Living with heart disease: The impact of a cardiac event on patients and their partners.

Gordana Bruce

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Faculty of Life and Social Sciences

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Abstract

Coronary heart disease (CHD) is a major cause of disease burden and the largest single cause of death in Australia. Continued improvements in detection, prevention and treatment of CHD have resulted in major declines in death rates, meaning that there are now more people living with heart disease than ever before.

The aim of this thesis was to explore the patterns of adjustment of cardiac patients and their partners. Adjustment was examined in terms of self-reported health and psychosocial outcomes (changes in lifestyle; psychological distress; perceived support; life satisfaction; relationship satisfaction; posttraumatic growth), with a particular interest in any differences based on gender or role (patient, partner).

Study 1 gathered qualitative responses from 56 partners of cardiac patients recruited through a cardiac rehabilitation program. Study 2 gathered both quantitative and qualitative responses from 30 couples in which one member had experienced a cardiac event (heart attack, angioplasty, bypass surgery).

Quantitative findings suggested that age was an important factor relating to variability in self-reported health and psychosocial outcomes for both patients and partners, with younger people reporting greater adjustment difficulties than older people. Once age was controlled, only a few gender and/or role effects were found. Women reported greater avoidance than men, while patients reported greater avoidance than partners. Women reported greater posttraumatic growth than men. Male patients and female partners reported greater difficulty making lifestyle changes than female patients and male partners. Analyses of couples’ experiences indicated that perceptions of change in the patient’s mood and the couple’s relationship were related to variability in the psychosocial outcomes, with these effects being more evident for partners than for patients.

Qualitative findings confirmed and added greater depth to quantitative results. In particular, difficulties with the recovery process were often related to the need for more information about the potential psychological impact of a cardiac event on the patient. Many people felt unprepared for these changes, which impacted on the quality of the couple’s relationship. Younger respondents noted a need for age appropriate
information and support. Perceived benefits resulting from the cardiac event included improved health practices and changes in life perspective.

The findings revealed the variety of individual and relationship consequences of a cardiac event, and highlighted the importance of considering couples’ experiences in assessing adjustment of both patients and partners. Results also highlighted the informational and support needs which health care providers need to address in helping couples adjust to the demands of living with heart disease.
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Thank You
Declaration

This thesis contains no material which has been previously accepted for the award of any other degree or diploma.

To the best of my knowledge, this thesis contains no material previously published or written by another person, except where due reference is made in the text of the thesis.

Signed ________________________________

Date _________________________________
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Chapter 1: INTRODUCTION

1.1 CORONARY HEART DISEASE: AN OVERVIEW

Everyone with heart disease knows that if you survive a first heart attack, life becomes a long, complex negotiation with the menace – the killer in black pyjamas who has come to live in the basement. You hear him down there. Sometimes he climbs the stairs and beats on the kitchen door. You feed him sublingual pellets of nitro and tell him to settle down (Morrow, 1998).

The term “cardiovascular disease” (CVD) refers to all conditions of the heart and blood vessels. Closely behind cancer, CVD is Australia’s second leading cause of disease burden, which is defined as “the combined extent of disability and premature death” (Australian Institute of Health and Welfare (AIHW), 2008, p. 175). The main underlying cause of CVD is plaque formation, “a process marked by abnormal build-ups of fat, cholesterol and other substances in the inner lining of the arteries” (AIHW, 2008, p. 182).

Coronary heart disease (CHD) is the most common form of CVD and is the largest single cause of death and the most common cause of sudden death in Australia (AIHW, 2009a). It has been called “by far the greatest epidemic in Australia during the twentieth century” (AIHW: Mathur, 2002, p. 1) There are two major clinical forms of CHD, heart attack and angina.

A heart attack occurs when a coronary plaque suddenly breaks open causing a blood clot which completely stops blood flow to one of the vessels supplying blood to the heart. This is a life-threatening condition which can cause damage or death to some part of the heart muscle, a condition which is called acute myocardial infarction or AMI (AIHW, 2004, 2008), and sometimes abbreviated to MI (Scheidt, 1996).

Angina is a chronic condition which results in short episodes of chest pain when the heart has a temporary deficiency in its blood supply. With angina, plaque has narrowed at least one coronary artery to the point where it cannot meet extra demands for blood supply incurred by exercise or strong emotion (AIHW, 2008). Although an episode of angina is not typically life-threatening, people with angina are more prone to sudden cardiac death or AMI than the general population (AIHW, 2004, 2008).
Procedures for treatment of CHD include coronary artery bypass graft (CABG) surgery, coronary angioplasty and coronary stenting (AIHW, 2004). CABG surgery involves opening a patient’s chest and using arteries from the chest wall and sometimes also veins from the legs or arms as graft material to bypass blockages in the coronary arteries and restore adequate blood supply to the heart. Coronary angioplasty involves inserting a catheter with a balloon into a narrowed artery. The catheter is usually inserted through a leg artery and threaded through the vessel to the heart. Once in place, the balloon is inflated against the blockage to create a wider passage for blood flow. Coronary stenting is another catheter-based procedure and is an adjunct to coronary angioplasty. It involves expanding a metal mesh tube within the artery to provide a support structure which holds the artery open at the site of the narrowing. In 2001-02 coronary stenting was included in 91% of coronary angioplasty procedures (AIHW, 2004). More recently, the term percutaneous coronary intervention (PCI) has been used to describe coronary angioplasty and coronary stenting (AIHW, 2008). There was a doubling in the use of PCI over the period 1996-97 to 2005-06 (AIHW, 2008).

The prevalence of heart stroke and vascular conditions increased by around 18% in Australia between 1994 and 2004 (AIHW, 2004). It is estimated that approximately 3.2% of Australians currently have CHD, but the prevalence of CHD increases with age. Based on self reports from the 2004-05 National Health Survey, approximately 7.5% of Australians aged 55-64 have CHD, while 20.3% of people aged 75 years and over have CHD. After adjusting for age, males are 1.8 times as likely as females to report angina, and 3 times as likely to report heart attack (AIHW, 2008).

Roughly 40% of Australians who suffer a heart attack die within a year of the event. Approximately 50% of all heart attack deaths occur before the person reaches the hospital with about 25% of those who have a heart attack dying within an hour of their first ever symptoms (AIHW, 2004, 2008).

In spite of this, death rates from heart disease have decreased markedly in Australia and internationally (AIHW, 2009a.; Fox et al., 2007). Death rates in Australia due to CHD peaked in 1968 when the age-standardised rate was 428.3 per 100,000 of population. From 1968 to 2006, the age-standardised death rate from CHD fell by 76%, with the actual number of deaths attributable to CHD in 2006 being 22,983, equating to 101.8 per 100,000 of population (AIHW, 2009a). This dramatic decline in death rates has been attributed to a combination of research and improvements in detection, prevention and treatment of CHD, including improvements in emergency medical
services and increases in specialised coronary care units (AIHW, 2009a; Fox et al., 2007). The decline in death rate means that not only have many lives been saved, but also that many people have gained additional years of life. The decline in death rates from CHD since 1968 means that in 2006, 73,000 lives were saved, resulting in an estimated additional 656,000 person years gained for the Australian population. According to AIHW (2009a), “Australians aged 55-64 years may have gained the most from the reduction in CVD and CHD death rates in terms of ‘lives saved’, while those aged 55-69 years may have benefited most in ‘years of life extended’ (assuming an arbitrary life expectancy of 80 years.” (p.2)

From the empirical evidence showing both increases in the prevalence of CVD and better survival rates for people with CHD (AIHW, 2004; AIHW, 2009a; Fox et al., 2007) it can be inferred that there are now more people living with heart disease as a chronic condition than there have been in the past. By logical extension, it can also be inferred that more spouses and partners also need to adjust to the challenges of living with heart disease. It is therefore important to gain insights into the experience of living with heart disease so that appropriate medical and support services can be made available for the growing number of people who face this prospect.

1.2 RESEARCH AIMS AND DESIGN

The overarching aim of the thesis was to examine the impact that a cardiac event has on patients and their partners. Coyne and Fiske (1992) suggested contextual methods of research may be the most appropriate ways to gain a deeper insight into the processes involved in adjusting to a chronic condition such as heart disease. They suggested the use of semi structured interviews “to obtain rich information from respondents”, followed by the application of “investigator-based categories to systematize and quantify it” (Coyne & Fiske, 1992, p.145). This suggestion was a forerunner to the more recent calls for a mixed-method approach to psychological research (Clarke, 2004; Todd, Nerlich & McKeown, 2004).

