this particular population, or within this sample in light of its extraordinary experiences during and after

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9/11. Finally, it could be that the 9/11 impacts superseded the effects of other stress for the entire sample, and the FILE would not have been sensitive to individual variations in responses to 9/11 events and aftermath. To summarize question one, there was no statistically significant bivariate correlation between FILE and WCQ total or subscales, but the impact of external events cannot be assessed within the present sample. The FILE did predict self-controlling coping within the multiple regression analyses, which will be considered under research question 5.

Research Question Two

What is the relationship between cognitive appraisal and coping of older women whose spouses have undergone CABG surgery?

The second research question examined the relationship of spouse perception of the CABG surgery and patient recovery as measured by the SPS, with coping, as measured by the WCQ. Consistent with previous research, participants in the present study reported feeling a) that surgery was necessary (Gulanick & Naito, 1994), b) that they felt safe in the hospital environment, c) happy with care of their husbands, d) trusting of the healthcare team (Redeker, 1993), e) that persons close to them could manage during the husband's illness and f) that persons close to them knew how they (the wife) felt while dealing with the surgery (Nyamathi, 1988). In the present study, participants' positive perceptions of their husband's care might be due to the inherent structure of the study whereby participants looked at the CABG surgery retrospectively. In doing so, they might have appraised the experience in a more positive light, and only reported that final positive perception despite more negative ones earlier in the process. As the SPS score went up the participant used more distancing from and positive

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reappraisal of the CABG surgery and its outcomes. Distancing implies that the participant used more cognitive efforts to distance herself from the CABG and minimize the significance of the CABG and its outcomes. Nunnally and Bernstein (1994) discussed that perceptions about important events might lead to response set bias whereby subjects respond in a favorable or expected light and thus misrepresent the true situation. Positive reappraisal implies the participant was able to create positive meaning by focusing on personal growth but it also has a strong religious dimension. Several items that were highly rated on the positive reappraisal subscale of the WCQ discussed use of prayer, finding a new faith and discovering what is important in life. To summarize question two, cognitive appraisal was correlated with distancing and positive reappraisal coping strategies.

Research Question Three

What is the relationship between resilience and coping of older women whose spouses have undergone CABG surgery?

Resilience as measured by the RS, is described as a personality trait or characteristic and reflected the woman's ability to adapt to stress and "bounce back" after prior life events and her spouse's CABG surgery and its outcomes. The RS was reliable and yielded results comparable with the previous research (Wagnild & Young, 1993). The RS does not control for social desirability, defensiveness, or other response styles that could distort results. It appears from the data that resilient women used a variety of coping strategies, including planful problem solving, positive reappraisal, and, to some extent, distancing from the situation.

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Similar to prior studies, resilient women in the present study used more deliberate problem-focused efforts (Felton, 2000; Nyamathi, Jacoby, Constancia & Rudevich, 1992) to alter the situation, and more efforts to create positive meaning by focusing on personal growth and religious practice (Wagnild & Young, 1990). Also, women used distancing to minimize the significance of the situation and, perhaps to facilitate evaluating the CABG surgery and its outcomes in the most favorable light. The collection of coping efforts of resilient women consisted of planful problem solving, positive reappraisal, and distancing coping strategies.

These results are similar to previous research studying resilience in children and adults in a variety of settings (Beardslee, 1989; Bebbington, Sturt, Tennant, & Hurry, 1984; Byrne, Love, Browne, Brown, Roberts & Streiner, 1986; Caplan, 1990; Masten & O'Conner, 1989; O'Connell & Mayo, 1988; Richmond & Beardslee, 1988; Rutter, 1985; Wagnild & Young, 1990). More resilient women seemed to use more effective coping measures. When faced with a situation, such as CABG surgery of one's spouse, resilient women reported more efforts to take the situation "in stride," analyze the situation, and reflect on the more important aspects of life. To summarize question two, resilience correlated with a variety of coping efforts to plan, to reassess the situation from a positive angle, and to not take the blame for the CABG surgery.

Research Question Four

What is the relationship between social support and coping of older women whose spouses have undergone CABG surgery?

Social support was defined in the present study as the degree to which women feel integrated into the community, view the community as a source of support, and feel that

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the community can provide emotional, esteem and network support. More specifically, social support is involved with community resources that might benefit the woman as she copes with the CABG surgery and its outcomes. Social support was measured by the Social Support Inventory (SSI), which demonstrated adequate overall reliability. Additionally, there was a seeking social support subscale on the WCQ. The SSI measured general perceived availability of social support whereas the seeking social support subscale assessed the behaviors associated with acquiring social support in response to the specific stress of spouse CABG. SSI was a significant positive predictor of seeking social support in the regression analysis.

As the woman reported increased levels of perceived social support on the SSI, they also reported the use of more positive reappraisal coping. It is possible that women felt sufficiently supported to be able to look for the "silver lining" in the CABG surgery events and utilize their religious support to create positive meaning in the experience. Two items that were frequently chosen on the WCQ related to prayer, and to discovering what was important in life. To summarize question four, social support was correlated with positive reappraisal and seeking social support coping.

Research Question Five

What are the effects of demographics, stress, cognitive appraisal, resilience, and social support on the coping of older women whose spouses have undergone CABG surgery?

Research question five examines the relationships among demographic variables, stress (FILE), perception of the CABG surgery and recovery (SPS), resilience (RS) and social support (SSI) as they relate to coping (WCQ). Regression analyses attempted to

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identify predictors of coping. In seven of the eight analyses number of children was retained in the final prediction model, such that having more children was associated with reduced scores on coping scales. Only for confrontive coping did number of children not remain in the final prediction model. The meaning of this relationship is not clear but may reflect that having more children allows women to become more passive and less concerned with coping with the crisis of CABG. In the post-911 environment having more children may have substituted family involvements for more specific coping efforts focused upon the spouse's CABG. An extensive review of the literature revealed only one study (Mancini, 1979) that addressed either family size or number of children in relation to healthy adaptation of older adults. The study related number of children to morale and Mancini reported the higher number of living children was related to lower morale. It may be that wives no longer have to make any special effort to deal with their spouses CABG. Thus, they are not actually more passive but simply do not report any coping efforts specific to the CABG stress and, therefore, overall ratings throughout the WCQ are lower. However, the number of children nearby behaved quite differently as a predictor. Women with more children nearby were more likely to make use of self-controlling and accepting responsibility coping strategies. This may be a reflection of family interactions influencing the wife to be more critical of her own behaviors, aspects of accepting responsibility coping. With more children in the immediate community, the wife may feel compelled to suppress or moderate her outward behaviors, thereby using more self-controlling coping. The lack of detailed interpretive norms for the WCQ, especially total score, makes interpretation more difficult, along with the high use of unscored filler items by this sample.

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Age was not a predictor of any variations in coping. However, demographics pertaining to income and education did show some relationships with coping. Better educated wives reported more use of confrontive coping and accepting responsibility. Better educated women might be more comfortable asking questions and behaving assertively as reflected in the questions within the confrontive coping scale. However, it may be that their intellectual skills allow them to do more questioning of their own values and behaviors as reflected in the accepting responsibility scale. They also showed higher scores for total coping, a result more difficult to interpret due to the lack of theoretical meaning or validity data for the total score of WCQ. Increased income was one of the predictors for positive reappraisal coping. This might reflect financial security allowing women to move beyond the immediate threats to security posed by illness of their spouse.

Measures of stress (FILE), cognitive appraisal (SPS), resilience (RS), and social support (SSI) did not contribute strongly or frequently to the prediction of coping. Among the 8 regression equations computed, these variables appeared only 6 times. Social support was retained in the prediction equations for positive reappraisal and seeking social support. This suggests that women who have social support are more likely to find meaning in the CABG surgery experience as reflected in the positive reappraisal coping scale. Additionally these women are able to mobilize social support as reflected in seeking social support coping scale when faced with the stress of CABG surgery. Other studies support present findings that more resilient women identified higher perceived levels of social support (Aroian & Norris, 2000; Beardslee & Podorefsky, 1988; Byrne, et al., 1986; Calvert, 1997; Dyer & McGuinness, 1996; Felton, 2000; Garmezy, 1993; Honzik, 1984; Werner & Smith, 1982). Resilient women and women reporting more

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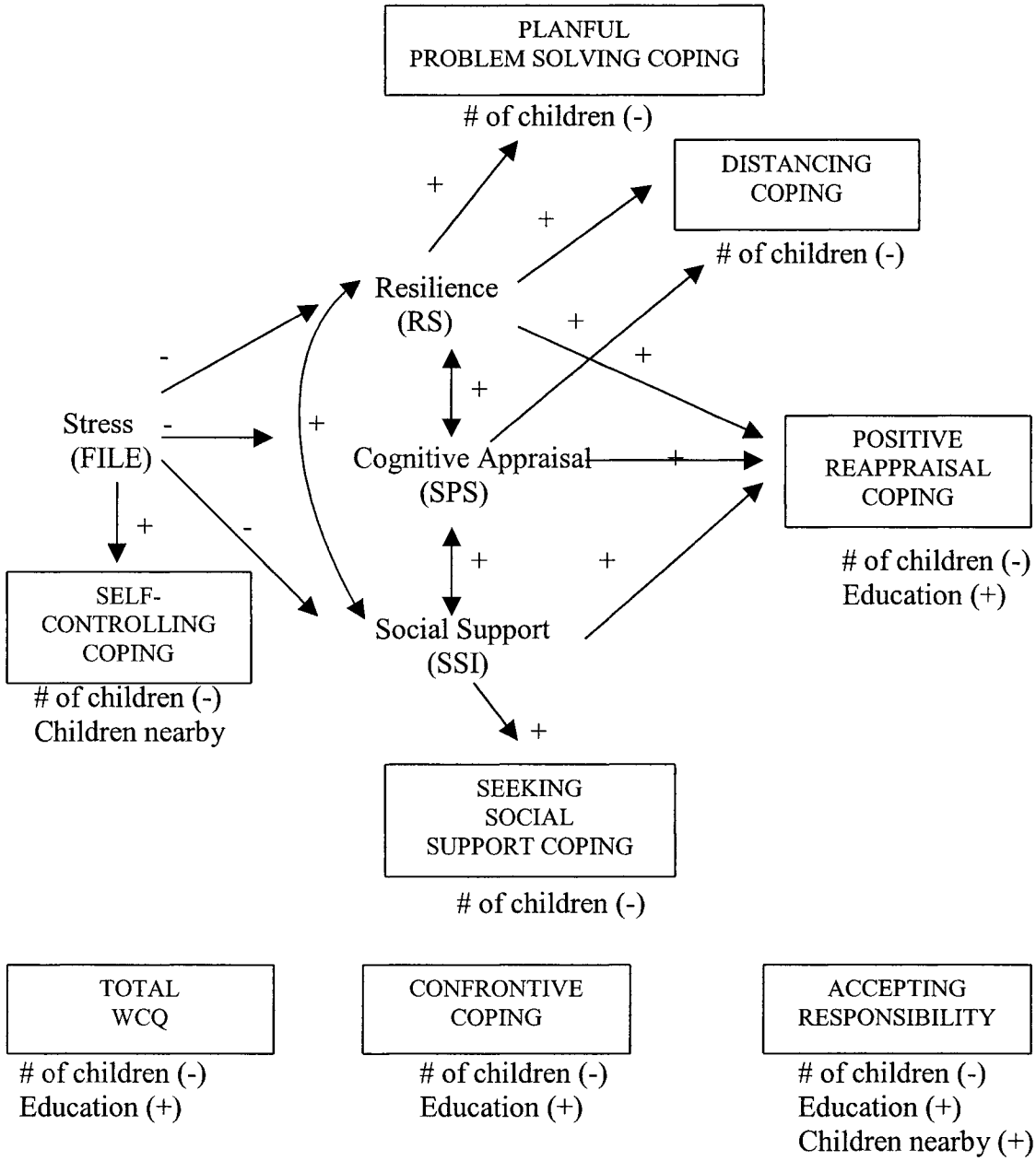

Figure 2. Conceptual Summary of Findings (Results are a composite of bivariate correlations and multiple regression findings.). Variables included are those which either were a focus of a specific research question or appeared in one or more multiple regression equations.

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social support identified more positive perceptions of the CABG surgery and its outcomes. Overall, these three variables were interrelated (resilience, social support, and spouse perception) and all contributed to a higher use of positive reappraisal coping. In similar fashion, higher scores for favorable cognitive appraisal of the CABG surgery experience (SPS) contributed to the prediction of more positive reappraisal coping. More positive cognitive appraisal (SPS) contributed to the prediction of distancing coping. A more favorable appraisal of the CABG situation may allow a healthy detachment or distancing from the stressful situation. More life change stress (FILE) contributed to the prediction of more self-controlling coping. This indicates that women experiencing more stressful events this sample used more self-control to cope with the CABG surgery and its outcomes. Higher scores on the resilience scale (RS) contributed strongly to the prediction of planful problem solving coping. This indicates that more resilient women utilized planning to cope with the stress of CABG surgery.

Limitations

Several limitations exist in the design and implementation of this study. An overriding limitation is the contamination of the entire sample by the results of 9/11/01. It must be assumed that the events of that day, occurring in direct proximity to the CABG surgery and the study, impacted the subjects and their perceptions of family dynamics as well as might have colored their perceptions of events that occurred during and after the CABG surgery. This fact makes the results nongeneralizable in other samples of women.

The use of a nonprobability sample in the present study carries the risk that subjects who agreed to participate are somehow different from those who refused to take or complete a research packet. These data were not tracked so this information is not

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available. In speaking with staff at the distribution sites, all agreed everyone took a packet when offered. The exception was one surgical office where two individuals refused. One person indicated they had already received a packet from the ICU nurse and the other one did not mention a reason. Furthermore the sample was limited to female CABG spouses 55 years of age and older. Both represent factors that limit the generalizability of the study results. Additionally, the sample size was small which would reduce generalizability of the results, and might limit power to detect small but important relationships among variables.

Additionally, the retrospective nature of the study may not lend itself to accurate recall and may have contributed to response-set bias where the participant gave responses she felt the researcher would want to have. Further research with the SPS is indicated to establish reliability and validity in a variety of populations.

The theoretical framework in the present study did not incorporate objective measures of successful coping. Such measures might include depression and anxiety measures, measures of health after the CABG event, marital satisfaction, physiologic measures, e.g. blood pressure, immune function, and cholesterol. The incorporation of objective measures of coping would have strengthened the study results. In addition, the objective physiologic outcomes and complications of spouses' CABGs were not obtained in the current research design, yet may have affected the use of coping.

There were several problems with the instruments used in the study. The WCQ total score was not useful due to the fact there are no data in the literature describing its interpretation. Also, the many filler items were a problem because they seemed to address areas of concern for the current sample and yet were not included in the scores of the

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individual subscales. Additionally, the escape-avoidance subscale demonstrated low reliability and was not included in the final results although used in calculations of the total score. Finally, the WCQ is copyrighted and owned by an external company and the costs of purchasing the rights to use the instrument are prohibitive.

The conceptual framework for this study did not reflect the complexity or directionality of the relationships among the variables of interest. A revised conceptual summary of the findings of the current study will be found in Figure 2.

Implications for Nursing Practice and Education

Results of the current study can be shared in the context of a teaching environment to better prepare novice nurses or enlighten practicing staff nurses. An overriding issue to communicate with nursing students and staff nurse is that the special circumstances of 9/11/01 and that they impacted the entire study sample. This means that these results cannot be generalized to similar samples of women undergoing CABG of their spouse even within the same institutions. This is s wonderful lesson about reading research and helping novice and experienced nurses understand the impact of world events. However, assuming the influence of history within the sample, the results of this study have several implications for nursing practice and education. The first implication is that undergraduate and nursing professionals need to understand that the women in the current study were responsive to answering lengthy questionnaires. I can only guess that the strong response is due to the fact that these women wanted to share their experience after their spouses' CABG. Nurses should be taught to direct more attention to the spouse of the coronary artery bypass patients. Older female spouses may not identify their own

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needs and, in fact, the nurse needs to be aware of and offer information, support, and comfort measures to these women.

Nurses need to be more attentive to stress experienced by the spouse during hospitalization and after discharge of their husband. The stress experience is not confined to the hospitalization but lingers for some time. Follow-up home care should be incorporated into the total plan of care. Nurses need to make provisions for planned attempts at offering support during and after discharge. Women who have more stress in addition to their husband's surgery revealed less resilience, lower levels of perceived social support and perceived the surgical experience as more stressful. Nurses need to be more aware of extraneous serious life events that might impact the spouse during and after discharge.