Todd et al., (2004) argue that psychological research has much to gain by using qualitative and quantitative methods together, and put forward ten reasons for the benefits of a mixed-method approach. Three of these reasons are particularly relevant in the context of the current thesis. Firstly, Todd et al., argue that using different methods which ultimately yield similar results, increases confidence in the overall findings. In
addition, they argue for the usefulness of using qualitative research as a prelude to further study, particularly in assessing whether participants come up with any topics that were not initially included by the researchers (Todd et al., 2004). Finally, they suggest that “different methods may be more suitable for looking at different levels of the same problem, and only through a mixed-methods approach can these different levels become enmeshed” (Todd et al., 2004, p. 10).

Clarke (2004) also argues for the usefulness of a mixed-methods approach, and contends that “the qualitative/quantitative distinction is not really fundamental” (p. 81). He proposes that the combination of qualitative and quantitative approaches may “produce findings which are more understandable, more credible, and easier to use in the context of everyday beliefs and practices” (p. 83).

Similar to Clarke (2004), Crotty (1998) contends that the distinction between quantitative and qualitative research does not occur at the level of theoretical perspective (i.e. the philosophical stance lying behind a methodology), but rather at the level of methods (i.e. the concrete techniques or procedures used). Thus, he argues against the divide between qualitative and quantitative research, which he says is often depicted in research textbooks, by setting qualitative and quantitative research “against each other as polar opposites” (Crotty, 1998, p. 15). Crotty contends that, while researchers need to justify their chosen methodology (the research design that shapes the choice and use of particular methods), ultimately researchers devise their own ways of proceeding, which allow them to best achieve their purpose.

The theoretical perspective of this thesis is descriptive and interpretive. The methodology of this thesis follows Coyne and Fiske’s (1992) suggestion, and uses a mixed-methods approach (Clarke, 2004; Todd et al., 2004) whereby an initial qualitative study (Study 1) sought to elicit the important issues for partners of cardiac patients. The themes that emerged from this first study informed a second study (Study 2) of both patients and their partners. This couples study examined the issues that emerged from the initial partner-only study in more detail through a combination of qualitative and quantitative methods.

Study 1 was a qualitative study of male and female partners of cardiac patients. The aim of this study was to examine the subjective experience of partners of cardiac patients shortly after the patient’s cardiac event. A qualitative method was used in order to elicit the issues that were deemed important by the partners themselves. This was
done through a questionnaire with a series of open-ended questions. A questionnaire format was chosen since it allowed for anonymity of respondents and thus increased the potential for complete candor of responses. It also allowed the respondents to reflect on the questions and their responses in their own time, which maximized the potential for respondents to give as much detail as they felt was appropriate.

The aim of Study 2 was to follow up on the themes which emerged from Study 1 and to examine these themes in more detail with both male and female patients and their partners. Study 2 used a questionnaire which included both open-ended questions and standard quantitative measures. Of particular interest in Study 2 was the examination of psychosocial outcomes for patients and partners, and couples’ experiences following the cardiac event, with an exploration of any differences based on gender and role (patient or partner) of the respondents.

1.3 OUTLINE OF THESIS

Chapter 2 gives a definition of terms as they are used in this thesis and then reviews the literature regarding spouses / partners of cardiac patients. Initially the four “classic” early studies with spouses of cardiac patients (Croog & Fitzgerald, 1978; Mayou, Foster, & Williamson, 1978; Skelton & Dominian, 1973; Stern & Pascale, 1979) are reviewed. Following this, an overview of the more recent quantitative and qualitative literature is provided. The quantitative studies reflect the theory-driven or researcher-derived areas of interest, while the qualitative studies reflect the issues that were deemed important by the spouses themselves. This literature review provided the basis for Study 1.

Chapter 3 presents the methodology and findings for Study 1, a qualitative study with 42 female and 14 male spouses of cardiac patients. Respondents were asked to reflect on their subjective experience of their partner’s cardiac event, on any lifestyle changes they may have made as a result of the event, on any perceived changes in their relationship and on what they found helpful and unhelpful during the time since the cardiac event. Findings are discussed in relation to the themes which emerged from the data.

Chapter 4 reviews the literature regarding couples’ experiences following a cardiac event. Particular emphasis is given to research which relates to the major themes identified in Study 1 which informed the design of Study 2. An overview of the
literature for each theme is provided and consideration is given to areas where more research is needed. The bulk of the literature reviewed is quantitative, but a separate section is provided reviewing qualitative literature with couples following a cardiac event.

Chapter 5 presents the methodology for Study 2. The overall aim of the study and the specific research questions are outlined, followed by information regarding participant characteristics, and the materials and measures used in the study. Procedures for the recruitment of participants and administration of the survey are described and an indication of response rates is provided.

Chapter 6 presents the quantitative findings regarding self-rated health and psychosocial outcomes for patients and partners. The focus here was on examining the effects of gender and/or role for self-reported health, lifestyle factors, perceived support, levels of distress, satisfaction with life, relationship satisfaction and posttraumatic growth. Information is provided regarding data screening, normality testing and preliminary analyses which were conducted prior to the main analyses. Findings are discussed in relation to gender and/or role effects on self-reported health and psychosocial outcomes for patients and partners.

Chapter 7 presents further quantitative findings regarding couples’ experiences. Only data for the 30 intact couples was used. The focus in this chapter was on examining the interconnections among the psychosocial variables, lifestyle changes, and perceived changes in the patient’s mood and the couple’s relationship. The analyses involved an examination of within-couple comparison for the study variables as well as a detailed examination of the relationships between these variables. Findings are discussed in relation to couples’ experiences of health and psychosocial outcomes.

Chapter 8 presents emerging themes from the qualitative responses given by patients and partners. Information is provided separately for each of the qualitative questions posed to the respondents, broken down by gender and role (e.g., male patients, female patients, etc). Summary findings are presented for each question and overall findings are discussed.

Chapter 9 draws together and consolidates the summary discussions presented in earlier chapters (3, 6, 7, and 8). This final chapter integrates the findings from Study 1 and Study 2 and considers potential limitations of the study as well as avenues for practical application of the findings and suggestions for further research.
Chapter 2: PARTNERS OF CARDIAC PATIENTS

2.1 CHAPTER OVERVIEW

This chapter focuses on research examining the impact of a cardiac event on the patient’s spouse or partner. A brief introduction is given regarding sources of personal stressors and sources of support in a crisis (Section 2.2) followed by an explanation for the terms “spouse” and “partner” as they are used in this thesis (Section 2.3). Section 2.4 reviews the classic early studies with wives of men who had survived a heart attack. Section 2.5 reviews the more recent quantitative (Section 2.5.1) and qualitative (Section 2.5.2) studies of spouses of cardiac patients. A summary of the findings and the rationale for Study 1 are presented in Section 2.6.

2.2 PERSONAL STRESSORS AND SOURCES OF SUPPORT IN A CRISIS

The Australian Bureau of Statistics (ABS) (2007a) defines personal stressors as “events or conditions that may adversely impact on an individual’s life or the collective lives of families” (p.11). They go on to say that a stressor may impact on an individual directly (e.g., suffering from a serious illness), or indirectly through a family member’s experience (e.g., a family member’s serious illness). Results from the 2006 General Social Survey indicated that 59% of Australians aged 18+ reported at least one potentially stressful situation or event in the preceding 12 months, with the most common stressor for 23% of the population being a serious illness of self or someone close (ABS, 2007a).

There is now an extensive body of research examining the impact of a cardiac event on the patient. This body of research has led to improvements in in-hospital coronary care, as well as improvements in discharge planning and follow-up measures for patients. However, shorter hospital stays (Randall, Molloy & Steptoe, 2009) mean that patients often need additional support during the recovery period. When asked about possible sources of support in times of crisis, 80% of Australian men and women indicated family members (ABS, 2007a), and it is generally accepted that an
individual’s partner is the most likely person to be the main provider of support (Randall, et al., 2009).