This study serves to add to the knowledge base of health care professionals caring for older spouses of CABG patients. The combination of the variables (stress, cognitive appraisal, resilience, social support and coping) in the present study have not been addressed previously in a sample of older women, therefore, this is unique and may provide information about coping of these women in the context of CABG surgery. Improvements in assessment of spouse needs and information interventions need to be generated.

This research has direct implications for nursing practice because nurses need to intervene to provide a support mechanism for non-resilient women. Resilient women are better able to utilize social support and cope. These are the women that may sail through the recovery process, however, women that are non-resilient may need further identification, coaching and follow-up. Such women might benefit from encouragement

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for increased social support, and for utilization of some of the core skills (equanimity, perseverance, self reliance, meaningfulness, and existential aloneness) which are components of resilience. Such nursing efforts would, of course, be in addition to nursing interventions to improve spouses' primary and secondary appraisals of the CABG surgery.

Implications for Research

The present study needs to be replicated with more diverse samples in order to broaden our understanding of stress and coping in the population of older women. Longitudinal research studies of stress, cognitive appraisal, resilience, social support and coping would be beneficial. The relationships among stress, cognitive appraisal, resilience, social support, and coping need to be investigated further with the addition of health and emotional outcome variables. Also, assessing stress, cognitive appraisal, resilience, and social support at the point of CABG and then following up with and reevaluating ways of coping (WCQ) after the CABG would allow better understanding of the dynamics of coping and prediction of outcomes.

More studies must be undertaken to examine the complex nature of the impact of demographic variables in a similar sample. More specific questions related to family composition, number of children and children nearby may lend more light to this underreported finding and help explain this result in the present study. One might assume these data have been gathered in other studies but not reported. Additionally, a comparison study of women post 9/11 might be of interest to evaluate just how the contamination of those events impacted the current study.

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In order to better implement an additional demand on a stressed and reduced nursing workforce, nurse researchers must study and generate accurate and efficient tools for screening spouses that the clinical caregivers can administer, interpret, and then intervene. A screening tool needs to be generated and tested to better assess resilient and non-resilient women. Intervention studies that target resilient and non-resilient women need to be designed and implemented. Perhaps this would lead to better identify a population served by a teaching and coaching relationship to ease their passage though the CABG surgery process. After development of the screening tool, nursing researchers must strive to generate valid and useful interventions for the clinical nurse to use.

The Spouse Perception Scale (Palmer, 1965; Silva, 1976) used in this study needs further development and testing. There is a paucity of cognitive appraisal instruments available in the literature that address nursing issues. Additionally, the Resilience Scale (Wagnild & Young, 1993) needs further testing and possibly and would likely benefit from subscale development rather than just a total score, as is currently the case. these women felt the desire to share their experience with the CABG and their husband's recovery process.

Summary

These female spouses of CABG patients were mostly Caucasian, nonemployed, and high school educated, with long term marital relationships. They appeared to be of modest but adequate financial means though a third indicated the CABG surgery had caused financial hardship. They noted relatively few illnesses in the past year, had children, typically with several nearby, and most reported weekly or daily religious activities. They endorsed relatively few life change events (stress) during the year prior to

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the CABG surgery, though every wife completed her survey after the vents of 9/11/2001. . Those with more life change stress showed lower resilience scores, less perceived social support, and more negative appraisal of the impact of CABG surgery. Resilience, perceived social support, and positive appraisal of the CABG surgery all demonstrate positive intercorrelations. When individual correlations were considered, resilience, positive appraisal, and perceived social support were all associated with more use of positive reappraisal coping. Finally, resilience was associated with more planful problems solving. In regression analysis seeking to predict different ways of coping, demographic variables showed an unexpectedly strong role. Women with more children generally endorsed less use of a variety of coping strategies, while having children nearby helped predict more use of accepting responsibility and distancing coping. Women's education contributed to the prediction of more confrontive, accepting responsibility, and positive reappraisal coping. Measures of stress, cognitive appraisal, resilience and social support did not show strong contributions to regression equations prediction ways of coping. In regression analyses, but not in simple correlations, increased stress predicted self-controlling coping, and more perceived social support predicted greater use of seeking social support coping. Ways of coping, as measured by the WCQ, are not readily predicted by demographic variables or the components of the stress and coping process measures in this study. However, positive aspects of these female spouses, specifically resilience, positive CABG appraisal, and seeking social support had most frequent and consistent positive correlations with positive reappraisal coping and distancing coping. Higher levels of these positive aspects were associated with lower levels of reported life change stress.

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REFERENCES

Administration on Aging. (1998) Projected health conditions among the elderly. Available E-mail http://www.aoa.dhhs.gov/aoa/stats/aging21/health.html

Allen, J. K., Becker, D. M. & Swank, R. T. (1991). Impact of spouse concordance of psychological adjustment on functional status after coronary artery bypass surgery. Journal of Nursing Quality Assurance, 5, (2), 69-74.

American Heart Association, (2002). Heart and stroke statistical update. Dallas, Texas: American Heart Association. Available E-mail http://www.americanheart.org/Heart_and_Stroke_A_Z_Guide/openh.html

Antoni, M. H. & Goodkin, K. (1988). Host moderator variables in the promotion of cervical neoplasia-I. Personal facets. Journal of Psychometric Research, 32 (3), 327-338.

Antonovsky, A. (1982). Health, stress and coping, San Francisco: Jossey-Bass.

Antonucci, T. C. (1985). Social support: theoretical advances, recent findings and pressing issues. In: Sarason & Sarason (Eds.) Social Support: Theory, Research and Application (pp. 21-37). Nijhoff: Boston.

Aroian, K. J. (1990). A model for psychological adaptation to immigration and resettlement. Nursing Research, 39, 5-10.

Aroian, K. J. & Norris, A. E. (2000). Resilience, stress, and depression among Russian immigrants to Israel. Western Journal of Nursing Research, 22, (1), 54-67.

Aroian, K. J., Norris, A. E., Tran, T. V. & Schappler-Morris, N. (1998). Development and psychometric evaluation of the Demands of Immigration Scale. Journal of Nursing Measurement, 6, (2), 175-194.

Aroian, K. J., Sptizer, A., & Bell, M. (1996). Family stress and support among former Soviet immigrants. Western Journal of Nursing Research, 18, 655-674.

Arth, C. (1962). American culture and phenomena of friendship in the aged. In: C. Tibbets & W. Donahue (Eds.) Social and Psychological Aspects of Aging. New York: Columbia University Press.

Artinian, N. T. (1986). Stress and families of coronary artery bypass patients: A pilot study. Unpublished field study, Wayne State University, Detroit.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Artinian, N. T. (1988). The stress process within the Roy adaptation framework: Sources, mediators and manifestations of coronary artery bypass patients during hospitalization and six weeks post discharge. University Microfilms International. (University Microfilms No. 8903215).

Artinian, N. T. (1989). Family members perceptions of a cardiac surgery event. Focus on Critical Care, 16, 301-308.

Artinian, N. T. (1991). Stress experiences of spouses of patients having coronary artery bypass during hospitalization and 6 weeks after discharge. Heart & Lung, (20), 1, 5259.

Artinian, N. & Hayes, M. G. (1992). Factors related to spouses' quality of life 1 year after coronary artery bypass graft surgery. Cardiovascular Nursing, 28, (4), 33-39.

Astin, M. C., Lawrence, K. J. & Foy, D. W. (1993). Posttraumatic stress disorder among battered women: risk and resiliency factors. Violence Victims, 8, (1), 17-28.

Azar, R., Soloman, C. R. (2001). Coping strategies of parents facing child diabetes mellitus. Journal of Pediatric Nursing: Nurisng Cere of Children & Families, 16, (6), 418-428.

Bachay, J. B. & Cingel, P. A. (1999). Restructuring resilience: Emerging voices. Afflilia: Journal of Women & Social Work, 14, (2), 162-176.

Baker, C. & Arseneault, A. & Gallant, G. (1994). Resettlement without the support of an ethnocultural community. Journal of Advanced Nursing, 20, 1064-1072.

Barakat, K., Wilkinson, P., Deaner, A., Fluck, D., Kulasegaram, R., & Timmis, A. (1999). How should age affect management of acute myocardial infarction? A prospective cohort study. Lancet, 353, (9157), 955-960.

Baron, L, Eisman, H., Scuello, M., Veyzer, A. & Lieberman, M. (1996). Stress resilience, locus of control, and religion in children of Holocaust victims. Journal of Psychology, 130, (5), 513-525.

Basic Behavioral Science Task Force of the National Advisory Mental Health Council, (1996). American Psychologist, 51, (1), 22-28.

Baumeister, R. F. (1982). Self-esteem, self-presentation, and future interaction: A dilemma of reputation Journal of Personality, 50, (1), 29-45.

Beach, E. K., Nagy, C., Tucker, & Utz, S. (1988). Perceived stressful life events: A factor in recovery after myocardial infarction. Progress in Cardiovascular Nursing, 1, 153-157.

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Beach, E. K., Maloney, B. H., Plocica, A. R., Sherry, S. E., Weaver, M., Luthringer, L. & Utz, S. (1992). The spouse: A factor in recovery after myocardial infarction. Heart & Lung: Journal of Critical Care, 21, (1), 30-38.

Beardslee, W. R. (1989). The role of self-understanding in resilient individuals: The development of a perspective. American Journal of Orthopsychiatry, 59, 266-278.

Beardslee, W. R. & Podorefsky, D. (1988). Resilient adolescents whose parents have serious affective and other psychiatric disorders: Importance of self-understanding and relationships. American Journal of Psychiatry, 145, (1), 63-69.

Beaton, R. & Murphy, S. (2002). Psychosocial responses to biological and chemical terrorist threats and events: Implications for the workplace. American Association of Occupational Health Nursing Journal, 50, (4), 182-194.

Beautrais, A. L., Fergusson, D. M. & Shannon, F. T. (1982a). Family life events and behavioral problems in school-aged children. Pediatrics, 70, 774-779.

Beautrais, A. L., Fergusson, D. M. & Shannon, F. T. (1982b). Life events and childhood morbidity: A prospective study. Pediatrics, 70, 935-940.

Bebbington, P. E., Sturt, E., Tennant, C. & Hurry, J. (1984). Misfortune and resilience: A community study of women. Psychological Medicine, 14, 347-363.

Beck, A. T. & Beck, R. W. (1972). Screening depressed patients in family practice: A rapid technique. Postgraduate Medicine, 52, 81-85.

Bedsworth, J. & Molen, M. (1982). Psychological stress in spouses with myocardial infarction. Heart & Lung, 11, 450-456.

Bee, H. L., Hammond, M. A., Eyers, S. J., Barnard, K. E., & Snyder, C. (1986). The impact of parental life change on the early development of children. Research in Nursing and Health, 9, 65-4.

Bell, R. R. (1966). The impact of illness on family roles. In: J. R. Folta, & E. S. Deck (Eds.), A sociological framework for patient care, 177-190. New York: John Wiley.

Benard, B. (1991). Moving toward a just and vital culture: Multiculturalism in our schools. Louisville, KY: Southeast Region for Drug-Free Schools and Communities, University of Louisville.

Bennett, D. H. & Holmes, D. S. (1975). Influence of denial (situational redefinition) and projection on anxiety associated with threat to self-esteem. Journal of Personality and Social Psychology, 32, 915-921.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Ben-Sira, Z. (1984). Chronic illness, stress and coping. Social Science and Medicine, 18, (9), 725-736.

Ben-Zur, H., Rappaport, B., Amman, R. & Uretzky, G. (2000). Coping strategies, life style changes, and pessimism after open-heart surgery. Health & Social Work, 25, (3), 201-209.

Benson-Stanley, M. J. & Frantz, R. A. (1988). Adjustment problems of spouses of patients undergoing coronary artery bypass grafting during early convalescence. Heart and Lung, 17, (6), 677-682.

Bergman, C. & Wallace, K. (1999). Resiliency in later life. In T. Whitman & T. Merluzzi, T., & White, R. (Eds.), Life-Span Perspectives in Health and Illness, 216-221. Mahwah, Maine: Lawrence Erlbaum Associates.

Bettelheim, B. (1979). Surviving and other essays. New York: Albert A. Knopf.

Biegel, D. E., Sales, E. & Schultz R. (1991). Family caregiving in chronic illness. California: Sage.

Bigbee, J. L. (1992). Family stress, hardiness, and illness: A pilot study. Family Relations, 41, (2), 212-218.

Billings, A. G. & Moos, R. H. (1981). The role of coping responses and social resources in attenuating the stress of life events. Journal of Behavioral Medicine, 4, (2), 139-157.

Billings, A. G. & Moos, R. H. (1984). Coping, stress and social resources among adults with unipolar depression. Journal of Personality and Social Psychology, 46, (4), 8777-891.

Blau, Z. S. (1981). Structural constraints on friendships in old age. American Social Review, 26, 429-439.

Block, J. & Kremen, A. M. (1996). IQ and ego-resiliency: Conceptual and empirical connections and separateness. Journal of Personality and Social Psychology, 70, 349-361.

Bloom, L. J., Houston, B. K., Holmes, D. S., & Burish, T. G. (1977). The effectiveness of attentional diversion and situational redefinition for reducing stress due to a nonambigious threat. Journal of Research in Personality, 11, 83-94.

Booth, A. (1972). Sex and social participation. American Social Review, 37, 183-197.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Booth, A. & Hess, E. (1974). Cross-sex friendships. Journal of Marriage and the Family, 36, 38-47.

Boudewyn, A. C. & Liem, J. H. (1995a). Childhood sexual abuse as a precursor of depression and self-destructive behavior in adulthood. Journal of Traumatic Stress, 8, 445-459.

Boudewyn, A. C. & Liem, J. H. (1995b). The effects of childhood sexual abuse on adult self and social functioning: An attachment theory perspective. Poster presented at the Society for Research in Child Development meeting: Indianapolis.

Bowling, A. (1994). Social networks and social support among older people and implications for emotional well-being and psychiatric morbidity. International Journal of Psychiatry, 6, (1), 1-26.

Bowling, A., Farquhar, M., Grundy, E. & Formby, J. (1992). Psychiatric morbidity among people aged 85 + in 1987. A follow-up study at two-and-a-half years: associations with changes in psychiatric morbidity. International Journal of Psychiatry, 7, 307-321.

Bowling, A. (1994). Social networks and social support among older people. International Review of Psychiatry, 6, (1), 1-26.

Bowling, A. & Grundy, E. (1998). The association between social networks and mortality in later life. Review in Clinical Gerontology, 8, 353-361.

Brailey, L. J. (1984). Issues in coping research. Nursing Papers, 16, (1), 5-13.

Bramwell, S. T., Masuda, M., Wagner, N. N. & Holmes, T. H. (1975). Psychosocial factors in athletic injuries: Development and application of the social and athletic readjustment rating scale (SARRS). Journal of Human Stress, 1 (2), 6-20.

Bramwell, S. T. & Whall, A. L. (1986). Effect of role clarity and empathy on support role performance and anxiety. Nursing Research, 35, (5), 282-287.

Brandt, M. A. (1984). Consider the patient part of a family. Nursing Forum, 1, (21), 19-23.

Brodland, G. A. & Adreasen, N. J. (1977). Adjustment problems of the family of the burn patient. In R. H. Moos (Eds.), Coping with physical illness, New York, Plenum.

Brodsky, M.S. (1995). Testicular cancer survivors' impressions of the impact of the disease on their lives. Qualitative Health Research, 5, (1), 78-96.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Browner, W., Black, D., Newman, T., & Hulley, S. (1988). Estimating sample size and power. In: S. Hulley. & S. Cummings (Eds.) Designing clincal research. (139-150, & 218). Baltimore: Williams & Wilkins.

Bruhn, J. G. (1977). Effects of chronic illness on the family. The Journal of Family Practice, 4, (6), 1057-1060.

Bunn, T. A. & Clarke, A. M. (1979). Crisis Intervention: An experimental study of the effects of a brief period of counseling on the anxiety of relatives seriously injured or ill hospital patients. British Journal of Medical Psychology, 52, 191-195.

Burke, M. & Nagle, L. M. (1993). ICU technology. Canadian Critical Care Nursing, 24.

Byrne, C., Love, B., Browne, G., Brown, B., Roberts, J., & Streiner, D. (1986). The social competence of children following burn injury: A study of resilience. Journal of Burn Care and Rehabilitation, 7, 247-252.

Calvert, W. J. (1997). Protective factors within the family and their role in fostering resiliency in African American adolescents. Journal of Cultural Diversity, 4, (4), 110-117.

Caplan, G. (1990). Loss, stress and mental health. Community Mental Health Journal, 26, 27-48.

Cantor, M. H. (1979). Neighbors and friends: An overlooked resource in the informal support system. Research on Ageing, 1, 434-463.

Cantril, H. (1965). The pattern of human concerns. New Brunswick, New Jersey: Rutgers University Press.

Caplan, G. (1976). The family as a support system. In G. Caplan & M. Killilea (Eds.). Support systems and mutual help. New York: Grune & Stratton.

Caplan, G. (1990). Loss, stress and mental health. Community Mental Health Journal, 26, 27 - 48.

Carlson, B. E. (1997). A stress and coping approach to intervention with abuse women. Family Relations, 46, (3), 291-299.

Carbone, L. M. (1999). An interdisciplinary approach to the rehabilitation of open-heart surgical patients. Rehabilitation Nursing, 3, 55-63.

Carstensen, L. L. & Freund, A. M. The resilience of the aging self. Developmental Review, 14, 81 - 92.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Carveth, W. B. & Gottlieb, B. H. (1979). The measurement of social support and its relation to stress. Canadian Journal of Behavioral Science, 11, (3), 179-188.

Cassidy, T. & Burnside, E. (1996). Cognitive appraisal, vulnerability and coping: An integrative analysis of appraisal and coping mechanisms. Counselling Psychology Quarterly, 9, (3), 261-280.

Cayse, L. N. (1994). Fathers of children with cancer: A descriptive study of their stressors and coping strategies. Journal of Pediatric Oncology Nursing,11 (3), 102-108.

Centers for Disease Control and Prevention (2002). National vital statistics report: Deaths: final data for 2001. National Center for Health Statistics, 47, (19), 1-6.

Champion, V. (1984). Instrument development for health belief model constructs. Advances in Nursing Science, 6, 73-85.

Christopher, K. A. (2000). Determinants of psychological well-being in Irish Immigrants. Western Journal of Nursing Research, 22, (2), 123-143.

Chatham, M. A. (1978). The effect of family involvement on patients' manifestations of postcardiotomy psychosis. Heart & Lung, 7, 995-999.

Clark, L. M. & Hartman, M. (1996). Effects of hardiness and appraisal on the psychological distress and physical health of caregivers to elderly relatives. Research on Aging, 18, (4), 379-392.

Claus, K. E. (1980). The nature of stress. In: K. E. Claus & J. T. Bailey (Eds.) Living with stress and promoting well-being: A handbook for nurses. St. Louis: C.V. Mosby.

Cobb, S. (1976). Social support as a moderator of life stress. Psychosomatic Medicine, 38, 300-314.

Cohen, C. I, Teresi, J. & Holmes D. (1986). Assessments of stress-buffering effects of social networks on psychological symptoms in an inner-city elderly population. American Journal of Community Psychology, 14, 75-91.

Cohen, S. & McKay, G. (1984). Social support, stress and the buffering hypothesis: A theoretical analysis. In: A. Baum, S. E. Taylor & J. E. Singer (Eds.) Handbook of psychology and health, Vol. IV social psychology aspects of health (pp. 253-267). Hillsdale, New Jersey: Lawrence Erlbaum.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Cohen, S., Mermelstein, R., Kamarck, T., & Hoberman, H. M. (1985). Measuring the functional components of social support. In: I. G. Sarason & B. R. Sarason (Eds.) Social support: Theory, research and applications (pp. 73-94). Hingham, Maine: Martinus Nijhoff.

Cohen, S. & Syme, S. L. (1985). Issues in the study and application of social support. In: S. Cohen & S. L. Syme (Eds.) Social support and health (pp 3-22). New York: Academic Press.

Cohen, S. & Willis, T. A. (1985). Stress, social support and the buffering hypothesis. Psychological Bulletin, 98, (2), 310-357.

Colletta. N. D. & Gregg, C. H. (1981). Adolescent mothers' vulnerability to stress. The Journal of Nervous and Mental Disease, 169, (1), 50-54.

Collins, E. G., White-Williams, C. & Jalowiec, A. (1996). Spouse stressors while awaiting heart transplantation. Heart and Lung, 25, (1), 4-13.

Combs, A. W. & Snygg, D. (1971). Individual behavior: A perceptual approach to behavior (rev. ed.). New York: Harper & Brothers.

Cowen, E. L. & Work, W. C. (1988). Resilient children, psychological wellness, and primary prevention. American Journal of Community Psychology, 16, (4), 591-607.

Coyne, J. C., Aldwin, C., & Lazarus, R. S. (1981). Depression and coping in stressful episodes. Journal of Abnormal Psychology, 90, 439-447.

Crandall, J. E. & Lehman, R. E. (1977). Relationship of stressful life events to social interest, locus of control, and psychological adjustment. Journal of Consulting and Clinical Psychology, 45, (6), 1208.

Craven, R. F. & Sharp, B. H. (1972). The effects of illness on family function. Nursing Forum, 11, (2), 186-193.

Croog, S. H. & Fitzgerald, E. F. (1978). Subjective stress and serious illness of a spouse: Wives of heart patients. Journal of Health and Social Behavior, 19, (2), 166-178.

Crumlish, C. M. (1998, Sept./Oct.). Coping strategies of cardiac surgery patients in the perioperative period. Dimensions of Critical Care Nursing.

Davidson, D. M. (1979). The family and cardiac rehabilitation. The Journal of Family Practice, 8, (2), 253-261.

Davidson, H., Feldman, P. H. & Crawford, S. (1994). Measuring depressive symptoms in the frail elderly. Journal of Gerontology, 49, 159-164.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Derogatis, L. R. (1992). SCL-90-R: Administration, scoring & procedures manual-II (2nd ed.). Towson, Maryland: Clincal Psychometric Research.

Derogatis, L. R. & Melisaratos, N. (1983). The brief symptom inventory: An introductory report. Psychological Medicine, 13, 595-605.

Dewe, P. J. (1987). Identifying strategies nurses use to cope with work stress. Journal of Advanced Nursing, 12, 489-497.

Dhooper, S. S. (1983). Family coping with the crisis of heart attack. Social Work in Health Care, 9, (1), 15-31.

Dickerson, S. S. (1998). Cardiac spouse's help seeking experiences. Clinical Nursing Research, 7, (1), 6-29.

Dillman, D. A. (1978). Mail and telephone surveys: The total design method. New York: John Wiley & Sons.

Dohrenwend, B. S. & Dohrenwend, B. P. (1974). (Eds.) Stressful life events: Their nature and effects. New York: John Wiley.

Dohrenwend, B. S. & Dohrenwend, B. P. (1984). Life stress and illness: Formulation of the issues. In: B.S. Dohrenwend & B. P. Dohrenwend (Eds.) Stressful life events in their contexts Vol. 12 (pp. 1-12). New Brunswick, New Jersey, Rutgers University Press.

Dohrenwend, B. S., Krasnoff, L., Askenasy, A. R., & Dohrenwend, B. P. (1978). Exemplification of a method for scaling life events: The peri life events scale. Journal of Health and Social Behavior.

Donnelly, E. (1994). Parents of children with asthma: An examination of family hardiness, family stressors, and family functioning. Journal of Pediatric Nursing: Nursing Care of Children and Families. 9, 398-408.

Dooley, D. (1985). Causal inference in the study of social support. In: S. Cohen, and S. L. Syme (Eds.) Social support and health, (pp. 109-125). New York: Academic Press.

Downe-Wamboldt, B. J. (1991). Coping and life satisfaction in elderly women with osteoarthritis. British Journal of Advanced Nurisng,12(1), 85-98.

Downe-Wamboldt, B. J. (1998). A causal model of coping and well-being in elderly people with arthritis. British Journal of Advanced Nursing, 27(6), 1109-1116.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Douglass, L. G. (1997). Reciprocal support in the context of cancer: perspectives of the patient and spouse. Oncology Nursing Forum, 24, (9), 1529-36.

Dracup, K., & Breau, C. (1978). Helping the spouses of critically ill patients. American Journal of Nursing, 78: 51.

Dracup, K. (1982). Psychosocial aspects of coronary heart disease: implications for nursing research. Western Journal of Nursing Research, 4, 256-279.

Dracup, K., Moser, D. K., Marsden, C., Taylor, S. E., & Guzy, P. M. (1991). Effects of multidimensional cardiopulmonary rehabilitation program on psychosocial function. American Journal of Cardiology, 68, 31-34.

Drummond, E. E. (1964). Impact of a father's illness. American Journal of Nursing, 644, (8), 80-91.

Druss, R. G. & Douglas, C. J. (1988). Adaptive responses to illness and disability: Health denial. General Hospital Psychiatry, 10, 163-168.

Dunkel-Schetter, C. & Skokan, L. A. (1990). Determinants of social support provision in personal relationships. Journal of Social and Personal Relationships, 7, 437-450.

Dupuy, H. (1978). Self-representations of general psychological well-being of American adults. Paper presented at American Public health Association Meeting: Los Angeles.

Dyer, J. G. & McGuinness, T. M. (1996). Resilience: An analysis of the concept. Archives of Psychiatric Nursing, 10, 276-282.

Dzau, R. E. & Boehme, A. (1979). Stroke rehabilitation. A family-team education program. Archives of Physical Medicine and Rehabilitation, 59, 236-239.

Endler, N. S. & Magnusson, D. (Eds.) (1976). Interactional psychology and personality. New York: Wiley.

Ergh, T. C., Rapport, L. J., Coleman, R. D., & Hanks, R. A. (2002). Predictors of caregivere and family functioning following traumatic brain injury: Social support moderates caregiver distress. Journal of Head Trauma Rehabilitation, 17, (2), 155-166.

Esparza, D. (1993). Maternal support and stress response in sexually abused girls ages 6 – 12. Issues in Mental Health Nursing, 14, 85-107.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Esterling, B. A., Kiecolt -Glaser, J. K. & Glaser, R. (1996). Psychosocial modulation of cytokinine-induced natural killer cell activity in older adults. Psychosomatic Medicine, 58, 3, 264-272.

Farkas, S. W. (1980). Impact of chronic illness on the patient's spouse. Health and Social Work, 5, (4), 39-46.

Felton, B. S. (2000). Resilience in a multicultural sample of community-dwelling women older that age 85. Clinical Nursing Research, 9, (2), 102-124.

Fergusson, D. M. & Lynskey, M. T. (1996). Adolescent resiliency to family adversity. Journal of Child Psychology and Psychiatry and Allied Disciplines, 37, 281-292.

Figley, C. R. (1983). Catastrophes: an overview of family reactions. In C. R. Figley & McCubbin (Eds.) Stress and the family, Vol. 11, New York, Gardner Press.

Fine, S. B. (1991). Resilience and human ability: Who rises above adversity? The American Journal Occupational Therapy, 45, (6), 493-503.

Finlayson, A. (1976). Social networks as coping resources: Lay help and consultation patterns used by women in husband's post-infarction career. Social Science and Medicine, 10, 97-103.

Fleury, J. Kimbrell, L. C., Kruszewski, M.A. (1995). Life after a cardiac event: Women's experiences in healing. Heart & Lung: Journal of Critical Care, 24, 474-482.

Folkins, C. H., Lawson, K. D., Opton, E. M. & Lazarus, R. S. (1968). Desensitization and the experimental reduction of threat. Journal of Abnormal Psychology, 73, 100-113.

Folkman, S. (1979). An analysis of coping in an adequately functioning middle-aged population. Unpublished doctoral dissertation, University of California, Berkley.

Folkman, S. (2002). Coping and health. Department of Medicine and Center for AIDS Prevention Studies {On-line}, 1-17, Available: http://teachpsych.lemoyne.edu/teachpsych/faces/script/Ch01.htm

Folkman, S. & Lazarus, R. S. (1980). An analysis of coping in a middle-aged community sample. Journal of Health and Social Behavior, 21, 219-239.

Folkman, S. & Lazarus, R. S. (1985). If it changes it must be a process: Study of emotion and coping during three stages of a college examination. Journal of Personality and Social Psychology, 48, 150-170.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Folkman, S. & Lazarus, R. (1988). Ways of coping questionnaire permissions set, manual, test booklet, scoring key. Redwood City, Calif.: Mind Garden.

Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis A., & Gruen, R. J. (1986). Dynamics of a stressful encounter: Cognitive appraisal, coping and encounter outcomes. Journal of Personality and Social Psychology, 50, (5), 992-1003.

Folkman, S., Lazarus, R., Primley, S. & Novacek, J. (1987). Age differences in stress and coping processes. Psychology and Aging, 2, 171-184.

Forrester, D. A., Murphy, P. A., Price, D. M. & Monaghan, J. F. (1990). Critical care family needs: Nurse-family member confederate pairs. Heart & Lung, 19, 198-209.

Foxall, M. J., Ekberg, J. Y. & Griffith, N. (1985). Adjustment patterns of chronically ill middle-aged persons and spouses. Western Journal of Nursing Research, 7, (4), 425-444.

Frank, A. (1952). The diary of a young girl. New York: Doubleday.

Frankl, V. E. (1985). Man's search for meaning. New York: Washington Square Press.

Freidrich, W. N. & Wilturner, L. T. & Cohen, D. S. (1985). Coping resources and parenting mentally retarded children. American Journal of Mental Deficiency, 90, (2), 130-139.

Funk, S. C. (1992). Hardiness: A view of theory and research. Health Psychology, 11, 335 –34.

Furner, S. E. & Kozak, L. J. (1992). Acute care. In Van Nostrand , Furner & Suzman (Ed's). Health data on older Americans: United States. Vital and health statistics series 3: Analytic and epidemiological studies, No. 27. DHHS Publication No. (PHS) 93-1411.

Garmezy, N. (1985). Stress resistant children: The search for protective factors. Journal of Child Psychology and Psychiatry, 4, 213–233.

Garmezy, N. (1991). Resilience in children's adaptation to negative life events and stress environments. Pediatric Annals, 20, 459–466.

Garmezy, N. (1993). Children in poverty: Resilience despite risk. Psychiatry, 56, 127-136.

Geary, M. C. (1979). Supporting family coping. Supervisor Nurse, 10, (3), 52-59.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Gilbar, O. (2002). Patient caregiver adjustment to cancer of an adult child. Journal of Psychosomatic Research, 52(5), 295-302.

Gilliss, C. L. (1983). Identification of factors contributing to family functioning following coronary artery bypass surgery. Unpublished doctoral dissertation, University of California, San Francisco.

Gilliss, C. L. (1984). Reducing family stress during and after coronary artery bypass surgery. Nursing Clinics of North America, 19, 103-112.

Gilliss, C. L., Sparacino, P. S. A., Gortner, S. R., & Kenneth, H. Y. (1985). Events leading to the treatment of coronary artery disease: Implications for nursing care. Heart & Lung, 14 (4), 350-356.

Glass, L. T., Dym, B., Greenberg, S., Rintell, D., Roesch, C. & Berkman, L. (2000). Psychosocial intervention in stroke: Families in recovery from stroke trial (FIRST). American Journal of Orthopsychiatry, 70, 169-181.

Gore, S. (1978). The effect of social support in moderating the health consequences of unemployment. Journal of Health and Social Behavior, 19, 157-165.

Gore, S. (1985). Social support and styles of coping with stress. In: S. Cohen, & S. L. Syme (Eds.) Social support and health, 263-278. New York: Academic Press.

Gorsuch, R. L. & Key, M. K. (1974). Abnormalities of pregnancy as a function of anxiety and life stress. Psychosomatic Medicine, 36, (4), 352-372.

Griffin, J. Q. (1980). Physical illness in the family, In J. R. Miller, & E. H. Janosik, Family-focused care (pp. 245-268). New York: McGraw-Hill

Gulanick, M. & Naito, A. (1994). Patient's reactions to angioplasty: Realistic or not. American Journal of Critical Care, 3, 368–373.

Guzzetta, C. E. & Whitman, G. R. (1985). Cardiac Surgery. In: Critical care nursing: Body, mind and spirit. (2nd ed.) Boston: Little, Brown and Company.

Hamarat, E. (2002). Age differences in coping resources and satisfaction with life among middle-aged, young-old, and oldest-old adults. Journal of Genetic Psychology,163(3), 360-367.

Hamburg, D. A. & Adams, J. E. (1967). A perspective on coping behavior. Archives of General Psychiatry, 17, 277-284.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Hampe, S. D. (1975). Needs of the grieving spouse in a hospital setting. Nursing Research, 24, (2), 113-120.

Hawley, D. R. & DeHaan, L. (1996). Toward a definition of family resilience: Integrating life-span and family perspectives. Family Process, 35, 283 –298.