2.3 Spouses, Partners or Carers

The literature on a patient’s “significant other” uses a variety of terms when referring to this person. Apart from the gender specific use of “husband” and “wife”, the most commonly used terms are spouse, partner and carer (or caregiver). It is important to clarify the use of these terms, as they are not necessarily interchangeable. The term spouse is defined as a husband or a wife (Hornby, 2001) and should be used to describe a person in a marital relationship. Partner is a more inclusive term and is generally understood in a broader sense to describe members of a couple in an intimate relationship, whether it is a marriage or a de facto relationship. The term carer has come into usage in more recent times, and has the specific connotation of providing care for another person who, due to physical or mental disability, needs assistance in the day-to-day tasks of living (dressing, bathing, eating, taking medications, transport, etc) (Hornby, 2001). A spouse or partner may take on the carer role, but not all people with an illness or chronic condition require a carer.

The focus of this thesis is on respondents living in an intimate relationship with someone who has experienced a cardiac event. In recruitment of participants, no distinction was made between married people and people living in de facto relationships, therefore, in the context of this thesis, the terms spouse and partner are used interchangeably (unless reporting on research where a distinction has been made). The term carer is considered a more specialized term and not the most appropriate in the context of this thesis. Unless there are major complications, a person who has experienced a cardiac event typically does not need the long-term higher level of care usually associated with carers. Thus, the more inclusive term partner is used as a first preference throughout the thesis. Spouse is used occasionally as an alternative when deemed appropriate. The term carer is only used when reporting on research that uses this particular term.

2.4 Early Research with Spouses

Following Klein, Dean, and Dogdonoff’s (1967) study with spouses of patients with “a variety of chronic medical and psychosomatic illnesses” (p.242), researchers
became increasingly interested in the effects on the spouse, of caring for a person with a chronic illness. In the 1970’s studies began to emerge which focussed on wives of heart attack survivors (Croog & Fitzgerald, 1978; Mayou et al., 1978; Skelton & Dominian, 1973; Stern & Pascale, 1979).

The earliest study conducted specifically with spouses of cardiac patients (Skelton & Dominian, 1973) looked at psychological stress reported by 65 wives of men following a first myocardial infarction (MI). The researchers found that at the time of the MI, feelings of guilt and loss, depression, anxiety, sleep and appetite disturbances, and the appearance of new physical symptoms such as headaches, stomach pains, and faintness were common among the wives (Skelton & Dominian, 1973). Three months later, 33% of the wives were more distressed than they had been during their husbands’ hospitalisation. At the one-year follow-up, 25% of the wives still showed severe emotional disturbance. Of these, 6.25% were wives whose husbands had died, 6.25% had husbands who had not resumed work, and 12.5% had husbands who had made a good physical recovery and had returned to work. In addition, approximately half of the wives reported negative changes in their marital relations three months after the MI. At the one-year follow-up, 28% of wives of patients who had made a good recovery felt that their marital relations were noticeably different from how they had been prior to the MI (Skelton & Dominian, 1973).

Mayou et al. (1978) and Stern and Pascale (1979) reported similar results and also found that levels of psychological distress in spouses were comparable to, and in some cases higher than, the psychological distress of the patients. Mayou et al. also found that one year after their husband’s MI, 31% of wives had decreased their social contacts and 18% of wives were less satisfied with their social contacts than they had been prior to the MI. Croog and Fitzgerald (1978) found that levels of subjective stress following a husband’s MI remained relatively stable over a one-year period and concluded that subjective stress for the women was more a function of their personality orientation than of external circumstances such as their age, employment status, ethnic origin or the severity of their husbands’ illness.

These researchers acknowledged that spouses were impacted by their partner’s illness and later, Schott and Badura (1988) further contended that a partner’s illness (such as a heart attack) is also a major life event for the spouse and that in such a relationship “there is one illness, but in reality there are two patients” (p.134).
The question of why wives were sometimes more distressed than patients was left largely unexplored. Figley (1985) and Janoff-Bulman (1992) argue that family members sometimes experience “vicarious effects” when a loved one experiences a trauma. However, within the context of an intimate relationship and a cardiac event, to suggest that the partner is experiencing “vicarious effects” may misrepresent and underestimate the subjective experience the “trauma” has on the partner. It is the contention of this thesis that a cardiac event has a direct effect on the partner as well as on the patient.

It was not until the late 1980s that researchers began to report on the experiences of female cardiac patients (Jacobs & Sherwood, 1996; Rankin-Esquer, Deeter & Taylor, 2000) and even then research about the effects on their male partners was all but nonexistent. It remained to be seen whether male partners reported similar experiences to those reported by female partners, or whether their experiences could be considered qualitatively different.

2.5 More Recent Research with Spouses

2.5.1 Quantitative Research

More recent studies have confirmed earlier findings that wives are often more distressed than their husbands (the patients) with greater impairment in emotional functioning (McGee, Graham, Newton & Horgan, 1994), greater psychological distress as measured by composite measures of depression, anxiety and hostility (Helgeson, 1993a), and on individual measures of depression, anxiety and anger (Michela, 1987). Coyne and Smith (1991) found that wives were as distressed as the patients, and that approximately one third of them met the criteria for a psychiatric diagnosis.

In other studies, Stanley and Frantz (1988) confirmed the social adjustment problems reported by Mayou et al. (1978), with more than one third of the 26 spouses of CABG surgery patients in their study, reporting a reduction in social activity and dissatisfaction with their social activity. Artinian (1991) used a composite measure of physical and mental symptoms of stress and a network measure of social support in her study of 86 wives of patients having CABG surgery. She reported that social support for wives remained stable over a six-week period, but that physical and mental symptoms of stress were high during the patient’s hospitalisation and significantly lower six weeks
after discharge. Artinian also noted that women who had larger social networks also had higher stress responses.

Nyamathi, Jacoby, Constancia and Ruvevich (1992) considered personality factors, social network and demographic characteristics, in relation to health outcomes of 80 male and 20 female spouses of patients admitted to hospital for an acute cardiac event (MI, unstable angina etc.). Personality factors were conceptualised as comprising positive personality traits (optimistic, independent and loving) and negative personality traits (nervous, moody, dominating). Social network was defined as the number of relationships an individual has. Adjustment was measured by emotional distress (feelings of depression, irritability and anger) and physical distress (somatic complaints). Nyamathi et al. reported a positive relationship between negative personality factors and physical and emotional distress, but no relationship was found between positive personality factors or social networks and either physical or emotional distress. However, the results of this study would have to be interpreted with due caution since there would seem to be a great deal of overlap between the predictor “negative personality trait” and the criterion “emotional distress”. In addition, the number of relationships an individual has may not be the best indicator of effective social support.

The availability of adequate information about the patient’s recovery process has been identified as another area of concern for spouses. Davies (2000a), Moser, Dracup and Marsden (1993) and Thompson and Cordle (1988) all reported that spouses felt they were not adequately informed about the recovery process and thus did not feel adequately prepared for the patient’s discharge from hospital. Moser et al. (1993) also noted that many of the needs ranked by spouses as being most important were unmet in up to 70% of cases. These included not only specific information about patient-related needs and prognosis, but also the need for information about their own possible feelings and emotions during patient recovery (Moser et al., 1993).

Changes in marital relationships were reported by spouses in a number of studies (Artinian, 1991; Thompson & Cordle, 1988; Waltz, 1986). Thompson and Cordle (1988) reported that approximately one third of the wives expressed some concerns about the effect their husband’s MI had on their marital relationship, but almost half of the wives felt that the MI had brought them closer together. By contrast, Artinian (1991) reported that wives had slightly lower than average marital quality during patients’ hospitalisation, but significantly lower marital quality at the 6-week follow-up. Artinian
suggested that fear, worry and caregiving responsibilities may have affected the marital relationship.

Kettunen, Solovieva, Laamanen and Santavirta (1999) investigated the fears and symptomatology of 57 Finnish spouses (47 women and 10 men) following their partner’s MI. They used factor analysis to classify fears and symptomatology into broader categories. They found that the most intensively expressed fears were disease-related (e.g., further MI, recovering problems) followed by personal fears (e.g., problems with marriage, sexual problems). The most frequently reported symptoms were emotional distress (e.g., depressive mood, anxiety) followed by dysfunction (e.g., sleep disturbance, fatigue) and vulnerability (e.g., new physical symptoms, dependence on others). Kettunen et al. noted that one of their important findings was that severity of the MI did not determine the spouse’s shock reaction or influence the strength of the fears. On this basis they caution health care professionals that all spouses need attention, not just those whose partner has experienced a more severe event.