Heidrich, S. M. (1996). Mechanisms related to psychological well-being in older women with chronic illnesses: Age and disease comparisons. Research in Nursing and Health, 19, 225-235.

Heidrich, S. M. (1998). Older women's lives through time. Advances in Nursing Science, 20, (3), 66–77.

Heidrich, S. M. & Ryff, C. D. (1993). Physical and mental health in later life: The self-system as mediator. Psychology and Health, 8(3), 327-338.

Heller, K., Swindle, R. W. & Dusenburg, L. (1986). Component social support processes: Comment and integration. Journal of Consulting Clinical Psychology, 54(4), 466-470.

Hilbert, G. A. (1994). Cardiac patients and spouses: family functioning and emotions. Clinical Nursing Research, 3(3), 243–252.

Hilgenberg, C., Liddy, K. G. Standerfer, J. & Schraeder, C. (1992). Changes in family patterns six months after a myocardial infarction. Journal of Cardiovascular Nursing, 6(2), 46-56.

Hill, R., (1949). Families under stress. New York: Harper & Row.

Hill, R., (1958). Generic features of families under stress. Social Casework, 49, 139-150.

Hill, R., (1971). Families under stress: Adjustment to the crisis of separation and reunion (Rev. ed.). Westport, Connecticut: Greenwood Press.

Hodges, K., Kline, J. J. Barbero, G. & Flanery, R. (1984). Life events occurring in families of children with recurrent abdominal pain. Journal of Psychosomatic Research, 28, 185–188.

Holahan, C. J. & Moos, R. H. (1985). Life stress and health: Personality, coping, and family support in stress resistance. Journal of Personality and Social Psychology, 49(3), 739-747.

Holahan, C. J. & Moos, R. H. (1987). Personal and contextual determinants of coping strategies. Journal of Personality and Social Psychology, 52(5), 946-955.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Holmes, D. S. & Houston, B. K. (1974). Effectiveness of situation redefinition and affective isolation in coping with stress. Journal of Personality and Social Psychology , 29, 212-218.

Holmes, T. H. & Rahe, R. H. (1967). The social readjustment scale. Journal of Psychosomatic Research, 11, 213-218.

House, J. (1981). Work, stress and social support (pp. 37-38). Reading, Maine: Addison-Wesley.

Howard, S. & Dryden, J. (1999). Childhood resilience: Review and critique of literature. Oxford Review of Education, 25(3), 307–324.

Huerta-Torres, V. (1998). Preparing patients for early discharge after CABG. American Journal of Nursing, 98(5), 49–51.

Hulley, S. B. & Cummings, S. R. (1988). Designing clinical research. Baltimore: Williams & Wilkins.

Hupcey, J. E. (1998). Clarifying the social support theory-research linkage. Journal of Advanced Nursing, 27, 1231-1241.

Hurdle, D. (2001). Social support: A critical factor in women's health and health promotion. Health & Social Work, 26(2), 72-79.

Hyman, R. B. & Woog, P. (1982). Stressful life events and illness onset: A review of crucial variables. Research in Nursing and Health, 5, 155-163.

Jacelon, C. S. (1997). The trait and process of resilience. Journal of Advanced Nursing, 25(1), 123 - 129.

Jalowiec, A. (1984). Psychometric assessment of the Jalowiec coping scale. Nursing Research, 33(3), 157-161.

Jalowiec, A. & Powers, M. J. (1986). Stress, coping and health-related adaptation in hypertensives. Paper presented at the 10th annual Midwest nursing research society. Omaha, Nebraska.

Jamerson, P. A., Scheibmeir, M., Bott, M. J., Crighton, F., Hinton, R. H., & Cobb, A. K. (1996). Experiences in the ICU: The experiences of families with a relative in the intensive care unit. Heart & Lung, 25(6), 467-474.

Jew, C. L., Green, K. E. & Kroger, J. (1999). Development and validation of a measure of resiliency. Measurement & Evaluation in Counseling & Development 32(2), 75 - 90.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Kadner, K. D. (1989). Resilience: Responding to adversity. Journal of Psychosocial Nursing, 27, 20-25.

Kahn, R. L. & Antonucci, T. C. (1980). Convoys over the life course: Attachment, roles and social support. In L P. Baltes & O. Brim (Eds.), Life-span development behavior (pp. 253-286). New York: Academic Press.

Kahn, R. L. (1994). Social support: content, causes, and consequences. In: Ables, Gift & Ory (Eds.) Aging and Quality of Life (pp. 163-184). Springer: New York.

Kammer, C. H. (1994). Stress and coping of family members responsible for nursing home placement. Research in Nursing & Health, 17, 89-98.

Kanner, A. D., Coyne, J. C., Schaeffer, C., & Lazarus, R. S. (1981). Comparison of two modes of stress measurement: Daily hassles and uplifts versus major life events. Journal of Behavioral Medicine, 4(1), 1-39.

Katz, M. H. & Piotrkowski, C. S. (1983). Correlates of role strain among employed Black women. Family Relations, 32, (3), 331-339.

Kidd, P. S. & Wagner, K. D. (2001). High acuity nursing. Upper Saddle River, New Jersey: Prentice Hall.

Kinney, J. M., Stephens, M. A., Franks, M. M., & Norris, V. K. (1995). Stressors and satisfactions of family care givers to older stroke patients. Journal of Applied Gerontology, 14, 3-21.

Kimball, L. P. (1998). Cognitive appraisal and cardiac risk reduction behavior following coronary angioplasty. Western Journal of Nursing Research, 20, (6), 733 –745.

King, R. B., Carlson, C. E., Shade-Zeldow, Y., Bares, K. K., Roth, E. J., & Heinemann, A. W. (2001). Transition to home care after stroke: depression, physical health, and adaptive processes in support persons. Research in Nursing & Health, 24 (4), 307 – 323.

King, S. L. & Gregor, F. M. (1985). Stress and coping in families of the critically ill. Critical Care Nurse, 5, (4), 48-51.

Kirkevold, M., Gortner, S. R., Berg, K., & Saltvold, S. (1996). Patterns of recovery among Norwegian heart surgery patients. Journal of Advanced Nursing, 24, (5), 943-951.

Klein, R. F., Dean, A. & Bogdonoff, M. D. (1967). The impact of illness upon the spouse. Journal of Chronic Disease, 20, 241-248.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Koopman, C., Angell, K., Turner-Cobb, J. M. Kreshka, M. A. Donnelly, P., McCoy, R. Turkseven, A. Graddy, K. Giese-Davis, J. and Spiegel, D. (2001). Distress, coping, and social support among rural women recently diagnosed with primary breast cancer. Breast Journal, 7(1) 25-33.

Knapp, -Spooner, C. &Yarcheski, A. (1992). Sleep patterns and stress in patients having coronary artery bypass. Heart & Lung: Journal of Critical Care, 21, 342-349.

Knox, S., Siegmund, K., Weidner, G., Ellison, C., Adelman, A., & Paton, C. (1998). Hostility, social support, and coronary heart disease in the national heart, lung, and blood institute family heart study. The American Journal of Cardiology, 82, (10), 1192-1196.

Kobasa, S. C. (1982). Commitment and coping in stress resistance among lawyers. Journal of Personality and Social Psychology, 42, 707-717.

Kobasa, S. C. (1986). Personal views survey. The Graduate School and University Center of the City University of New York: New York.

Koller, P. A. (1991). What are family needs and coping behaviors when faced with a the stress of a family member's critical illness? Issues in Critical Care Nursing, 2, (2), 338 - 345.

Koska, M. (1996). Relationship between hardiness and psychological stress response. Journal of Performance Studies, 3, 35 - 40.

Knox, S. S., Siegmund, K. D., Weidner, G., Ellison, C. R., Adelman, A., & Paton, C. (1998). Hostility, social support, and coronary heart disease in the National Heart, Lung, and blood institute family heart study. American Journal of Cardiology, 82, (10), 1192 – 1196.

Kulik, J. A. & Mahler, H. I. M. (1993). Emotional support as a moderator of adjustment and compliance after coronary artery bypass surgery: A longitudinal study. Journal of Behavioral Medicine, 16, 45-63.

Lamarche, D., Taddeo, R. & Pepler, C. (1998). The preparation of patients for cardiac surgery. Clinical Nursing Research, 7, (4), 390 – 406.

LaRocco, J. M., House, J. S. & French, J. R. P. (1980). Social support, occupational stress and health. Journal of Health and Social Behavior, 21, 202-218.

Lavee, Y., McCubbin, H. I., & Patterson, J. M. (1985). The double ABC-X model of family stress and adaptation: An empirical test by analysis of structural equations with latent variables. Journal of Marriage and the Family, 47, (4), 811-825.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Lawton, M. P. (1975). The Philadelphia geriatric morale scale: A revision. Journal of Gerontology, 30, 85-89.

Lazarus, R. S. (1966). Psychological stress and the coping process. New York: McGraw-Hill.

Lazarus, R. S. & Alfert, E. (1964). The short-circuiting of threat. Journal of Abnormal and Social Psychology, 69, 195-201.

Lazarus, R. S. & Folkman, S. (1984). Stress, appraisal and coping, New York: Springer.

Lazarus, R. S. & Launier, R. (1978). Stress-related transactions between person and environment . In L. A. Pervin & M. Lewis (Eds.) Perspectives in interactional psychology (pp. 287-327). New York: Plenum.

Lazarus, R. S., Opton, E. M., Nomikos, M. S. & Rankin, N. O. (1965). The principle of short-circuiting of threat: Further evidence. Journal of Personality, 33, 622-635.

Leathem, J., Heath, E. & Woolley, C. (1996). Relatives perceptions of role change, social support and stress after traumatic brain injury. Brain Injury, 10, 27-38.

Lee, H. J. (1991). Relationship of hardiness and current life events to perceived health in rural adults. Research in Nursing & Health, 14, 351-359.

Lee, R. (1994). Passage from the homeland. Canadian Nurse. 27 –32.

Lefebvre, R. C. & Sandford, S. L. (1985). A multi-modal questionnaire for stress. Journal of Human Stress, summer, 69-75.

Leif, A. (1948). The commonsense psychiatry of Dr. Adolf Meyer. New York: McGraw-Hill.

Leske, J. S. (1992). Comparison ratings of need importance after critical illness from family members with varied demographic needs. Critical Care Clinics of North America, 4, (4), 607-613.

Leske, J. S. & Jiricka, M. K. (1998). Impact of demands and family strengths and capabilities on family well-being and adaptation after critical injury. American Journal of Critical Care, 7, (5), 383-392.

Liem, J. H., James, J. B., O'Toole, J. G., and Boudewyn, A.C. (1997). Assessing resilience in adults with histories of childhood sexual abuse. American Journal of Orthopsychiatry, 67 (4), 594 – 606.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Lorr, M. & McNair, D. M. (1982). Profile of mood states: Bi polarform (POMS-BI). Sand Diego: Educational Testing and Industrial Testing Service.

Lovallo, W. R. (1997). Stress & health: biological and psychological interactions. Thousand Oaks, Calif.: Sage Publications

Lowenthal, M., Thurner, M. & Chiriboga, D. (1975). Four stages of Life. San Francisco: Jossey-Bass.

Lubben, J. & Gironda, M. (1998). Assessing social support networks among older people in the United States. Manuscript submitted for publication.

Lugton, J. (1997). The nature of social support as experienced by women treated for breast cancer. Journal of Advanced Nursing, 25, (6), 1184 – 1191.

Mackay, C., Cox, T., Burrows, G, Lazzerini, T. (1978). An inventory for the measurement of self-reported stress and arousal. British Journal of Social and Clinical Psychology, 17, 283 – 284.

Magnani, L. E. (1990). Hardiness, self-perceived health and activity among independently functioning older adults. Scholarly Inquiry for Nursing Practice: An International Journal, 4, (3), 171 - 188.

Mailick, M. (9179). The impact of severe illness on the individual and family: An overview. Social Work in Health Care, 5, (2), 117-128.

Major, B., Richards, C., Cozzarelli, C, Cooper, M. L., & Zubek, J. (1998). Personal resilience, cognitive appraisals and coping: An integrative model of adjustment to abortion. Journal of Personality and Social Psychology, 74, (3), 735 - 752.

Mancini, J. A. (1979). Family relationships and morale among people 65 years of age and older. American Journal of Orthopsychiatry, 49, (2), 292-300.

Markush, R. E. & Favero, R. V. (1974). Epidemiologic assessment of stressful life events, depressed mood, and psychophysiological symptoms-A preliminary report. In: B. S. Dohrenwend & B. P. Dohrenwend (Eds.), Stressful life events: Their nature and effects (pp. 171-190). New York: John Wiley.

Marx, M. B., Garrity, T. F. & Bowers, F. R. (1975). The influence of recent life experience on the health of college freshman. Journal of Psychosomatic Research, 19, 87-98.

Masten, A. S., Best, K., & Garmezy, N. (1990). Resilience and development: contributions from the study of children who overcome adversity. Development and Psychopathology, 2, 425 – 444.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Masten, A. S. & O'Conner, M. J. (1989). Vulnerability, stress, resilience in the early development of a high-risk child. Journal of the American Academy of Child and Adolescent Psychiatry, 28, (2) 274-278.

Masten, A. S., Garmezy, N., Tellegen, A., Pellegrini, D. S., Larkin, K., & Larsen, A. (1988). Competence and stress in school children: The moderating effects of individual and family qualities. Journal of Child Psychiatry, 29, 745 – 764.

May, W. F. (1986). The virtues and vices of the elderly. In T. R. Cole & S. A. Gadow (Eds.) What does it mean to grow old? Durham: Duke University Press, 41 – 61.

Mayou, R., Foster, A. & Williamson, B. (1978). The psychological and social effects of myocardial infarction on wives. British Medical Journal, 1, (6114), 699-701.

McClelland, D. C. (1985). Human Motivation. New York: Cambridge University Press.

McCoy-Boney, S. and Finkelhor, D. (1996). Is youth victimization related to trauma symptoms and depression after controlling for prior symptoms and family relationships? Journal of Consulting and Clinical Psychology, 64(6), 1406–1416.

McCrae, R. R. (1982). Age differences in the use of coping mechanisms. Journal of Gerontology, 37, 454 – 460.

McCrae, R. R. (1984). Situational determinants of coping responses: Loss, threat, and challenge. Journal of Personality and Social Psychology, 46, (4) 919-928.

McCubbin, M. (1995). Reviews the books 'Families and change: Coping with stressful events,' by McKenry, P. C. & Price, S. J. and 'Reexamining family stress: New theory and research,' by Burr, W. R. & Klein, S. R. Journal of Marriage & the Family, 57, (3), 835 – 838.

McCubbin, M. (1984). Nursing assessment of parental coping with cystic fibrosis, Western Journal of Nursing Research, 6, 407 – 422.

McCubbin, H. I. & McCubbin, M. A. (1988). Typologies of resilient families: Emerging roles of social class and ethnicity. Family Relations

McCubbin, H. I., Joy, C. B., Cauble, A. E., Comeau, J. K., Patterson, J. M. & Needle, R. H. (1980). Family stress and coping: A decade review. Journal of Marriage and the Family, 42, (4), 855-871.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

McCubbin, H. I. & Patterson, J. M. (1983). The family stress process: The double ABCX model of adjustment and adaptation. In: H. I. McCubbin, M. B. Sussman, & J. M. Patterson (Eds.), Social stress and the family: Advances and developments in family stress theory and research pp. 7-37). New York: Haworth.

McCubbin, H. I. & Patterson, J. M. (1987). Five family inventory of life events and changes. In: H. I. McCubbin & A. I. Thompson (Eds.), Family assessment inventories for research and practice (pp. 80 – 98). Madison, WI: University of Wisconsin-Madison.

McCubbin, H. I., Patterson, J. M. & Glynn, T. (1982). Social support index (SSI). In: H. I. McCubbin, A. I. Thompson, & M. A. McCubbin (1976). Family assessment: Resiliency, coping and adaptation-Inventories for research and practice (pp. 357-390). Madison, WI: University of Wisconsin System.

McCubbin, H. I., Patterson, J. M. & Wilson, L. R. (1981). Family inventory of life events and changes. In H. I. McCubbin & A. J. Thompson (Eds.), Family assessment inventories for research and practice (pp. 80-98). Madison, WI: University of Wisconsin-Madison.

McCubbin, H.I., McCubbin, M.A., Thompson, A.I., & Thompson, E.A. (1995). Resiliency in ethnic minority families: A conceptual model for predicting family adjustment and adaptation. In H. I. McCubbin, E. A. Thompson, &. J. Fromer (Eds.) Resiliency in ethnic minority families: Native and immigrant American families, Vol.1, (pp. 3-48). Madison, WI: University of Wisconsin, Madison.

McCubbin, H. I., Thompson, A. I. & McCubbin, M. A. (1996). Family assessment: Resiliency, coping and adaptation. Madison, Wisconsin: University of Wisconsin Publishers.

McKeehan, K. M., Cowling, W. R. & Wykle, M. L. (1986). Cantril self-anchoring ladders: Methodological considerations for nursing science. In: P. L. Chinn (Ed.), Nursing research methodology: Issues and implementation, 285-294. Rockville, Maryland: An Aspen Publication.

McKoy, Y. D. (1996). An examination of marital stress, sexual satisfaction, marital satisfaction and quality of life of myocardial infarction patients. Unpublished doctoral dissertation, Florida State University.

McMurray, D. L. (1998). Psychological, social, and medical factors affecting rehabilitation following coronary bypass surgery. Journal of Rehabilitation, 14-18.

McNaughton, M. E., Smith, L. W., Patterson, T. L. & Grant, I. (1990). Stress, social support and coping networks: Older women and immune status. Journal of Nervous and Mental Disease, 178, (7), 460-461.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

McRae, M. E. (1991). Holding death at bay: The experience of the spouses of patients undergoing cardiovascular surgery. Canadian Journal of Cardiovascular Nursing, 2, (2), 14-20.

Medalie, J. H. (1985). Stress, social support, coping, and adjustment. The Journal of Family Practice, 20, (6), 533-535.

Meenan, R. F., Gertman, P. M., & Mason, J. H. (1980). Measuring health status in arthritis: The arthritis impact measurement scales. Arthritis and Rheumatism, 23, 146 – 152.

Mennaghan, E. G. (1983). Individual coping efforts and family studies. In: H.S. McCubbin, M. B. Sussman & J. M. Patteson (Eds.) Social stress and the family: Advances and developments in family stress theory and research. Marriage and Family Review, 6, (1/2) (pp. 113-135). New York: Haworth Press.

Mederer, H. & Hill, R (1983). Critical role transitions over the family life cycle: Theory and research. In H. I. McCubbin, M. Sussman & J. Patterson (Eds.), Advances and developments in family stress theory and research, New York: Haworth.

Mikulincer, M. & Florian, V. (1995). Appraisal and coping with real-life stressful situation: The contribution of attachment styles. Personality and Social Psychology Bulletin, 21, (4), 406 – 414.

Mikulincer, M. & Florian, V. & Weller, A. (1993). Attachment styles, coping strategies, and post-traumatic psychological distress: The impact of the Gulf War in Israel. Journal of Personality and Social Psychology, 61, 273 – 280.

Miller, P., McMahon, M. & Ringel, K. (1990). Marital functioning after cardiac surgery. Heart & Lung, 19, (1), 55-61.

Miller, P., Wikoff, R. (1989). Spouses' psychosocial problems, resources, and marital functioning post myocardial infarction. Progress in Cardiovascular Nursing, 4, (2), 71-76.

Miller, P., Wikoff, R., McMahon, M., Garrett, M. & Ringel, K. (1990). Marital functioning after cardiac surgery. Heart & Lung, 19, (1), 55-61.

Mishel, M. H. & Murdaugh, C. L. (1987). Family adjustment to heart transplantation: Redesigning the dream. Nursing Research, 36, (6), 332-338.

Mishel, M. H. & Sorenson, D. S. (1991). Uncertainty in gynecological cancer: A test of the mediating functions of mastery and coping. Nursing Research, 40, 167 – 171.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Mitchell, R. E. & Hodson, C. A. (1983). Coping with domestic violence: Social support and psychological health among battered women. American Journal of Community Psychology, 11, (6), 629-654.

Molter, N. C. (1979). Needs of relatives of critically ill patients: A descriptive study. Heart & Lung, 8, (2), 332-229.

Molter , N. C. & Leske, J. S. (1983). Critical Care Family Needs Inventory. University of Wisconsin, Milwaukee.

Monroe, S. M. (1983). Social support and disorder: Toward an untangling of cause and effect. American Journal of Community Psychology, 11, (1), 81-97.

Moore, S. M. (1992). What are the effects of an information intervention on recovery outcomes of patients and spouses following CABG? Unpublished doctoral dissertation,

Moos, R. H. (1976). A topology of family social environments. Family Process, 15, 357-370.

Moos, R. H., Cronkite, R, C., Billings, A. G., & Finney, I. W. (1986). Health and daily living form manual. Palo Alto, CA: Social Ecology Laboratory Department of Psychiatry and Behavioral Sciences. Veterans Administration and Stanford Medical Centers.

Moser, D. K., Dracup, K. A. & Marsden, C. (1993). Needs of recovering cardiac patients and their spouses: Compared views. International Journal of Nursing Studies, 30, (2), 105-114.

Mulholland, D. J. & Watt, N. F. & Philpott, A., & Sarlin, N. (1991). Academic performance in children of divorce: Psychological resilience and vulnerability. Psychiatry, 44, (2), 268-280.

Nah, K. (1993). Perceived problems and service delivery for Korean immigrants. Social Work, 38, (3), 289 – 296.

Narayan, S. M. & Joslin, D. J. (1980). Crisis theory and intervention: A critique of the medical model and proposal of a holistic nursing model. Advances in Nursing Science, 2, (4), 27-39.

National Heart, Lung & Blood Institute (1997). The sixth report of the joint national committee on prevention, detection, evaluation, and treatment of high blood pressure. Bethesda, MD: US Department of Health and Human Services. Publication No. 98-4080.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Neugarten, B., Havighurst, R. & Tobin, S. (1961). The measure of life satisfaction. Journal of Gerontology, 16, 132-143.

Niina, R., Sakata, S., Yatomi, N., & Homma, A. (1990). Development of the psychological stress response scale. Psychosomatic Medicine, 30, 29 – 30.

Norbeck, J. S., Lindsey, A. M. & Carrieri, V. L. (1981). The development of an instrument to measure social support. Nursing Research, 30, (1), 264-269.

Norbeck, J. S. (1985). Types and sources of social support for managing job stress in critical care nursing. Nursing research, 2, (4), 250-230.

Norheim, C. (1989). Family needs of patients having coronary artery bypass graft surgery during the intraoperative period. Heart & Lung, 18, 622-626.

Nunnally J. C. & Bernstein, I. H. (1994). Psychometric Theory. New York: McGraw-Hill.

Nyamathi, A. M. (1987a). The coping response of female spouses of patients with myocardial infarction. Heart & Lung, 16, (1), 86-92.

Nyamathi, A. M. (1987b). Coping responses of spouses of MI patients and of hemodialysis patients as measured by the Jalowiec Coping Scale. Journal of Cardiovascular Nursing, 2, (1), 67-74.

Nyamathi, A. M., Dracup, K., & Jacoby, A. (1988). Development of a spousal coping instrument. Progress in Cardiovascular Nursing,3, 1-6.

Nyamathi, A. M., Jacoby, A., Constancia, P., & Ruvevich, S. (1992). Coping and adjustment of critically ill patients with cardiac disease. Heart & Lung, 21, (2), 160 – 166.

O'Connell, R. A. & Mayo, J. A. (1988). The role of social factors in affective disorders: A review. Hospital and Community Psychiatry, 39, 842-851.

Oelofsen, N., Fullard, J. P., & Foxcroft, C. D. (1998). Health-related quality of life after coronary revascularisation surgery. South African Journal of Psychology, 28, (2), 85 – 92.

O'Malley, P., Anderson, B., Siewe, S., Deane, D., & Keefer, N. (1991) Critical care nurse perceptions of family needs. Heart & Lung, 20, (2) 189 – 201

Olsen, E. H. (1970). The impact of serious illness on the family system. Postgraduate Medicine, 47, (2), 169-174.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Orzeck, S. A. & Staniloff, H. M. (1987). Comparison of patients' and spouses' needs during the post-hospital convalescence phase of a myocardial infarction. Journal of Cardiopulmonary Rehabilitation, 7, (2), 59-67.

Palmer, I. (1964). Perceptions of patients to imminent general surgery: A comparative analysis of the expressed perceptions of patients between the ages of twenty-one and sixty years of age to cholecycstectomy, gastrectomy, and herniorrhapy. Unpublished doctoral dissertation, New York University.

Palmer, I. (1965). The development of a measuring device: Measuring patients' perceptions toward impending surgery. Nursing Research, 14, (2), 100 -105.

Panzarine, S. (1985). Coping: Conceptual and methodological issues. Advances in Nursing Science, 7, (4), 49-57.

Parkes, (1984) Locus of Control and Coping

Patel, V. & Hope, R. A. (1992). A rating scale for aggressive behaviour in the elderly-the RAGE. Psychological Medicine, 22, 211-221.

Patterson, J. M. & McCubbin, H. I. (1983). The impact of family life events and changes on health of a chronically ill child. Family Relations, 32, (2), 255-264.

Paykel, E. S. (1976). Life stress, depression and attempted suicide. Journal of Human Stress, 2, (3), 3-12.

Pearlin, L. I., Lieberman, M. A., Mennaghan, & Mullan, J. T. (1981). The stress process. Journal of Health and Social Behavior, 22, 337-356.

Pearlin, L. I. & Schooler, C. (1978). The structure of coping. Journal of Health and Social Behavior, 19, 2-21.

Pearlin, L. I. & Schooler, C. (1982). The structure of coping. In: H. I. McCubbin, A. E. Caubel, & J. M. Patterson (Eds.) Family stress, coping and social support (pp. 109-135). Springfield Illinois: Charles C. Thomas.

Pennock, B. E., Crawshaw, L., Maher, T., & Kaplan, P. D. (1994). Distressful events in the ICU as perceived by patients recovering from coronary artery bypass surgery. Heart & Lung: Journal of Critical Care, 23, 323-327.

Perkins, D. V. (1982). The assessment of stress using life events scales. In: L. Goldberger, & S. Breznitz (Eds.), Handbook of stress theoretical and clinical aspects (pp.320-331). New York: The Free Press.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Pervin, L. A. & Lewis, M. (Eds.) (1978). Perspective in interactional psychology. New York: Plenum.

Pieper, B., Lepczyk, M., & Caldwell, M. (1985). Perceptions of the waiting period before coronary artery bypass grafting. Heart & Lung, 14, (1), 40-44.

Pierce, A. G., Wright, F., & Fulmer T. (1992). Needs of the family during critical illness of elderly patients. Critical Care Nursing Clinics of North America, 4, (4), 597-606.

Pinelli, J. M. (1997). The effects of family coping and family resources on family adjustment and parental stress in the acute phase. Unpublished doctoral dissertation, State University of New York, Buffalo.

Polit, D. F. (1996). Data analysis: and statistics for nursing research. Stamford, Connecticut: Appleton & Lange.

Polit, D. F. & Hungler, B. P. (1999). Nursing research: Principles and methods. 6th Ed. Philadelphia: Lippincott.

Rabkin, J. G. & Struening, E. L. (1976). Life events, stress and illness. Science, 194, 1013-1020.

Rabkin, J. G, Remien, R., Katoff, L. & Williams, J. B. (1993). Resilience in adversity among long-term survivors of AIDS. Hospital and Community Psychiatry, 147, 162-167.

Radley, A. & Green, R. (1986). Bearing illness: Study of couples where the husband awaits coronary graft surgery. Social Science Medicine, 23, (6), 577-585.

Rak, C. F. & Patterson, L. E. (1996) Resilience in the face of adversity: The protective factors and resistance to psychiatric disorder. British Journal of Psychiatry, 147, 369-373.

Random House unabridged dictionary. (2n ed.). (1993). New York: Random House.

Redeker, N. S. (1992). A description of the nature and dynamics of coping after coronary artery bypass surgery. Scholarly Inquiry in Nursing Research, 6, (19), 63-5.

Redeker, N. S. (1993). Symptoms reported by older and middle-aged adults after coronary bypass surgery. Clincal Nursing Research, 2, 148-159.

Redeker, N. S. & Brassard, A. B. (1996). Health patterns of cardiac surgery clients using home health care nursing services. Public Health Nursing, 13, 6, 394-403.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Richmond, J. B. & Beardslee, W. R, (1988). Research and practical implications for pediatricians. Developmental and Behavioral Pediatrics, 9, 157-163.

Rodgers, C. D. (1983). Needs of relatives of cardiac surgery patients during the critical care phase. Focus on Critical Care, 10, (5), 50-55.

Rodney, V. (2000). Nurse stress associated with aggression in people with dementia: its relationship to hardiness, cognitive appraisal and coping. Journal of Advanced Nursing, 31, (1), 172-180.

Roberts, B. L. (1994). Physical, psychological, and social resources as moderators of the relationship of stress to mental health of the very old. Journal of Gerontology, 49(1), 35-34.

Rosenberg, M. (1965). Society and the adolescent self-image. Princeton, NJ: Princeton University Press.

Rosenheck, R., Schuster, M. A., Stein, B. D., & Jaycox, L. H. (2002). Reactions to the events of September 11...New England Journal of Medicine, 346, (8), 629 – 630.

Rukholm, E. E., Bailey, P. H. & Coutu-Wakulczyk, G. (1992). Anxiety and family needs of the relatives of cardiac medical-surgical ICU patients. Canadian Journal of Nursing, 2, (4), 15-22.

Rutter, M. (1985). Resilience in the face of adversity. British Journal of Psychiatry, 147, 598-611.

Rutter, M., (1987). Psychosocial resilience and protective mechanisms. American Journal of Orthopsychiatry, 57, 316-331.

Sanders-Dewey, N.E.J., Mullins, L.L., & Chaney, J. M. (2001). Coping styles, perceived uncertainty in illness, and distress in individuals with Parkinson's diseased and their caregivers. Rehabilitation Psychology, 46, (4), 363-381.

Santavirta, N., Kettunen, S., & Solovieva, S. (2001). Coping in spouses of patients with acute myocardial infarction in the early phase of recovery. Journal of Cardiovascular Nursing, 16, (1), 34-46.

Savage, L. S. & Grap, M. J. (1999). Telephone monitoring after early discharge for cardiac surgery patients. American Journal of Critical Care, 8, (3), 154-159.

Scheier, M. & Carver, C. (1987). Dispositional optimism and physical well-being: The influence of generalized outcome expectancies on health. Journal of Personality, 55, 169-210.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Scherer, R. F. & Drumheller, P. M. (1993). Evaluating differences in cognitive appraisal and coping over stages of a transaction. Journal of Psychology Interdisciplinary & Applied, 127, (4), 435-442.

Schmidt, S., Nachtigall, C., Wuethrich-Matrone, O., & Strauss, B. (2002). Attachment and coping with chronic disease. Journal of Psychosomatic Research, 53(3), 763-771.

Schmitz, G., Schroeder, K. & Schwarzer, R. (1998). The role of perceived social support for cardiac patients and their spouses in their dyadic coping with bypass surgery. Presentation: 125th Conference of the European Health Psychology Society EHPS in Vienna. On-line http://userpage.fu-berlin.de/~gschmitz/Vienna/titel_e.htm

Sells, S. B. (1970). On the nature of stress. In: J. E. McGrath (Ed.) Social and psychological factors in stress. New York: Holt.

Selzer, M. L. & Vinokur, A. (1974). Life events, subjective stress, and traffic accidents. American Journal of Psychiatry, 131, (8), 903-906.

Sexton, D. L. (1984). The supporting cast: Wives of COPD patients. Journal of Gerontological Nursing, 10, (2), 82-85.

Sexton, D. L. & Munro, B. H. (1985). Impact of a husband's chronic illness (COPD) on the spouse's life. Research in Nursing and Health, 8, 83-90.

Shalala, D. (2000). Annual Update of the HHS Poverty Guidelines. Federal Register, 65, (31), 7555-7557.

Shrout, P. E. (1984). Scaling of stressful life events. In: B. S. Dohrenwend & B.P Dohrenwend (Eds.), Stressful life events and their contexts Vol.2 (pp. 29-47). New Brunswick, New Jersey: Rutgers University Press.

Sidle, A., Moos, R., Adams, J., & Caddy, P. (1969). Development of a coping scale: A preliminary study. Archives of General Psychiatry, 20, 226-232.

Sikorski, J. M. (1985). Knowledge, concerns and questions of wives of convalescent coronary artery bypass graft surgery patients. Journal of Cardiac Rehabilitation, 5, 74-85.

Silva, M. E. (1976). The effect of orientation information on spouse's anxiety and attitude toward hospitalization and major general surgery. Unpublished doctoral dissertation, University of Maryland.