A number of studies have found that younger spouses reported higher distress than older spouses (Coyne & Smith, 1991; Nyamathi et al., 1992; O’Farrell, Murray & Hotz, 2000; Skelton & Dominian, 1973). O’Farrell et al. (2000) found that 66% of the 213 female spouses of patients undergoing cardiac rehabilitation, met the criteria for distress as measured by the Brief Symptom Inventory (Derogatis, 1993), and this was more common in younger spouses than older spouses. In addition they found that distressed spouses reported less intimacy in their marriage and poorer family functioning.

One notable feature of all the studies reviewed thus far is that either they only looked at female spouses, or if there were both male and female participants, no gender differences were explored. Levin (1994) contends that men may have special needs and qualitatively different experiences as caregivers because in our culture it is rare for a man to take on the role of a caregiver. Thus Levin suggests there may be added adjustments for male spouses associated with the reversal of traditional roles. Turk (2000) also argues that, within couples, there are assigned roles which “encompass the division of responsibilities, expectations, and rights of each partner and the boundaries established” (p. xi). Within these established boundaries “one partner may be designated the role of breadwinner and another the overseer of health care. … Roles always have responsibilities with behavioural referents” (Turk, 2000, p. xi). From discussions with a focus group of postinfarction couples, Coyne, Ellard and Smith (1990) reported that
when male patients went home from hospital their wives took care of them, but when female patients went home from hospital, they returned to their routine of caring for their husbands. This would suggest that, contrary to Levin’s (1994) argument, males did not make added adjustments following their partner’s MI, but rather returned to their traditional roles.

Rankin (1992) paid particular attention to gender and age differences as they related to adaptation to a spouse’s coronary artery disease. She concluded that age and gender are “master variables” under these circumstances. Rankin found that male caregivers were more satisfied with the social support they received from their recovering spouse than were females. Males had experienced fewer life changes since their spouse’s surgery and were significantly more hopeful about their own long-term adjustment to their spouse’s surgery than were females. Rankin also found that, of the women who were distressed, young women experienced the greatest caregiver burden.

Halm and Bakas (2007) also examined gender and age in relation to outcomes for partners following their spouse’s CABG surgery. As well as reporting on their own well-being, spouses were asked to rate the health status of the patient. Halm and Bakas found that being female and having lower perceptions of patients’ health status were associated with negative caregiver outcomes. Caregiver outcomes were defined as “life changes in social functioning, subjective well-being and physical health specifically as a result of providing care” (p. 509). In addition, being younger and having lower perceptions of patients’ health status were associated with lower caregiver perceived health.

Randall et al. (2009) reviewed 62 quantitative studies (including some of the studies reviewed above) of carers and partners of patients who had been hospitalized following MI, CABG surgery or angioplasty. These studies were primarily of partners, although some studies included other carers and some studies were of patient-spouse pairs. Based on their review they concluded that key outcomes identified in the research could be summarized under five broad categories: psychological impact, coping, relationship and marital impact, impact on daily life and caregiving, and illness perceptions. However, Randall et al. (2009) argue that an understanding of spouses’ experiences is still somewhat limited, particularly since the majority of research was conducted prior to 2000. Since then, treatment options for patients have changed somewhat and in-hospital stays have been reduced from approximately 7-10 days
twenty years ago to 2-3 days depending upon the condition and the procedure. This shorter hospital stay means that both patients and partners need to adjust to the demands of living with heart disease much more quickly after the cardiac event than they did in the past. Randall et al. (2009) also note that partner experiences relating to cardiac events are not as widely documented as partner experiences in other chronic and acute diseases (e.g., cancer) and urge further research in this area.

2.5.2 Qualitative Research

In addition to the quantitative research reviewed above, a number of qualitative studies have identified additional experiences and concerns of partners following a cardiac event. Bedsworth and Molen (1982) used semi-structured interviews with 20 wives of men with newly diagnosed myocardial infarction or probable myocardial infarction during the first 72-hours following hospital admission. Bedsworth and Molen chose qualitative methodology to “obtain information from subjects whose responses could not be predicted from previous descriptive research” (p. 450). Their findings showed that the most commonly reported concern for wives was the threat of the loss of their partner, or the loss of their healthy partner. Anxiety and fear were the dominant emotions at this time. Bedsworth and Molen suggested that future research should compare the impact that a cardiac event has on patients and partners.

Bramwell (1986) conducted semistructured interviews with 82 wives of men who had experienced a first MI. The particular focus of these interviews was on examining the “wives’ perceptions as they attempted to develop their support roles during rehabilitation” (p. 578). Bramwell highlighted three main aspects of the findings: the wives’ understanding of support roles, wives’ interpretation of husbands’ experiences and wives’ ability to support husbands. Understanding of support roles was largely related to information needs, with many wives reporting missing or inadequate information that they thought would have helped them. Interpretation of husbands’ experiences included comments about husband’s mood changes with almost half of the wives perceiving their husband’s mood and self-perception had become more negative since the MI, and the majority of wives perceiving their husbands were worried or anxious. In general the wives perceived that they gave adequate support to their husbands and most reported no difficulty with dietary management or in providing support for their husband’s physical activities / exercise regimens. A small proportion of wives reported difficulties providing support due to their own anxieties. Wives who
reported difficulties providing support mostly attributed them to lack of information, reluctance of husbands to engage in appropriate lifestyle modifications or husband’s tendencies to keep their worries to themselves and not share their feelings. Bramwell concluded that provision of appropriate information in the early phase of recovery was critical.

Theobald (1997) conducted in-depth interviews with three spouses. She identified five major themes from the interviews: “crushing uncertainty, overwhelming emotional turmoil, the need for support, the lack of information heightened anxiety, and the acceptance of lifestyle changes” (p. 595). While Theobald acknowledges that the small sample would not allow for generalization of the findings, she contends that the data suggest “a need for more comprehensive care of spouses” (p.600).

Lukkarinen and Kyngas’ (2003) qualitative study using written responses to an open-ended question, sought to elicit the everyday experiences of 146 spouses of cardiac patients. Their sample included spouses of patients whose heart disease had been treated with medication only (27%), angioplasty (34%) and CABG surgery (39%). Lukkarinen and Kyngas reported that responses for all three respondent groups could be categorised into three broad categories: slow pace of life, limited life and unsure life. Slow pace of life was exemplified by spouses’ reports of needing to organise their lives in new ways to accommodate living with heart disease. In addition some spouses reported re-evaluating parts of their life and finding a different balance in life. Limited life was exemplified by changes to personal diet and exercise habits as well as a number of references to loss of personal time / freedom for pursuing personal interests or hobbies. Taking on additional roles and responsibilities was also an important issue and was related to taking on additional household tasks as well as monitoring patients’ symptoms and providing support. This was also associated with spouses feeling unsupported and alone themselves. Unsure life was exemplified by concerns about the future, changed working conditions and the resulting financial uncertainty, the need to adjust to the patient’s shifting moods and sometimes suppressing their own feelings so as not to upset the patient.

McLean and Timmins (2007) used “focus group methodology” (p.142) with 15 partners in order to explore the information received and required following MI. Within this context they reported on the perceived benefits the partners reported about information they received (clarification of aspects of the process; expected patient capabilities; confidence to act effectively; feeling supported). By contrast, some partners
reported feeling left out of the information receiving process and others were critical of
the amount or timing of the information received. McLean and Timmins concluded that
partners often felt isolated from the information process and reiterated the need to
include spouses in the post-event care that is offered to patients.

Only one study was found which specifically examined the experiences of male
partners (separately) three months and 12 months after the patient’s MI. Svedlund and
Danielson state that interpretation of the interviews showed no variation between
patients’ and partners’ responses, so interviews were combined and two main themes
were identified, each with four sub-themes. The first theme “living in a changed life
situation” had the sub-themes of showing consideration, taking responsibility, living
side by side, and desiring what to do (sic). The second main theme, “looking to the
future” had the sub-themes of feeling uncertain, feeling powerless, feeling limited, and
feeling hope. It should be noted that Svedlund and Danielson’s interpretations are
somewhat ambiguous. Firstly, a reading of the interview excerpts they provide does not
always suggest that there was no variation between patients’ and partners’ responses.
Secondly, there are some contradictions in the conclusions they draw. For example the
statement that “the text also reveals that the couples became closer to each other than
earlier” (p. 442) does not seem in keeping with the statement “our study shows that the
couples did not share their experiences of the situation with each other … the couples
lived somewhat in ‘discordance’ and there seemed to be a kind of loneliness” (p. 444).
Nevertheless, this study is valuable for its exploration of the experiences of male
partners of female cardiac patients.