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Silver,R.C., Holman, E.A., McIntosh, D. N., Poulin, M. Gil-Rivas, V. (2002). Nationwide longitudinal study of psychological responses to September 11, Journal of the American Medical Association, 288, (10), 1235 – 1244.

Skelton, M. & Dominian, J. (1973). Psychological stress in wives of patients with myocardial infarction. British Medical Journal, 4, (14), 101-103.

Solomon, Z., Mikulincer, M. & Avitzur, E. (1988). Coping locus of control, social support, and combat-related posttraumatic stress disorder. Journal of Personality and Social Psychology, 55, 279-285.

Smart, J. & Smart, D. (1995). Acculturative stress: The experience of the Hispanic immigrant. The Counseling Psychologist, 23, (1), 25-42.

Smeltzer, S. C. & Bare, B. G. (2000). Brunner and Suddarth's textbook of medical-surgical nursing (6th ed.)., Philadelphia: Lippincott.

Smith, R. E., Smoll, F. L., & Ptacek, J. T. (1990). Conjunctive moderator variables in vulnerability and resiliency research: life stress, social support and coping skills and adolescent sport injuries. Journal of Perspectives in Social Psychology, 58, 2, 360-370.

Spanier, G. B. (1976). Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. Journal of Marriage and the Family, 38, (1), 15-28.

Speisman, J. C., Lazarus, R. S., Mordkoff, A. M. & Davidson, L. A. (1964). Experimental stimulus. Journal of Consulting Psychology, 28, 23-33.

Speer, J. J. (1973). Impact of husband illness on family functioning (Vol. II) and I. Unpublished doctoral dissertation. University of Minnesota, St. Paul, Minnesota.

SPSS (2002). SPSS 11.0.

Stanley, M. J. B. & Frantz, R. A. (1988). Adjustment problems of spouses of patients undergoing coronary artery bypass graft surgery during early convalescence. Heart & Lung, 17, (6), 677-682.

Starzomski, R. & Hilton, A. (2000) Patient and family adjustment to kidney transplantation with and without an interim period of dialysis. Nephrology Nursing, 27, (1), 21-32.

Staudinger, U. M., Marsiske, M. & Baltes, P. B. (1993). Resilience and levels of reserve capacity in later adulthood: Prospectives from life-span theory. Development and Psychopathology, 5, 541-566.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Steele, C. M. (1993). Self-image, resilience and dissonance: the role of affirmational resources. Journal of Perspectives in Social Psychology, 64(6), 885-896.

Stember, M. L. H. (1975). The impact of hospitalization on families. Unpublished doctoral dissertation, University of Colorado, Denver.

Stember, M. L. H. (1977). Family response to hospitalization of an adult member. In: M. V. Batey (Ed.) Communicating nursing research Vol.9: Nursing research in the bicentennial year (pp. 59-75). Boulder, Colorado: Western Interstate Commission for Higher Education.

Stern, M. J. & Pascale, L. (1979). Psychosocial adaptation to myocardial infarction: The spouse's dilemma. Journal of Psychosomatic Research, 23, 83-87.

Stokes, S. A. & Gordon, S. E. (1988). Development of an Instrument to measure stress in the older adult. Nursing Research, 37, (1), 16-19.

Stone, A. A. & Neale, J. M. (1984). New measures of daily coping: Development of preliminary results. Journal of Personality and Social Psychology, 46, (4), 892-906.

Stryker, S. (1969). Symbolic interaction as an approach to family research. In: R. I. R. King (Ed.) Family relations: Concepts and theories (pp. 125-140). Berkeley, California: The Glendessary Press.

Swanson, J. M. (1986). Analyzing data for categories and description. In: W. C. Chenitz & J. M. Swanson. Menlo Park, California: The Glendessary Press, 125-140.

Tapp, D. (1995). Journal of Family Nursing, 1(1), 79-105.

Tartasky, D. S. (1990). The relationship among coping, hardiness, and outcomes of multiple chronic illnesses in the elderly. Unpublished doctoral dissertation.

The Hardiness Institute (1994). Personal views survey II manual. Irvine, California.

Theobald, K. (1997). The experiences of spouses whose partners have suffered a myocardial infarction: a phenomenological study. Journal of Advanced Nursing, 26, (3), 595 - 601.

Thoits, P. A. (1982). Conceptual, theoretical and methodological problems in studying social support as a buffer against life stress. Journal of Health and Social Behavior, 23, 145-159.

Thoits, P. A. (1986). Social support as coping assistance. Journal of Consulting and Clinical Psychology, 54, (4), 416-423.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Thompson, D. R. & Cordle, C. J. (1988). Support of wives of myocardial infarction patients. Journal of Advanced Nursing, 13, 223-228.

Thompson, E., McCubbin, H., Thompson, A. & Elver, K. (1995). Vulnerability and resiliency in Native Hawaiian families under stress. In: H. McCubbin, E. Thompson, A. Thompson, & J. Fromer, (Eds.), Resiliency in ethnic minority families: Native and immigrant American families. Madison, WI: University of Wisconsin System.

Tilden, V. P. & Galyen, R. D. (1987). Cost and Conflict. The darker side of social support. Western Journal of Nursing Research, 9(1), 9-18.

Trimm, D. (1997). Spousal coping during the surgical wait. Journal of PeriAnesthesia Nursing, 12(3),141-151.

Trochim, W. M. K. (1997). Research methods: Knowledge base. New York: Cornell University Press.

Tyzenhouse, P. (1973). Myocardial infarction: Its effects on the family. American Journal of Nursing, 73, 1012-1013.

Vandervoort, D. (2000). Social isolation and gender. Current Psychology, 19, (3), 229-237.

Veiel, H. O. & Baumann, U. (1992). The many meanings of social support. In: Veiel & Baumann, (Eds.). The meaning and measurement of social support (pp. 1-9). Hemisphere: New York.

Vitaliano, P.P. (1987). Manual for revised ways of coping checklist (WCCL). Seattle, WA: The Stress and Coping Project.

Vitaliano, P. P., Maiuro, R.D., Russo, J., & Becker, J. (1987). Raw versus relative scores in the assessment of coping strategies. Journal of Behavioral Medicine, 10, 1-18.

Von Witzelben, H. D. (1958). On loneliness. Psychiatry, 21, 37-43.

Vrabec, N. J. (1997). Literature review of social support and caregiver burden, 1980 – 1995. Image: Journal of Nursing Scholarship, 29(4), 383-388.

Wagnild, G. M. & Young, H. M. (1988). Resilience and caregiver burden among caregivers of spouses with Alzheimer's disease. Unpublished raw data.

Wagnild, G. M & Young, H. M. (1990a). Resilience among older women. Image: Journal of Nursing Scholarship, 22, 252-255.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Wagnild, G. M & Young, H. M (1990b). Resilience: Analysis and measurement, The Gerontologist, 30, 267A.

Wagnild, G. M & Young, H. M. (1991). Another look at hardiness. Image: Journal of Nursing Scholarship, 23, (4), 257-259.

Wagnild, G. M. & Young, H. M. (1993). Development and psychometric evaluation of the Resilience Scale. Journal of Nursing Measurement, 1, (2), 165-178.

Wamala, S. P., Mittleman, M. A., Schenck-Gustafsson, K., & Orth-Gormer, K. (1999). Potential explanation for the educational gradient in coronary heart disease: A population-based case-control study of Swedish women. American Journal of Public Health, 89(3), 313-321.

Warren N. A. (1993). Perceived needs of the family members in the critical care waiting room. Critical Care Nursing Quarterly, 16(3), 56-63.

Wenger, G. C. (1987). Demographic profile of elderly people living in the community in Liverpool. Ageing in Liverpool. Working paper No. 1 Banger, Centre for Social Policy Research and Development: University of Wales.

Whall, A. L. (1986). The family as the unit of care in nursing: A historical review. Public Health Nursing, 3, (4), 240-249.

Whall, A. L. & Loveland, C. J. (1993). Family unit -focused research: 1984-1991. Annual Review of Nursing Research, 11, 227-247.

Wilcox, B. L. & Vernberg, E. M. (1985). Conceptual and theoretical dilemmas facing socials support research. In: I. G. Sarason & B. R. Sarason (Eds.), Social support: Theory, research and applications, 3-20. Hingham, Maine: Martinus Nijhoff.

Wiener, C. L. & Dodd, M. J. (1993). Coping amid uncertainty: An illness trajectory perspective. Scholarly Inquiry for Nursing Practice: An International Journal, 7 (1), 17 – 35.

Wills, T. A. (1985). Supportive functions of interpersonal relationships. In: S. Cohen, & S. L. Syme (Eds.), Social support and health (pp. 61-82). New York: Academic Press.

Wilson, V. (1987). Identification of stressors related to patient's psychologic responses to the surgical intensive care unit. Heart and Lung, 16.

Wineman, N. M., Durand, E. J. & McCulloch, B. J. (1994). Examination of factor structure of the Ways of Coping Questionnaire with clinical populations. Nursing Research, 43 (5), 268 – 273.

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Winer, B. J. (1971). Statistical principles in experimental design. 2nd edition. New York: McGraw-Hill.

Winger, J. M., Hubbard, R. & Campbell, J. (1992). Family responses to critical care of the geriatric patient. In Fulmer, T. & Walker, M. (Eds.): Critical care nursing of the elderly (pp. 306-330). New York, Springer.

Wishnie, H. A, Hackett, T. P. & Cassem, N. H. (1971). Psychological hazards of convalescence following myocardial infarction. Journal of the American Medical Association, 215(8), 1292-1296.

Woolley, N. (1990). Crisis theory: A paradigm of effective intervention with families of critically ill people. Journal of Advanced Nursing, 15, 1402.

Worden, J. W. & Sobel, H. J. (1978). Ego strength and psychosocial adaptation to cancer. Psychosomatic Medicine, 40(8), 585-592.

Wortman, C. B. (1984). Social support and the cancer patient: Conceptual and methodological issues. Cancer, 53(10), 2339-2360.

Wyman, P.A., Cowen, E.L., Work, W.C. & Parker, G.R. (1991). Developmental and family milieu correlates of resilience in urban children who have experienced major life stress. American Journal of Community Psychology, 19(3), 405-426.

Yahoo Finance (2003). Dow Jones Industry Averages. http://finance.yahoo.com

Yarcheski, A., & Knapp-Spooner, C. (1994). Stressors associated with coronary bypass surgery. Clincal Nursing Research, 3(1), 57-68.

Yates, B., Bensley, L., Lalonde, B., Lewis, F., & Woods, N. (1995). The impact of marital status and quality on family functioning in maternal chronic illness. Health Care for Women International, 16, 437-449.

Yates, B. C. & Booten-Hiser, D. A. (1992). Comparison of psychologic stress responses in patients and spouses ten weeks after a cardiac illness event. Progress in Cardiovascular Nursing, 7(4), 25-33.

Zabalegui, A. (1997). Perceived social support, coping, and psychological distress in advanced cancer patients. Dissertation Abstracts International, 58, (6-B).

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APPENDIX A

Demographic Data Collection

Please put a check mark in the appropriate box or give the requested responses in your own words. Your answers are confidential, you will not be identified personally, and your data will be combined with that of others to obtain group properties.

1. Age _____

2. What is your ethnic background?
   a. Caucasian ( )
   b. African American ( )
   c. Asian ( )
   d. Latino ( )
   e. Native American ( )
   f. European American ( )
   g. Middle Eastern ( )
   h. Other Please specify: _____

3. How often do you participate in religious activities?

   a. Less than once a year ( )

   b. A few times a year ( )

   c. Monthly ( )

   d. Weekly ( )

   e. Daily ( )

4. What is the highest grade of regular school that you completed?

Grade School											High School										College		Graduate School	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22			

5. How long have you been married to your present spouse?

   _____ Years

6. How many children do you have? _____(include step-children)

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7. Number living nearby _____

8. Are you employed now?

a. No ( ) 2. Yes, part-time ( ) 3. Yes, full time ( )

9. What is (or was) your occupation? Please be as specific as possible.

---

10. What is your total annual income?

a. Less than 10,000 ( ) d. 30,000-39,999 ( ) g. 60,000-69,999 ( )
b. 10,000-19,999 ( ) e. 40,000-49,000 ( ) h. 70,000-79,999 ( )
c. 20,000-29,999 ( ) f. 50,000-59,999 ( ) i. 80,000 or more ( )

11. Do you have comprehensive medical insurance? Yes ( ) No ( )
12. Do you perceive you husband's illness has placed financial strain upon your family?
Yes ( ) No ( )

13. Did your husband have a "heart attack" (myocardial infarction) prior to his surgery?

Yes ( ) No ( )

14. Did you husband have previous open-heart surgery?
Yes ( ) No ( )

15. When did you first learn about your husband's need for coronary artery bypass surgery?
(Day, month, year) _____
16. Surgical Date_____
17. Cardiac Rehab Phase_____(if known)
18. Did you attend a class (es) prior to your husband's surgery that informed you about what to expect?
Yes ( ) No ( )

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19. Here is a list of medical conditions that usually last some time.
DURING THE LAST 12 MONTHS, have you had any of these conditions? (Answer "Yes" only if you have been diagnosed by a physician or nurse practitioner).

a.	Anemia	Yes ( ) No ( )
b.	Asthma	Yes ( ) No ( )
c.	Arthritis	Yes ( ) No ( )
d.	Serious back trouble	Yes ( ) No ( )
e.	Heart trouble	Yes ( ) No ( )
f.	High blood pressure	Yes ( ) No ( )
g.	Dizziness/fainting	Yes ( ) No ( )
h.	Bronchitis	Yes ( ) No ( )
i.	Cancer	Yes ( ) No ( )
j.	Liver trouble	Yes ( ) No ( )
k.	Diabetes	Yes ( ) No ( )
l.	Kidney trouble	Yes ( ) No ( )
m.	Stroke	Yes ( ) No ( )
n.	Tuberculosis	Yes ( ) No ( )
o.	Stomach ulcer	Yes ( ) No ( )
p.	Other Please specify_____	

_____

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APPENDIX B

FILE

FAMILY INVENTORY OF LIFE EVENTS AND CHANGES©

Purpose:

Over their life cycle, all families experience many changes as a result of normal growth and development of members and due to external circumstances. The following list of family life changes can happen in a family at any time. Because family members are connected to each other in some way, a life change for any one member affects all the other persons in the family to some degree.

"FAMILY" means a group of two or more persons living together who are related by blood, marriage or adoption. This includes persons who live with you and to whom you have a long-term commitment.

Directions:

"Did the change happen in your family?"

Please read each family life change and decide whether it happened to any member of your family" including you" during the past 12 months and check **Yes** or **No**.

	During the last 12 months	
Did the change happen in your family:	**Yes**	**No**
I. Intrafamily Strains 1. Increase of husband/father's time away from family		
2. Increase of wife/mother's time away from family		
3. A member appears to have emotional problems		
4. A member appears to depend on alcohol or drugs		
5. Increase in conflict between husband and wife.		
6. Increase in arguments between parent(s) and child(ren)		
7. Increase in conflict among children in the family		
8. Increased difficulty in managing teenage child(ren)		
9. Increased difficulty in managing school-age child(ren) (6-12 yrs)		

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	During the last 12 months	
Did the change happen in your family:	**Yes**	**No**
10. Increased difficulty in managing preschool-age child(ren) (2.5-6 yrs)		
11. Increased difficulty in managing toddler(s) (1-2.5 yrs)		
12. Increased difficulty in managing infant(s) (0-1 yr)		
13. Increase in the amount of "outside activities" which the children are involved in		
14. Increased disagreement about a member's friends or activities		
15. Increase in the number of problems or issues which don't get resolved		
16. Increase in the number of tasks or chores which don't get done		
17. Increased conflict with in-laws or relatives		
II. Marital Strains 18. Spouse/parent was separated or divorced		
19. Spouse/parent had an "affair"		
20. Increased difficulty in resolving issue with a "former" or separated spouse		
21. Increased difficulty with sexual relationship between husband and wife		
III. Pregnancy and Childbearing Strains 22. An unmarried member became pregnant.		
23. A member had an abortion		
24. A member gave birth to or adopted a child		
IV. Finance and Business Strains 25. Took out a loan or refinanced a loan to cover increased expenses		
26. Went on welfare		

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	During the last 12 months	
Did the change happen in your family:	**Yes**	**No**
27. Change in conditions (economic, political, weather) which hurts the family investments		
28. Change in agriculture market, stock market, or land values which hurts family investments and/or income		
29. A member started a new business		
30. Purchased or built a home		
31. A member purchased a car or other major item		
32. Increased financial debts due to overuse of credit cards		
33. Increased strain on family "money" for medical/dental expenses		
34. Increased strain on family "money" for food, clothing, energy, home care		
35. Increased strain on family "money" for child(ren)'s education		
36. Delay in receiving child support or alimony payments		
V. Work-Family Transitions and Strains 37. A member changed to a new job/career		
38. A member lost or quit a job		
39. A member retired from work		
40. A member started or returned to work		
41. A member stopped working for extended period (e.g., laid off, leave of absence, strike)		
42. Decrease in satisfaction with job/career		
43. A member had increased difficulty with people at work		

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	During the last 12 months	
Did the change happen in your family:	**Yes**	**No**
44. A member was promoted at work or give more responsibilities		
45. Family moved to a new home/apartment		
46. A child/adolescent member changed to a new school		
VI. Illness and Family "Care" Strains 47. Parent/spouse became seriously ill or injured		
48. Child became seriously ill or injured		
49. Close relative or friend of the family became seriously ill		
50. A member became physically disabled or chronically ill		
51. Increased difficulty in managing a chronically ill or disabled member		
52. Member or close relative was committed to an institution or nursing home		
53. Increased responsibility to provide direct care or financial help to husband's and/or wife's parents		
54. Experienced difficulty in arranging for satisfactory child care		
VII. Losses 55. A parent/spouse died		
56. A child member died		
57. Death of husband's or wife's parent or close relative		
58. Close friend of the family died		
59. Married son or daughter was separated or divorced		
60. A member "broke up" a relationship with a close friend		
VIII. Transitions "In and Out" 61. A member was married		

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	During the last 12 months	
Did the change happen in your family:	**Yes**	**No**
62. Young adult member left home		
63. Young adult member began college (or post high school training)		
64. A member moved back home or a new person moved into the household		
65. A parent/spouse started school (or training program) after being away from school for a long time		
IX. Family Legal Violations 66. A member went to jail or juvenile detention		
67. A member was picked up by police or arrested		
68. Physical or sexual abuse or violence in the home		
69. A member ran away from home		
70. A member dropped out of school or was suspended from school		

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APPENDIX C

SPOUSES PERCEPTION SCALE

Directions

The enclosed pages contain some statements about how spouses feel about your husband's surgical experience. There are no right or wrong answers to these statements. Let your own personal feelings determine your answers. Please check each statement in terms of whether you strongly agree, agree, are undecided, disagree, or strongly disagree. Check ALL statements but do not spend too much time on any one.

Checking a statement strongly agree means that you definitely and emphatically agree with it.

If you definitely disagree and have no doubt about your disagreement, check strongly disagree.

If you are not really sure about how you feel about a statement, check undecided.

If you agree with the statement generally, but are not completely emphatic about it, check agree.

If you disagree with the statement, but are not really emphatic in your disagreement with it, check disagree.

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1. Soon my spouse is going to be able to do all the things he used to do.					
2. Although very serious, I can take this surgery in my stride.					
3. My spouse will be doing more things for himself in a few days.					
4. Although serious, open heart surgery is a quick way to get well.					
5. Surgery is much safer today than it was before.					
6. The staff help make people comfortable when they have pain.					

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	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
7. The thought of my spouse having an incision does not upset me.					
8. The immediate family know how to manage while my spouse is in the hospital.					
9. Hospitals are the best place to be when you are sick.					
10. With God's help this operation is going to restore my spouse's health.					
11. I know what is going to happen to my spouse.					
12. Money is of little importance at a time like this.					
13. The pain after the operation did not amount to much.					
14. The immediate family is able to take care of itself while my spouse is recovering.					
15. Even though my spouse was operated upon, there are some things he is able to do for himself.					
16. If you have lots of faith in God, being operated on need not worry you.					
17. Medical science takes the chance out of an operation today.					
18. Surgery is necessary to my spouse's future health and well-being.					
19. My spouse is doing everything the way the doctors and nurses want.					
20. Surgery had to happen when it did.					
21. The people closest to me understand how I feel about my spouse's surgery.					
22. This is a very serious surgery and may impact our lives together.					
23. My spouse received the best possible care.					

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	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
24. This operation is going to remove my spouse's source of discomfort.					
25. It is a relief to me that the entire situation is out of my hands.					
26. The people who are taking care of my spouse are a great source of strength to me.					
27. Incisions are not very noticeable these days.					
28. At times like this I am glad to depend on other people.					
29. The experience of my spouse's surgery is like an adventure to me.					
30. I had confidence in the skill of the hospital staff.					
31. The people who are caring for my spouse give me courage.					
32. There is no need to worry about one's spouse being operated upon.					
33. Pain can be overcome in a situation like this.					
34. Modern drugs make people comfortable.					
35. Soon my spouse can take up where he left off.					
36. Most of my questions about the operation have been answered.					
37. I am being as little trouble as possible for the people taking care of my spouse.					
38. A scar from surgery does not matter.					
39. This operation creates no problem for the immediate family.					
40. With faith in God everything turns out well.					

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	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
41. I can take what goes on before and after the operation.					
42. We get wonderful care in our hospitals today.					
43. It is a relief I have no more decisions to make.					
44. The people who are taking care of my spouse know how I feel about his operation.					
45. With prayers all turns out well.					
46. My spouse can lead his usual life after the operation.					

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APPENDIX D

Instructions for completing Resilience Scale: Take a few minutes and indicate the degree to which you disagree or agree with each item. A score of 1 indicates you strongly disagree and a score of 7 indicates you strongly agree.

25-ITEM RESILIENCE SCALE

	Disagree						Agree
	1	2	3	4	5	6	7
1. When I make plans I follow through with them.							
2. I usually manage one way or another.							
3. I am able to depend on myself more than anyone else.							
4. Keeping interested in things is important to me.							
5. I can be on my own if I have to.							
6. I feel proud that I have accomplished things in my life.							
7. I usually take things in stride.							
8. I am friends with myself.							
9. I feel that I can handle many things at a time.							
10. I am determined.							
11. I seldom wonder what the point of it all is.							
12. I take things one day at a time.							
13. I can get through difficult times because I have experienced difficulty before.							
14. I have self-discipline.							
15. I keep interested in things.							
16. I can usually find something to laugh about.							
17. My belief in myself gets me through hard times.							
18. In an emergency, I am someone people generally can rely on.							
19. I can usually look at a situation in a number of ways.							
20. Sometimes I make myself do things whether I want to or not.							
21. My life has meaning.							
22. I do not dwell on things that I can't do anything about.							
23. When I am in a difficult situation, I can usually find my way out of it.							
24. I have enough energy to do what I have to do.							
25. It's okay if there are people who don't like me.							

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APPENDIX E

Social Support Index (SSI)

Directions

Read the statements below and decide for your family whether you: (1) **Strongly Disagree**, (2) **Disagree**, (3) **Neutral**, (4) **Agree**, or (5) **Strongly Agree** and circle that number.

Please indicate how much you agree or disagree with each of the following statements about your community and family:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. If I had an emergency, even people I do not know in this community would be willing to help.	0	1	2	3	4
2. I feel good about myself when I sacrifice and give time and energy to member of my family.	0	1	2	3	4
3. The things I do for members of my family and they do for me make me feel part of this very important group.	0	1	2	3	4
4. People here know they can get help from the community if they are in trouble.	0	1	2	3	4
5. I have friends who let me know they value who I am and what I can do.	0	1	2	3	4
6. People can depend on each other in this community.	0	1	2	3	4
7. Members of my family seldom listen to my problems or concerns; I usually feel criticized.	0	1	2	3	4
8. My friends in this community are a part of my everyday activities.	0	1	2	3	4
9. There are times when family members do things that make other members unhappy.	0	1	2	3	4
10. I need to be very careful how much I do for my friends because they take advantage of me.	0	1	2	3	4
11. Living in this community gives me a secure feeling.	0	1	2	3	4
12. The members of my family make an effort to show their love and affection for me.	0	1	2	3	4

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Please indicate how much you agree or disagree with each of the following statements about your community and family:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
13. There is a feeling in this community that people should not get too friendly with each other.	0	1	2	3	4
14. This is not a very good community to bring children up in.	0	1	2	3	4
15. I feel secure that I am as important to my friends as they are to me.	0	1	2	3	4
16. I have some very close friends outside the family who I know really care for me and love me.	0	1	2	3	4
17. Member(s) of my family do not seem to understand me; I feel taken for granted.	0	1	2	3	4

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APPENDIX F

Ways of Coping Questionnaire (WCQ)

Please think of your husband's surgery. Rate each item as to how you coped during and after the surgery.

0 = Does not apply or not used **1 = Used somewhat** **2 = Used quite a bit** **3 = Used a great deal**				
1. I just concentrated on what I had to do next—the next step.	0	1	2	3
2. I tried to analyze the problem in order to understand it better.	0	1	2	3
3. I turned to work or another activity to take my mind off things.	0	1	2	3
4. I felt that time would have made a difference—the only thing was to wait.	0	1	2	3
5. I bargained or compromised to get something positive from the situation.	0	1	2	3
6. I did something that I didn't think would work, but at least I was doing something.	0	1	2	3
7. I tried to get the person responsible to change his or her mind.	0	1	2	3
8. I talked to someone to find out more about the situation.	0	1	2	3
9. I criticized or lectured myself.	0	1	2	3
10. I tried not to burn my bridges, but leave things open somewhat.	0	1	2	3
11. I hoped for a miracle.	0	1	2	3
12. I went along with fate; sometimes I have bad luck.	0	1	2	3
13. I went on as if nothing had happened.	0	1	2	3
14. I tried to keep my feelings to myself.	0	1	2	3
15. I looked for the silver lining, so to speak; I tried to look on the bright side of things.	0	1	2	3
16. I slept more than usual.	0	1	2	3
17. I expressed anger to the person(s) who caused the problem.	0	1	2	3
18. I accepted sympathy and understanding from someone.	0	1	2	3
GO ON TO NEXT PAGE				

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0 = Does not apply or not used **1 = Used somewhat** **2 = Used quite a bit** **3 = Used a great deal**				
19. I told myself things that helped me feel better.	0	1	2	3
20. I was inspired to do something creative about the problem.	0	1	2	3
21. I tried to forget the whole thing.	0	1	2	3
22. I got professional help.	0	1	2	3
23. I changed or grew as a person.	0	1	2	3
24. I waited to see what would happen before doing anything.	0	1	2	3
25. I apologized or did something to make up.	0	1	2	3
26. I made a plan of action and followed it.	0	1	2	3
27. I accepted the next best thing to what I wanted.	0	1	2	3
28. I let my feelings out somehow.	0	1	2	3
29. I realized that I had brought the problem on myself.	0	1	2	3
30. I came out of the experience better than when I went in.	0	1	2	3
31. I talked to someone who could do something concrete about the problem.	0	1	2	3
32. I tried to get away from it for awhile by resting or taking a vacation.	0	1	2	3
33. I tried to make myself feel better by eating, drinking, smoking, using drugs, or medications, etc.	0	1	2	3
34. I took a big change or did something very risky to solve the problem.	0	1	2	3
35. I tried not to act too hastily or follow my first hunch.	0	1	2	3
36. I found new faith.	0	1	2	3
37. I maintained my pride and kept a stiff upper lip.	0	1	2	3
38. I rediscovered what is important in life.	0	1	2	3
39. I changed something so things would turn out all right.	0	1	2	3
40. I generally avoided being with people.	0	1	2	3
GO ON TO NEXT PAGE				

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0 = Does not apply or not used **1 = Used somewhat** **2 = Used quite a bit** **3 = Used a great deal**				
41. I didn't let it get to me; I refused to think too much about it.	0	1	2	3
42. I asked advice from a relative or friend I respected.	0	1	2	3
43. I kept others from knowing how bad things were.	0	1	2	3
44. I made light of the situation; I refused to get too serious about it.	0	1	2	3
45. I talked to someone about how I was feeling.	0	1	2	3
46. I stood my ground and fought for what I wanted.	0	1	2	3
47. I took it out on other people.	0	1	2	3
48. I drew on my past experiences; I was in a similar situation before.	0	1	2	3
49. I knew what had to be done, so I doubled my efforts to make things work.	0	1	2	3
50. I refused to believe that it happened.	0	1	2	3
51. I promised myself that things would be different next time.	0	1	2	3
52. I came up with a couple of different solutions to the problem.	0	1	2	3
53. I accepted the situation, since nothing could be done.	0	1	2	3
54. I tried to keep my feeling about the problem from interfering with other things.	0	1	2	3
55. I wished that I could change what had happened or how I felt.	0	1	2	3
56. I changed something about myself.	0	1	2	3
57. I daydreamed or imagined a better time or place than the one I was in.	0	1	2	3
58. I wished that the situation would go away or somehow be over with.	0	1	2	3
59. I had fantasies or wishes about how things might turn out.	0	1	2	3
60. I prayed.	0	1	2	3
61. I prepared myself for the worst.	0	1	2	3
62. I went over in my mind what I would say or do.	0	1	2	3
63. I thought about how a person I admire would handle this situation and used that as a model.	0	1	2	3

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0 = Does not apply or not used **1 = Used somewhat** **2 = Used quite a bit** **3 = Used a great deal**				
64. I tried to see things from the other person's point of view.	0	1	2	3
65. I reminded myself how much worse things could be.	0	1	2	3
66. I jogged or exercised.	0	1	2	3

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APPENDIX G

Introductory Letter to Participants

My name is Suzanne Marnocha and I am an Intensive Care Unit registered nurse completing my doctoral degree at the University of Wisconsin Milwaukee. I am very interested in learning what women think and feel during the first three months following the coronary artery bypass surgery of their husband.

I realize that having your husband undergo coronary artery bypass surgery can be very stressful for some women. However, many women whose husbands have had this surgery and are aged 55 and older have not been asked about this experience. In fact that is why I am contacting you. You were chosen as a woman who has to deal with the issues surrounding the surgery on a daily basis.

You are invited to participate in a research study investigating the stress, perceptions, resiliency and social support factors in your life that are impacting you as you cope with your husband's coronary artery bypass surgery. Your participation in this survey may help other women in the future cope more effectively with the coronary artery bypass surgery and first three months after discharge from the hospital.

If you chose to participate in this study, you will complete a survey that you will mail to me in an envelope provided to you by the surgical prep or cardiac rehabilitation staff. Please do not put your name on the survey or the return envelope because I want to protect your identity. As a matter of fact, I will not know your name. The information I receive from the completed surveys will be combined so no individual person can be identified. You will complete a total of six research questionnaires. All six are included in this survey packet. The total amount of time this will take is approximately 50 minutes. Please feel free to take your time to answer the questions so you do not feel tired out.

The entire research study will take approximately 12 months to complete and I will be asking approximately 70 women like you to participate.

Your participation is completely voluntary and you may decide to stop your participation at any point without penalty. Your decision whether to participate or not will not affect the treatment you or your spouse receive.

Although I could study these questions by just interviewing your doctor and the office staff, I feel that obtaining direct information from you is the best way to understand the experience of living through the first three months after the coronary artery bypass surgery of your husband.

There are no foreseeable risks to your participation. You should not incur any costs since I have included a self-addressed stamped envelope, which the cardiac rehabilitation staff will give you. *The time you spend is precious and I am grateful that*

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you would consider taking the time necessary to answer the questions to the best of your ability. Once the study is completed, I would be glad to give the results to you. In the meantime, if you have questions, please contact the cardiac rehabilitation office.

If you feel the research project has caused you any unusual stress, or other ill effects, please contact your healthcare provider. If you have any complaints about your treatment as a participant in this study please call or write:

Dr. Brian Moore, Institutional Review Board
Appleton Medical Center and Theda Clark Medical Center
[redacted]

OR

Dr Kristen Steffen, Institutional Review Board
Affinity Health System
[redacted]

OR

Joyce McCollum, Institutional Review Board
Bellin CIRB Human Subject Rights
[redacted]

OR

Dr. Berri Forman
Institutional Review Board for the Protection of Human Subjects
Department of Environmental Health, Safety and Risk Management
University of Wisconsin-Milwaukee
[redacted]
Although D. Foreman will ask your name, all complaints are kept in confidence.

I have received an explanation of this study and agree to participate. I understand my participation in this study is strictly voluntary. I am consenting to this study by returning this survey. This research project has been approved by the University of Wisconsin-Milwaukee Institutional Review Board for the Protection of Human Subjects for a one-year period.