The findings from these qualitative studies highlight a number of varied issues
that the spouses deemed important in their own lives which occurred following their
partner’s cardiac event. While there is some overlap in the findings of both the
quantitative and qualitative studies, there are also a number of differences which
suggest that the different research strategies elicit different kinds of information. In
particular the depth of information available in qualitative data may help to explain why
some partners experience prolonged distress following their spouse’s cardiac event, and
thus show that a cardiac event has personal consequences for the partner rather than
merely vicarious effects as suggested by Figley (1985) and Janoff-Bulman (1992).
2.6 CONCLUSION

The literature reviewed in this chapter indicates that partners are susceptible to distress following their spouse’s cardiac event and they may face a variety of challenges as they endeavour to manage their own concerns while providing support to the patient. While quantitative research in this area is important, there is potential to miss information that is deemed important by the respondents. Qualitative research using open-ended questions can overcome this and allows respondents to describe issues that are important for them. In addition, there is a dearth of information regarding the experiences of male partners. Much of the research with partners of cardiac patients has been conducted exclusively with wives. Where research included both male and female partners, gender differences were often not examined. Although there are fewer male partners by virtue of the fact that there are fewer female cardiac patients (AIHW, 2008), it cannot be assumed that the experiences of male and female partners are the same. As noted by Randall et al. (2009), the majority of research with partners of cardiac patients was conducted prior to 2000, and many changes have occurred in coronary care since then, including shorter hospital stays for patients which mean partners have even less time to adjust to their new role.

In light of the continuing need for a greater depth of understanding of the experiences of partners of cardiac patients, a qualitative study was designed for male and female partners of cardiac patients. The aim of Study 1 was to elicit the subjective (lived) experiences of partners following a cardiac event. To this end, respondents were asked a number of open-ended questions regarding their subjective experience of the cardiac event, any changes in lifestyle they had made as a result of the event, what they found helpful or unhelpful following the event, and whether they perceived any changes in their relationship with their partner and how these changes had affected them. Chapter 3 provides full details of the methodology and findings of Study 1.
Chapter 3: **STUDY 1 QUALITATIVE STUDY**

### 3.1 Chapter Overview

This chapter describes Study 1, a qualitative investigation of experiences of spouses of cardiac patients shortly after a cardiac event. Section 3.2 gives the rationale for the study, focussing on the rationale for the choice of qualitative method and on the need to examine the responses of male and female spouses separately. The sample and methodology are described in Section 3.3, followed by the analytic strategy (Section 3.4) and results (Section 3.5). The results are grouped according to commonality of experience: experiences which are common to both men and women (Section 3.5.1), experiences that are gender specific (Section 3.5.2) and experiences with overlapping themes but differentiated gender responses (Section 3.5.3). In Section 3.6 these findings are discussed, with conclusions presented in Section 3.7.

### 3.2 Study Rationale

Early research with spouses of cardiac patients largely focussed on wives of men who had experienced a first heart attack (e.g., Mayou et al., 1978; Skelton & Dominian, 1973). As new treatment options became available, research was extended to include wives of men who had CABG surgery or angioplasty (e.g., Davies, 2000a; Halm & Bakas, 2007). The majority of this research used standard measures of distress such as depression and anxiety inventories to assess well-being. The general consensus among researchers was that wives of men who experienced a cardiac event also experienced considerable distress, sometimes reporting greater distress than the patients themselves. In recent times there has been a growing interest in female cardiac patients; however, there does not seem to be an equivalent increased interest in the experiences of male spouses. One cannot assume that experiences of male and female spouses of cardiac patients are the same, but there have been very few studies which reported male and females spouses’ experiences separately.

While standard quantitative measures allow for statistical analysis of predetermined hypotheses, one must consider that hypothesis testing may miss issues which are potentially important to the participant, but which are not accounted for
within a structured quantitative survey. Todd et al. (2004) suggest that quantitative psychologists focus on measuring people’s behaviour, while qualitative psychologists focus on understanding behaviour. While this may be somewhat of an oversimplification, it does highlight the fact that subjective responses to open-ended questions may be a more appropriate way to identify issues which spouses deem to be important. There have been a few qualitative studies of this kind (e.g., Bramwell, 1986; Theobald, 1997), but they have either been conducted solely with female spouses, or male and female responses were not examined separately.

There are a number of ways that qualitative research can be undertaken, but it is beyond the scope of this thesis to elaborate on all of them. The grounded theory approach allows for the exploration of emerging themes within the data, rather than starting with a predetermined theory or hypotheses (Charmaz, 2003, 2008). Chamaz (2008) states that grounded theory methods “consist of systematic guidelines for gathering, synthesising, analysing and conceptualising qualitative data to construct theory” (p. 82). However she also notes that, at present, most researchers who use grounded theory methods do not construct theory. Rather they “construct conceptual analyses of a particular experience” (Charmaz, 2008, p. 107).

One of the underlying principals of grounded theory methodology is that rather than starting with predetermined hypotheses, grounded theory researchers start with a topic of interest or general research question to explore (Charmaz, 2008). Data are collected to determine what “relevant people for this topic” (Charmaz, 2008, p. 85) say about it, and then fragments of data are compared with each other, in order to synthesise and make analytic sense of the data (Charmaz, 2008).

Maykut and Morehouse (1994) describe the process of qualitative data analysis as “culling for meaning” (p. 128). Thematic analysis is part of the early process of data analysis in the grounded theory approach (Ezzy, 2002). Thematic analysis allows categories to emerge from the data, through a process of coding, which Ezzy (2002) describes as “disassembling and reassembling the data” (p. 94). Data are broken apart into lines, sentences, paragraphs or sections (Ezzy, 2002) which stand alone as units of meaning (Maykut & Morehouse, 1994). These units of meaning (fragments of data) are then rearranged to produce a new understanding that explores similarities and differences across a number of different cases (Ezzy, 2002).

One of the main distinguishing features of grounded theory methodology is the constant comparison of fragments of data (Charmaz, 2008; Ezzy, 2002). A number of
researchers give detailed descriptions for undertaking constant comparison of data (Charmaz, 2008; Ezzy, 2002; Maykut & Morehouse, 1994). The essential process involves identifying and coding units of meaning, comparing each unit of meaning with all other units of meaning, and thus grouping similar units of meaning into categories. If there are no similar units of meaning, a new category is formed (Maykut & Morehouse, 1994).

The current study was designed to explore the subjective experiences of both male and female spouses of cardiac patients. A qualitative study was chosen because it was deemed important to explore the themes that emerged when respondents were given the opportunity to comment on those issues that were meaningful for them. Grounded theory methodology was considered the most appropriate approach at this stage, because the researcher was interested in exploring the subjective experiences of the participants, without preconceived hypotheses or predefined categories of experience.

### 3.3 Method

#### 3.3.1 Participants

Participants were 56 male and female spouses of patients involved in a cardiac rehabilitation program, following the patient’s cardiac event. Of the 56 patients, 18 had had angioplasty; nine had undergone coronary artery bypass graft (CABG) surgery; four had experienced a heart attack; 15 had angioplasty following a heart attack; four had CABG surgery following a heart attack and six had had valve repairs. The mean time since the cardiac event was 16.17 weeks ($SD = 2.48$ weeks).

The sample of 56 spouses was comprised of 42 women whose ages ranged from 37 to 77 years ($M_{age} = 59.55$, $SD_{age} = 11.14$) and 14 men whose ages ranged from 48 to 80 years ($M_{age} = 67.71$, $SD_{age} = 8.66$). All participants were from English speaking countries with 49 listing their nationality as Australian, six as British and one New Zealander. Most participants (55.4%) were retired, while 25% were employed part-time, 12.5% were employed full-time and 7.1% were involved in home duties and/or childcare.

#### 3.3.2 Procedure and Materials

Participants were recruited from spouses attending a four-week Cardiac Rehabilitation Program and monthly Spouse and Family Meetings at a Melbourne
private hospital. The researcher attended a total of sixteen cardiac rehabilitation sessions and three spouse and family meetings over a three-month period to introduce the study and ask for volunteers. Spouses who volunteered were given a packet containing an information sheet, a questionnaire with a series of open-ended questions which required written self-report responses, and return envelopes for return of the questionnaire. (Participant information sheets and questionnaires are included in Appendix A). A total of 96 question packets were distributed. Of these, 56 (58.3%) completed questionnaires were returned.

Demographic information about the respondent included the participant’s age, gender, nationality, number of years of education, employment status and family structure. Demographic information about the cardiac patient was also provided by the respondent and included information about the patient’s age, gender, cardiac history and the nature of their most recent cardiac event.

Participants were asked a series of open-ended questions which the researcher deemed appropriate for the early recovery phase following a cardiac event:

- Briefly describe what it has been like for you following your spouse’s most recent cardiac event.
- Have you made any changes to your daily routines and/or lifestyle since your spouse’s most recent cardiac event? If yes, please specify.
- In relation to your spouse’s heart condition, what have people said or done that you found helpful?
- In relation to your spouse’s heart condition, what have people said or done that you found unhelpful?
- What would you say are your five most important needs at the moment?
- Have you noticed any change in your spouse’s moods or temperament since his/her cardiac event? (If yes, please specify.) How has this change affected you?
- Have you noticed any change in your relationship with your spouse since his/her cardiac event? (If yes, please specify.) How has this change affected you?
- Looking back, what would you have found most helpful at the time of your spouse’s cardiac event?
- Looking back, what did you find most difficult/stressful at this time?
- Do you have any other comments?
3.4 **Analytic Strategy**

The constant comparison of fragments of data (as outlined in the grounded theory approach) (Charmaz, 2008; Ezzy, 2002) was used to analyse responses to the open-ended questions. Similar to Bramwell (1986), rather than analysing responses to each of the open-ended questions separately, responses were grouped according to themes that emerged during analysis of all the responses. Using the constant comparison method, a new theme was identified when a response did not fit an existing theme.

The first step was line-by-line coding of responses to identify the range of ideas present in the data. The next step was focused coding to synthesise the most frequent and/or significant codes (Charmaz, 2003, 2008). At the second stage the responses from men and women were coded separately as the researcher was interested in any emerging gender differences. This process resulted in three broad categories of experiences: a) experiences common to both men and women; b) experiences with overlapping themes but differentiated gender responses; and c) gender specific experiences. Within each category, a number of themes were identified.

Where direct quotes are given below, each quote is followed by a letter and two numbers in brackets. The letters M or F indicate male or female spouses. The first number is the respondent’s ID number and the second number is the respondent’s age. For example, (M 16; 55) would indicate a male spouse with the ID number 16 and aged 55 years. All emphases within quotes are transcribed from the original text.

3.5 **Results**

3.5.1 **Experiences Common to Both Men and Women**

There were several experiences that were described in similar ways by both the men and the women. While some of these experiences were reported by almost everyone, others were reported less frequently.

*Increased exercise:* Most participants reported increasing their own level of exercise. The majority reported walking with their partner daily, but a few also reported taking up or increasing other forms of exercise such as cycling, yoga or going to the gym.

*Shock/Disbelief and anxiety:* Shock and disbelief were very commonly used words with a number of respondents making additional comments along the lines of “something you think could not happen to you”. Many respondents reported feeling
anxious about their partner’s immediate health and the possibility of reoccurrences of heart related problems. Many spouses also reported being concerned about keeping a balance between caring for their partner to help them return to good health and managing their own other responsibilities.

**Support and gratitude:** Many spouses commented on the helpful support they received from family, friends and medical staff. A number of people included additional support from their church minister and/or community and a few even commented on the comfort they gained from their family dog(s). Several people reported that sharing experiences with people who had gone through similar things had been very helpful. Gratitude was expressed not only for the concern and support shown by others, but also for medical assistance, modern technology and the fact that things had turned out well.

**Togetherness:** A number of people noted that they wanted to spend more quality time with their partner and to enjoy life. In the same vein, several respondents noted that they wanted to have a holiday with their partner to have a break away from the stresses resulting from the cardiac event.

**Self-reflection:** A fairly common theme was that of self-reflection, particularly regarding the respondent’s own health. People commented that they had become more focussed on their own health, some realising the need to maintain healthy habits, some commenting that their own health had worsened and some deciding to have an overdue check up.

*It has made me more conscious of the need to watch and monitor my own health. I have decided to have a regular check-up after having not seen a doctor for years. (M 12; 69)*

Respondents were also more aware of their own emotions. A number of people noted a need for patience in dealing with their partner and a few commented that they wanted harmony in their relationship. Several people also commented on their coping strategies, including faith in God, maintaining a positive outlook, drawing on past experience and confidence in the medical assistance received or their partner’s ability to cope. A number of people noted that they had become more resourceful and adaptable and that this had helped them cope with the situation.

**Financial concerns:** Concerns were expressed not only about meeting the immediate costs of medical procedures, but the potential future costs should problems reoccur. In families where the patient was employed, the cardiac event meant daily living expenses were threatened and financial concerns were greater.
Looking back: In looking back at what would have been helpful at the time of the cardiac event, all of the responses given revolved around earlier action such as going for medical tests earlier and going to the hospital sooner. A few people commented that they suspected something was wrong with their partner but didn’t think it could be a heart problem. Several people also commented that they later realised that they should have called an ambulance rather than driving their partner to the hospital themselves.

In looking back at what had been unhelpful, a few people commented on family members who had been overprotective of the patient. More common responses, though, related to friends and family who were pessimistic about the patient’s recovery:

Some friends were very negative and didn’t believe she would come out of it. They were afraid to come around. (M 13; 67)

Family didn’t think he would ever work again. They were very negative, kept saying he should be in a wheelchair, should be doing this or that. They kept looking at the worst possible outcome while we were trying to be positive. (F 52; 57)

Most difficult/stressful: Almost everyone commented that the most difficult/stressful part of their partner’s cardiac event was the initial shock, waiting for procedures to be done, and waiting for test results. Several people also commented that the fear they experienced regarding the possibility of their partner dying was very stressful for them. A few people noted that their partner had experienced an unexpected setback from a medical condition subsequent to, but unrelated to the cardiac event, and that this setback had been a very stressful time.

Perceived benefits: Perhaps the most interesting observations came from the invitation to make any further comments. Since the researcher gave no direction in this question, it was seen as an opportunity for the respondents to make comments on those things that they perceived to be important that had not been covered in previous questions. Several people took the opportunity here to comment on the positive aspects of the cardiac event. A common perceived benefit was the improved health and health habits of the patient.

There is a sense of relief for me. Previously my husband was aging before my eyes. He was tired and pale. He had lost his energy and did not want to do things. The [CE] gave him a new lease on life. He’s better mentally than he used to be – he feels more alert. He is also confident that he can do the long drive to Queensland for our holiday, and that makes him feel better in himself. We are also sharing things now that we didn’t do before. (F 3; 69)
Another benefit mentioned by a number of people was improvement in personal relationships.

This was one of the best things that has happened to [husband] and us. We talk more about our feelings and our future, which we didn’t do before his heart attack. (F 26; 55)

We keep a positive attitude – we have little treats to keep up the positive attitude and do things during the day so the whole day doesn’t revolve around the heart problem. (F 31; 54)

In a way we are glad it happened. When you go through a trauma yourself, people tend to open up more to you. (M 13; 67)

Finally there were comments about a changed perspective on life.

Something like this rehumanises people – you become less blase about life and mindful of what’s important and what you can and cannot change. (M 32; 48)

3.5.2 Gender Specific Experiences

3.5.2.1 Men

There were a number of experiences that seemed to be gender specific. For the men, there were only a few comments that were not echoed in some way by the women. A couple of the men commented that their wife’s hospital stay had been the most stressful part of the cardiac event for them. One man commented on the unfavourable response from family, and one man commented on his confidence in his wife’s ability to overcome physical problems.

The whole process of my wife being in hospital was the most stressful. (M 32; 48)

The way the family didn’t realize how serious this was – they really didn’t take it seriously at all. That’s been disappointing for both of us. (M 42; 71)

She has always been quite exceptional in her capacity to accept and overcome any physical problems and I had no doubt the cardiac problem would be overcome. I did not downgrade the seriousness of the attack but I had a very positive feeling that all would be well in due course. (M 30; 67)

3.5.2.2 Women

In contrast to the small number of male-specific spousal responses to partner’s cardiac event, the women reported a large number of experiences that seemed to be common for them, but were not expressed at all by the men. A number of women commented that they had given up smoking and many reported doing more driving
since their husband’s cardiac event. Several of the women also reported that they would have liked some practical support with household chores and a number mentioned that financial advice would have been very helpful. In addition, there were several categories of experiences where the women chose to elaborate on their responses.

**Personal time/space:** The vast majority of the women reported that they needed personal time/space/rest. Some simply wrote or voiced the single word. Others elaborated a little saying they needed a break from people always talking about their husband’s heart condition; they needed a break from constant phone calls and/or visitors; they needed some peace and quiet.