Sincerely,

Suzanne K. Marnocha RN, MSN, CCRN, Doctoral Candidate

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APPENDIX H

Links Among FILE Responses, WCQ Scales, and External Stressful Circumstances at the Time of Survey Completion

In order to consider further the impact of 9/11/01 events, postmarks from all subjects' surveys were coded by the number of days post-911, which ranged from 13 to 293 days. When days between CABG and postmark were computed, using postmark data and the indicated number of days between CABG and survey, it appeared that only 3 CABGs could possibly have occurred prior to 911, and likely all surveys were completed after 911. To examine the ongoing indirect effects on the economy, the Dow Jones (DJIA) closing average for the week prior to each subject's postmark date was analyzed. Market levels, post-911, ranged from 8019 to 10607 for the DJIA.

Time of CABG and survey postmark relative to 911 had little relation with WCQ variables; the only significant relationship was between time of 911 to postmark and seeking social support, such that longer time since 911 was associated with less seeking social support coping ($r = -.23$; $p \leq .024$).

However, the DJIA, observed at the close of the week prior to the postmark date, showed several correlations of interest with the WCQ. With a higher market close, subjects tended to report lower WCQ total and less distancing coping (2-tailed r's = -.21 and -.23, respectively; both with $p \leq .05$). In addition there were near-significant tendencies for higher market closes to correlate with less use of seeking social support, planful problem-solving, and positive re-appraisal coping (2-tailed r's of -.18 to -.19; p's .08 to ,055). Controlling for income, number of children and other demographics via partial correlations did not attenuate these correlations.

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APPENDIX I

UW-Milwaukee IRB Approval Memorandum

University of Wisconsin-Milwaukee
Graduate School, Office of Research Services & Administration — Room 273, Mitchell Hall
Institutional Review Board for the
Protection of Human Subjects

MEMORANDUM

Date: June 26, 2001

To: Suzanne K Marnocha
Doctoral Student, Nursing
[redacted]

From: Jeanne M. Kreuser, Human Protections Administrator
Institutional Review Board for the Protection of Human Subjects

Re: **Protocol #02-02-005**
Title: *Influence of Stress, Cognitive Appraisal, Resiliency and Social Support on Coping of Older Female Spouses After Coronary Artery Bypass Surgery*

I would like to acknowledge receipt of the materials requested by the Institutional Review Board (IRB) in granting approval of your protocol. As final materials fulfilling conditions for exemption were received by the Department of Health, Safety, and Risk Management on June 25, 2001 **your protocol is approved as exempt.**

You do not need to have further review of this protocol. **However, it is the policy of the University of Wisconsin-Milwaukee that, *if necessary to your research protocol,* you must have your signed affiliation letters filed with the Institutional Review Board (IRB) Office before you may begin your research.** Signed affiliation letters from the agencies with whom you are doing research are only necessary *if you are doing your research at an organization other than UWM, where you are not employed and where you do not have a contractual relationship.*

If you have questions or if your plans for human subject involvement change substantially from those approved by the IRB, please contact me at the IRB Office ([redacted] or via email at [redacted], to arrange for a review of the new procedures.

Thank you for your cooperation and best wishes for a successful project.

cc: Protocol File
Jane Leske – Associate Professor, Nursing Foundations

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SUZANNE K. MARNOCHA RN, MSN, CCRN, Ph.D. candidate

[redacted]

PROFESSIONAL VITA

EDUCATION AND LICENSURE

Doctoral studies	University of Wisconsin, Milwaukee Ph.D. program	1994-present
Licensure	State of Wisconsin (#106897)	1991-present
MSN	University of Evansville	1990
BSN	University of Evansville	1982-1984
CCRN	Critical Care Registered Nurse (#20437)	1982-present
Licensure	State of Indiana (#066331)	1980-present
ACLS, BLS	Annual Certification for ACLS (Advanced Cardiac & Basic Life Support) instructor	1978-present
PALS	Pediatric Advanced Life Support Provider	1996-present
Licensure	State of Iowa	1977-1980
Licensure	State of Minnesota	1976-1977
RN-Diploma	St. Elizabeth Hospital School of Nursing Lafayette, Indiana	1973-1976
	Michigan State University	1971-1972

PROFESSIONAL AFFILIATIONS

Biofeedback Society of Wisconsin
American Association of Critical Care Nurses
American Heart Association
Indiana Society for Healthcare Education and Training
Sigma Theta Tau
Tri-State Critical Care Society
Phi Kappa Phi
Midwest Nursing Research Society
American Nurses Association
Wisconsin Nurses Association
Fox Valley District Nurses Association
Fox Valley Health Professionals
Doctoral Student Nurse Organization (Milwaukee)
American Association of University Women
American Association of University Professors

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COMMITTEE AND ORGANIZATIONAL EXPERIENCE

Conference Coordinator Dialoguing Globally and Culturally, India	2001-2003
Board of Directors, Biofeedback Society of Wisconsin	2002-present
President Sigma Theta Tau, Eta Pi Chapter	2000-2002
Chair, Chancellors' committee for Honorary Doctorate Award	2000-present
Member, Student Conduct Panel, University Committee	1998-present
Board of Directors, Fox Valley District Nurses	1998-present
Member of various College of Nursing Committees including College Committee, Recruitment Council, Undergraduate Program, and Nursing Center Committees	1998-present
Secretary, Doctoral Student Nurse Organization	1994-1996
Chair, State PR/Membership Committee, WNA, Madison WI	1994
Member, Recruitment Council, University Committee	1997-2001
President, Fox Valley District Nurses Association of the WNA	1994
Member, Fox Valley Health Professionals, Appleton WI	1993
Member, PR/Membership Committee, Wisconsin State Nurses Association Madison WI	1993
President-elect, Fox Valley District Nurses Association of the Wisconsin Nurses Association	1993
Member, Appleton District Nurses Board and Program Committee Appleton WI	1992-1993
Member of various College of Nursing Committees including Library and Learning Resources (Chair), Undergraduate Program, Research and Faculty Development, Recruitment and Retention Committee	1994-1998
Chair, Code Blue Committee, St. Elizabeth Hospital, Appleton WI	1991-1994
Member, Nursing Practice Committee, St. Elizabeth Hospital, Appleton WI	1991-1994
Member, Documentation Committee, St. Elizabeth Hospital, Appleton WI	1991-1994
Member, Critical Care Committee, St. Mary's Medical Center, Evansville IN	1987-1990
Chair, Speakers Subcommittee, American Heart Association, Kentucky/Indiana	1987-1989
Member, Planning Committee, American Heart Association, Kentucky/Indiana	1987-1988
Member, Nursing Diagnosis Committee, St. Mary's Medical Center, Evansville IN	1987-1989
Member, Performance Standards Committee, St. Mary's Medical Center Evansville IN	1987-1989
Member, Intensive Care Committee, St. Mary's Medical Center, Evansville IN	1987-1989
Member, Regional Open-Heart Surgery Subcommittee on Education St. Mary's Medical Center, Evansville IN	1987-1989
Member, Nurse Marketing Committee, St. Mary's Medical Center, Evansville IN	1986-1987
Committee Memberships, AACN Chapter, Evansville IN (Membership, Program, and Publications)	1982-1990
President, AACN Chapter, Evansville IN	1985-1986
Coordinator, AACN Symposium on "Multi-Organ Recovery and Transplantation" Evansville IN	1986
Member, Therapeutic Environment Committee, MICU, St. Mary's Medical Center Evansville IN	1982-1985
President, Winneshiek County Nurses' Association, Decorah IA	1979-1980
Chairperson, Audit Committee, ICCU, Winneshiek County Memorial Hospital Decorah IA	1977-1980

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Coordinator of Transition to Subjective-Objective Assessment Plan (SOAP) 1977-1980
Winneshiek County Memorial Hospital, Decorah, IA

BOOK REVIEWS, PAPERS, PRESENTATIONS

Publications:

Gay, B. & Chernecky, C.C. (2002). *Saunders manual for medical surgical nursing: A guide for clinical decision-making*, Chapter 28 on Endocrine (Hypoparathyroidism, hyperparathyroidism, hypothyroidism and hyperthyroidism). W. B. Saunders Company: PA.

Marnocha, S. (2001).*Influence of stress, cognitive appraisal, resilience and social support on coping of older female spouses after coronary artery bypass surgery.* Unpublished doctoral dissertation proposal. University of Wisconsin, Milwaukee

Marnocha, S. (1999). Exploring our potential in changing times. *Dialogue with Eta Pi, 11*, 2.

Silvestri, L.A. (1999) *Saunders q & a review for NCLEX-RN*. W. B. Saunders Company, Philadelphia. (Content contributor).

Cohen, S. & Doyle, F.E. (1998). Types of stressors that increase susceptibility to the common cold in healthy adults: Article review. *Evidence-Based Nursing, 2,* 54.

Book Reviews:

Pharmacotherapeutics: Case studies for treatment reasoning.
F. A. Davis Company, PA. 1998

Perspectives on pathophysiology, W. B. Saunders Company, Chapter 45:
Chronic Disorders of Neurological Function. 1997

Perspectives on pathophysiology, W. B. Saunders Company Chapter 37:
Clients With Cardiac Problems 1997

W. B. Saunders Company, NCLEX Review Products. 1997

Rapid nursing intervention: Cardiovascular. Delmar Book Series Review Board. 1997

Bedside critical care. Jennings & Keefe: Media Development 1995

Pechan, M. K. *Coronary care modules.* Williams and Wilkins 1987

Papers:

"Influence of stress, cognitive appraisal, resilience and social support on coping of older women whose spouses have undergone coronary artery bypass surgery" 2003
Doctoral Dissertation
STTI-International Research Conference Chennai India

"Alzheimer's Knowledge Assessment" 1994
Sigma Theta Tau, Eta Pi Chapter,
Pioneer Inn, Oshkosh, WI

"Alzheimer Knowledge Assessment" 1990
MSN Thesis

"Patient Perceptions of Noise in the ICU" 1985
Paper prepared for MIC Administration
St. Mary's Medical Center, Evansville IN

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Presentations:

"Using Humor to Survive" Kimberly Clark Corporation 2002

"Growing Older, Growing Wiser" Woman's' Wellness Conference.
Green Lake, WI 2002

UW Oshkosh Speakers' Bureau multiple presentations 2000-present

"Cardiovascular Update", ' Acute Care Nurse Practitioners", and
"Managing Acute Pain." Multiple presentations and sites
Chennai and New Delhi, India 2001

"Using Case Studies in Undergraduate Medical Surgical Classes".
American Association of the Colleges of Nursing, Chicago 2001

"Using Case Studies in Teaching Undergraduate Nursing Students"
Sixth International Middle East Nursing Conference, Irbid, Jordan
2000
"Stress and Coping of Older Women", Eta Pi Research Day 2000

" Case Studies as a Teaching Method with Undergraduate Students"
12th Annual Conference for Teachers of Nursing Practice, Madison, WI 2000

"Case Studies as a Teaching Method: Educating for the New Millennium"
Villanova and Rutgers Universities, Philadelphia, PA 1999

"Alzheimer's Disease Overview and Care"
State meeting, Wisconsin Insurance Underwriters Association, Oshkosh
Hilton 1997

"Growing Older, Growing Wiser"
Presentation through UWO Speakers Bureau, multiple sites 1996-present

"Using Humor and Creativity to Survive"
Presentation through UWO Speakers Bureau, multiple sites 1996-present

Pharmacology and Adult Health Courses for Junior II UWO Courses 1996-present
"Your Professional Responsibility"
Presentation to Oshkosh Student Nurses Assn. (OSNA) 1995

"The Role of the Clinical Nurse Specialist" 1994
Presentation to Nurse Practitioner Class, UWO

"Cardiovascular Medications" 1994
New London Family Medical Center, New London WI

Level II Alterations in Health Care Practicum for Level II 1994
UWO

Basic, Intermediate, and Advanced Hemodynamic Monitoring 1993-1994

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St. Elizabeth Hospital, Appleton WI, Mercy Medical Center, Oshkosh WI, and additional outlying hospitals

"The Ventilator Patient" 1993
Riverside Medical Center, Waupaca WI

Core Critical Care Classes and Critical Care Grand Rounds for ICU/CVU Staff 1992-1994
St. Elizabeth Hospital, Appleton WI

"Hemodynamic Monitoring" 24-Hour Course 1992
New London WI

"Caring for the Critically Ill Adult" 1992
UWO School of Nursing, Oshkosh WI

"Differential Diagnosis of Chest Pain" 1990
American Heart Association, Regional Symposium, Evansville IN

"Assessment of Heart Sounds" 1990
Tri-State Regional Heart Institute, Huntingburg Hospital

"CV Patient Assessment" 1990
SE Illinois University

All in-house Critical Care Classes for Basic and Advanced, including 1987
Hemodynamics and Intra-Aortic Balloon Pumping
St. Mary's Medical Center, Evansville IN

"Future in Critical Care Nursing" 1987
AACN, Evansville Chapter

"Cardiac Assessment" 1987
University of Evansville School of Nursing

"Heart Sounds" 1986
Critical Care Class Lecture, Human Resource Development
St. Mary's Medical Center, Evansville IN

"Ventricular Ectopy" 1984-1985
Critical Care Class Lecture, Human Resource Development
St. Mary's Medical Center, Evansville IN

"Streptokinase and PTCA Update" 1984
Presentation to American Heart Association Regional Conference
Owensboro KY

"Streptokinase: Nursing Perspectives" 1983
Presentation to American Heart Association Regional Conference
Owensboro KY

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"Streptokinase: Nursing Perspectives" 1983
Presentation to AACN, Evansville IN

TEACHING AND TRAINING EXPERIENCE

Advanced Cardiac Life Support Instructor 1989-present
Basic Cardiac Life Support Instructor 1980-2002
Instructor (part-time), Coronary Care, Geriatric Care, and 1977-1980
Home Health Classes
Member, Lafayette Crisis Center Training Committee and Speaker's Bureau 1973-1974
Lafayette IN

CLINICAL EXPERIENCE AND EMPLOYMENT

Assistant Professor, College of Nursing 1994-present
University of Wisconsin Oshkosh, Oshkosh, WI
ICU Float Nurse, ThedaCare 1994-present
Appleton, WI
Case Management Coordinator for Critical Care 1993-1994
St. Elizabeth Hospital, Appleton WI
Clinical Nurse Specialist-Critical Care 1991-1994
St. Elizabeth Hospital, Appleton WI
Critical Care Educator - ICU/CRU/ER 1991
St. Mary's Medical Center, Evansville IN
Education Coordinator - ICU/CRU 1990-1991
St. Mary's Medical Center, Evansville IN
Critical Care Coordinator, MIC 1987-1990
Education Department
St. Mary's Medical Center, Evansville IN
Open-Heart Unit Staff Nurse & Cardiac Transport Team 1986
St. Mary's Medical Center, Evansville IN
Supplemental Critical Care Staff 1986
Deaconess Hospital, Evansville IN
Staff - Charge Nurse, MIC 1981-1987
St. Mary's Medical Center, Evansville IN
(Certified for Code Blue Team, ACLS, and IABP)
Staff - Charge Nurse, Medical-Coronary ICU 1980-1981
Home Hospital, Lafayette IN
(Certified for ACLS, IV Therapy, and Code Teams)
Charge Nurse, Intensive Coronary Care Unit 1977-1980
Winneshiek County Memorial Hospital, Decorah IA
(Certified for IV Therapy, Code Team and Ambulance Transfers)
Charge Nurse (part-time) 1977
Winneshiek County Health Care Facility, Decorah IA
Charge Nurse, Neurosurgical Unit 1976-1977
University of Minnesota Hospitals, Minneapolis MN

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Clinical Experiences St. Elizabeth Hospital School of Nursing, Lafayette IN (Standard rotations, plus three weeks ICU/CCU and seminar)	1973-1976
Nurses Aide Provincial House, East Lansing MI (Geriatric Care)	1971-1972

COMMUNITY SERVICE EXPERIENCE

Board of Directors, Fox Valley Unitarian Universalist Church	1999-2001
League of Women Voters	1998-present
Volunteer Counselor, Teen Health Line, American Red Cross	1989-1991
Instructor, WIKY-UE CPR Day, Evansville IN	1983-1991
Staff Nurse, Women's Free Clinic Luther College Health Service, Decorah IA	1979
Crisis Counselor, Lafayette Crisis Center Lafayette IN	1973-1976
Counselor, Women's Exchange, YWCA Lafayette IN	1973-1976
Teachers' Aide, Wabash Center for the Mentally Handicapped Lafayette IN	1972
Geriatric Aide, Red Cross East Lansing, MI	1968-1969

Dissertation Title: Influence of Stress, Cognitive Appraisal, Resilience and Social Support on Coping of Older Women Whose Spouses Have Undergone Coronary Artery Bypass Surgery

[redacted] 4/30/03

Major Professor Date

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