*Family was always around. I wanted to be alone.* (F 8; 77)

*Family members were making things worse by standing over me telling me what I should and should not do.* (F 46; 64)

*Time away from constant organization.* (F 37; 42)

*Feeling like I had to be there all the time.* (F 1; 42)

**Information about psychological impact of the cardiac event:** A number of the women commented that while they had been given plenty of information about the physical aspects of the cardiac event, little or no information had been given about the potential psychological impact of the cardiac event on the patient or the family.

*Information on my partner’s behavioural change would have been very helpful.* (F 1; 42)

*If someone had warned us about the impact on the family of the psychological aspects of this. They were very good about all the information about the physical side, but no one warned us about the emotional impact.* (F33; 44)

*There was no mention of possible psychological effects later. It would have been helpful to be told that possibly his mental state/personality may change.* (F 21; 53)

**Communication:** Communication difficulties with partners were expressed by some of the women. In two of the cases, the women had not been aware that their partners had had previous cardiac events.

*There is a lack of communication. My husband never told me that his angina was so bad.....I just heard him telling someone ‘I think I had it for 10 years’.* (F 22; 65)
He had another heart attack he never told me about several years ago. (F 39; 37)

I am openly critical of some of his lifestyle choices – this hasn’t been helpful and we’ve had to find new and different ways of communicating our anxieties. (F 48; 44)

**Emotional turmoil:** Expressions of emotional turmoil were quite common for the women. They used the terms “emotional exhaustion” and “emotional despair” and expressions such as “feeling like a yo-yo”, “living on a roller coaster” and “feeling like I was in a nightmare” to depict the highs and lows they were experiencing.

The overall worst feature is the utter dependence on you at times and the ‘no need for you’ at others. You are forever on a seesaw unsure of your role. (F 11; 57)

Feeling like your world has caved in. Doctors see it all as matter of fact – you don’t. (F 4; 44)

I’ve been to the doctor because I was finding it hard to cope with the mood swings of my husband. I was wondering what was happening to me. (F 28; 70)

**Emotional Needs:** When asked to consider important needs, many of the women focussed on emotional needs. Some mentioned the need for friendship, some mentioned the need for humour and/or laughter, and one woman mentioned being valued:

It would be good to be told I am appreciated once in a while, even though I know I am. (F 52; 57)

Several of the women simply said “emotional support”, but a number of women elaborated with more detailed information. In a number of cases this related to the women feeling like they had to restrain their emotions in front of friends and family, but they needed someone impartial just to listen to their concerns.

Someone to talk to in the first days and weeks. It would have meant a lot to have someone check that I was OK and if I needed to talk about myself or ask questions regarding my partner, that I could do so privately. (F 1; 42)

Counseling for me. Emotional support. (F 37; 42)

It would have been helpful to have had someone just to sit and listen to me “mouth off”. I can’t talk to the kids because they have their own worries/guilt about their dad. I can’t talk to Mum because I don’t want to worry her. I needed someone to listen so I could get things off my chest. I just needed to get things off my chest. (F 26; 55)
Emotional support for me. Someone to talk to – just to listen to me. A “home visit” for the carer once a month – just to talk/listen to me. Not someone in a uniform behind a desk, but an interested “stranger” – not family or friend that knows you. You don’t want to talk to people you know because they have their own worries. Someone you don’t know because you don’t have to keep up any sort of front or concern yourself that you might be adding to their troubles. I was totally exhausted and it would have been good to have someone to talk to – who would have just listened. It would have relieved the pressure of feeling like you had to do everything yourself. (F 52; 57)

**Negative feelings towards husband:** A number of the women expressed strong negative feelings towards their husband. These largely revolved around the husbands being dependent and not taking responsibility for themselves.

*He’s dependent – needs lots of emotional support. It’s very hard to be responsible for the way everyone feels. I have the children and my mother to look after too. I want him to take responsibility for himself. I feel anger and resentment.* (F 33; 44)

*[Husband] has become very demanding and anxious about his own health – impossible to live with. This has led me to become argumentative and has resulted in feelings of resentment and hatred toward husband. We have grown apart and there is now a lot of tension between us.* (F 1; 42)

*I am more watchful than before, which isn’t my role!!...he is still so busy with work it’s unnecessary and it makes me angry.... but he’s got to come to this decision himself – it’s his life not mine.* (F 48; 44)

*The first month was awful – I felt as if my world had been turned upside down and things would never be normal again. I had just retired and was looking forward to doing things for myself, but he was so dependant and everything revolved around him. When I had both my breasts removed I did everything for myself. When he had his heart attack I did everything for him. It’s worse for the spouse because the patient gets all the care and attention.* (F 26; 55)

*He seems to be a defeatist and unprepared to help himself. He says all this will happen again and next time it will be worse. He spends a lot of time in front of the TV and has all the answers, with what is wrong with the world and me when I don’t please him. He puts on a great show for the outsider about how great he is coping. There is nothing wrong with him – he is the greatest. He seems to be two different people.* (F 28; 70)

**Self-reflection about being a study participant:** A number of the women commented that being a participant in the current study had given them an opportunity to reflect on the effect of the cardiac event.
It’s been good to go through the process of thinking about how this has affected me - given me the opportunity to analyze my feelings at this time. (F 34; 59)

It’s made me more sensitive to other people’s needs for support at the start. (F 11; 57)

It’s good to have the spouse considered as a separate entity. (F 7; 69)

It’s so much more difficult I honestly think watching someone else’s disease or illness and so much harder than dealing with your own. (F 48; 44)

Responding to the survey has increased my realization that this event has had a psychological impact. (F 28; 70)

**Lack of understanding:** Most of the women reported some lack of understanding for their situation following the cardiac event. Some of this related to the women feeling that others were minimizing their experiences. Some women commented on lack of understanding for their experiences by their husbands, others commented that other people did not understand what it was like for them. A few women also commented that people did not understand what the experience was like for their husband adjusting to his cardiac condition.

The women who reported lack of understanding from their husbands commented that their husbands had become self-focused, that they did not realize that the cardiac event had impacted on their wife, or that they expected their wife to remain unaffected by the event.

*I’m not allowed to get down to it, or be affected but to be my usual calm self. (F 15; 55)*

Whilst [my husband] was recovering slowly, he had no idea that I was really tired, fearful, restraining my emotions and generally feeling in need of a friend to let emotions out. Feelings of being grateful and thankful had to be instilled into [the patient’s] mind as he went through “down” days and unstable patches – yet another stress for me. (F 21; 53)

Perhaps the most poignant comment about lack of understanding by the husband came from the woman who had a miscarriage after her husband’s cardiac event:

*A very lonely time. At the time of his heart attack I was approximately 2 ½ months pregnant. It was a planned pregnancy but I had problems connected to the pregnancy. I spent every hour at the hospital with him. I was exhausted emotionally. I was in need of a friend. But the time and energy weren’t there, nor his understanding. He developed a huge ego and demanded to be the center of attention (very childlike). Two weeks after he came home I miscarried. Still all he could talk about was his heart attack,*
procedures etc. Now demands I don’t work. Insanely jealous of time spent with, even my son, haven’t seen friends. But have phone calls from friends which create tension. Life with him now is very hard and lonely. He’s now always on edge and flies into a rage over anything and everything. (F 1; 42)

Women also reported lack of understanding for their situation from other people including family, friends and medical personnel.

My daughter said to me “You’re the reason dad ended up like this. If you had been more careful with diet this would never have happened Mum” ...People telling me about my poor mental state – not understanding the effect this had on me! (F 21; 53)

Being locked out of the whole process. Having to do everything that was needed, but not really feeling as if I was being included in the decision process – or that my needs were being understood. (F 14; 42)

A friend whose husband had a bypass a month prior said, “Well we all have to do these things”. Then when I went to my own doctor for help with my own emotions he said, “Well you should be glad he’s alive”. I found both of these really upsetting because they minimized my feelings. (F 26; 55)

Women also reported a lack of understanding towards their husbands as they adjusted to the demands of life following their cardiac event.

My husband’s friend who had a brain tumor. He was minimizing my husband’s experience and bagging him for the low-fat diet etc – most unpleasant. (F 15; 55)

A friend shook hands with my husband and jokingly said “May be the last time I see you” – in front of our daughter. This was very upsetting. Day 2 or 3 in hospital our 13 year-old became very embarrassed about her dad – no one else’s dad had gone through this. (F 37; 42)

People not recognizing that [husband] has to come to terms with the changes. He’s struggling with the idea of having heart disease. People keep saying, “You should do this, eat this, or you shouldn’t ...” This adds to the anxiety. (F 48; 44)

3.5.3 Experiences With Overlapping Themes but Differentiated Gender Responses

There were a number of experiences that were cited by both men and women that at first seemed to be common experiences. However, on closer examination it was found that while the themes that emerged were the same, there were clear gender differences in the subjective experiences and the changes made by the male and female spouses.
Diet: Many spouses mentioned diet, however two thirds of the women, and only one third of the men said they changed their own diet as a result of their partner’s changes in diet.

Work: Both male and female spouses mentioned changing work hours and taking over their partner’s usual tasks. Over one third of the men decreased their work hours and many increased the amount of housework they did. Only about 10% of the women changed their work hours with equal numbers increasing and decreasing hours. Women also took over some of the heavier household duties and in a number of cases became involved in running the family business.

Increased focus on partner: Both men and women reported an increased focus on their partner in terms of a focus on care and nurturance. Spouses mentioned an increased alertness to their partner’s health, checking that their partner was not doing too much and expressing a desire for the best possible treatment. Women also commented that they tried to maintain a stress free environment and made a point of setting aside time for going on outings and spending time together.

None of the men reported that their wives had placed additional demands on them, however several of the women commented that their husbands had become more demanding since their cardiac event:

My husband has had a huge need to be with me all the time. (F 1; 42)

My life revolves around [my husband’s] needs, driving him, rehab, taking him or going with him where he wants to go. I feel as if my whole life has disintegrated into the needs and wants of [my husband]. (F 26; 55)

My daily routine has changed dramatically because my whole attention seems to be catering to his needs. I have to be very patient. (F 28; 70)

He says he wants his …no… it’s “I need my” dinner on time! (F 33; 44)

Normality: Many people expressed the desire for things to return to normal, to regain the lifestyle they had before. However, one woman’s response seemed to express an underlying desire to regain some control in her own life:

Getting my life back again – making decisions again and not just going along with [patient’s] need to have control in extra areas to make him feel good. (F 11; 57)

Reassurance: Both male and female spouses mentioned reassurance, but it was mentioned in different contexts. Men reported wanting to provide reassurance to their
wives about their progress. Women reported wanting reassurance that they were doing the right things in caring for their husbands.

**Travelling:** Many people commented on how tiring it had been constantly travelling to and from hospital (in some cases over very long distances). Women in particular said they did more driving or they had to rely on others for transport.

**Future orientation:** Both men and women commented on the future. In terms of concerns about the future, men expressed more general concerns about the stress associated with planning activities. Women expressed more concrete concerns to the extent of putting a halt on future plans, anticipating their partner’s death (updating wills, talking about funeral service, thinking about life without their partner) and financial concerns (particularly those running a family business).

In terms of being optimistic about the future, the men cited more concrete ideas such as being optimistic because there was no damage to the patient’s heart, and contemplating when they themselves could return to work. The women made more general comments about looking forward “to returning to normal” and “with a positive frame of mind”.

**Changes in patients since their cardiac event:** All spouses reported some changes in their partner following the cardiac event, but the changes noted by male and female spouses were different. Male spouses tended to comment on behavioural or physical changes, commenting either that their wives had slowed down a lot or that they had made a quicker recovery than expected. In contrast, female spouses tended to comment on emotional changes in their husbands since the cardiac event. They cited mood swings, quickness to anger, depression, withdrawal, defeatist attitude, resistance to making changes and, in a few cases, doing too much “to prove he is Superman”.

**Additional stressors:** Only one man reported on additional stressors and this was to do with his wife focussing only the negative aspects of her illness. However several of the women reported having to deal with additional stressors. These included dealing with their own illness, caring for children and/or elderly parents, dealing with problems of their adult children (including illness and relationship breakdowns) and dealing with medical problems (such as absence of usual GP and incorrect prescriptions).

**Link between partner’s mood change and couple’s relationship:** Participants were asked whether they thought their partner’s mood had changed since the cardiac event. They were also asked whether they thought there had been any change in their
relationship with their partner since the cardiac event. In both cases some people thought things had stayed the same, some thought they had changed for the better and some thought they had changed for the worse. To explore whether there was a relationship between perceived mood change and couples’ relationship changes, crosstabulations were performed separately on the responses of men and women. It should be noted that, although qualitative findings generally do not have the inclusion of information within tables, Todd et al., (2004) contend that “qualitative researchers do not altogether dismiss the use of quantitative data or the summarising of results in quantitative form (p. 8). The tables in this chapter are used as a means of providing summary information.

As shown in Table 3.1, 43% of male spouses thought their wife’s mood had not changed since the cardiac event, 21% thought mood had changed for the better and 36% thought mood had changed for the worse. With regard to the couple’s relationship since the cardiac event, 71% of the men reported no change and 29% reported their relationship had changed for the better.

Table 3-1

<table>
<thead>
<tr>
<th>Men’s Perceptions of Wife’s Mood and Relationship Changes</th>
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<tbody>
<tr>
<td>Wife’s Mood</td>
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<tr>
<td>No Change</td>
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<tr>
<td>Better</td>
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<td>Worse</td>
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<td>Total</td>
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*Note: Values are in percentages*

Most men did not think their relationship with their wife had changed since her cardiac event. One man said his wife’s mood had changed for the better, but their relationship had not changed because it had always been good. The four men who said their wife’s mood had changed for the worse all commented that their wife had become
more anxious or emotional and less confident. This had not impacted on their relationship and two of the men commented on efforts made to help their wives.

*She is less confident. I am working hard to help her improve it.* (M 24; 69)

*She’s more emotional. I’m more careful about what I say so I don’t upset her. I bite my tongue sometimes.* (M 44; 72)

Better relationships were attributed to greater emotional closeness, a positive outlook and an awareness of vulnerability.

*My wife’s mood is better. This makes me a very happy man right now. We are going everywhere together, but are also able to have our own space when we want it. We are much closer together. It’s great. Now when we walk anywhere we walk hand in hand – like a couple of teenagers – we take our time and stroll together.* (M 6; 55)

*My wife is more positive about her outlook on life. This is good for the family. Our relationship is improving. Again it is good for the whole family.* (M 32; 48)

The responses for the women were somewhat different from that of the men. As shown in Table 3.2, a majority of the women (55%) said their husband’s mood had changed for the worse since his cardiac event, 29% said there had been no change in mood and 16% said their husband’s mood had changed for the better. The responses regarding changes in their relationship were somewhat more evenly spread with 37% reporting no change in their relationship, 37% reporting a change for the better and 26% reporting a change for the worse.

Table 3-2

*Women’s Perceptions of Husband’s Mood and Relationship Changes*

<table>
<thead>
<tr>
<th>Husband’s Mood</th>
<th>Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No Change</td>
</tr>
<tr>
<td>No Change</td>
<td>18.4</td>
</tr>
<tr>
<td>Better</td>
<td>0</td>
</tr>
<tr>
<td>Worse</td>
<td>18.4</td>
</tr>
<tr>
<td>Total</td>
<td>36.8</td>
</tr>
</tbody>
</table>

*Note: Values are in percentages*
The “no mood change no relationship change” category would indicate that couples were maintaining the status quo that existed prior to the cardiac event. Responses from the group where the husband’s mood had changed for the worse but there had been no change in relationship seemed to suggest that the mood changes had been relatively small or temporary, or that these men had been worried about something specific. The women reported accommodating these changes without too much disruption or they reported making an effort not to worry about it.

*He’s wanting to go around Australia, but worried about if he will make it.* (F 16; 52)

*His mood has changed but it’s more of a niggle – it comes and goes.* (F 27; 57)

*He’s obsessed with keeping fit – nothing stops the walk. Sometimes it irritates me but I try not to worry too much.* (F 36; 54)

*He’s a bit more anxious. I have to take on a bit more so that I don’t overload him or worry him.* (F 49; 52)

In the groups where there had been no mood change or a mood change for the better, improved relationships were generally attributed to greater emotional closeness, awareness of vulnerability, husbands taking responsibility for their well-being and being easier to live/get on with.

*This has given me more appreciation of our marriage and the closeness of our bond. We’ve always been close but now it’s even better.* (F 9; 69)

*My husband became dependent at first, but I made him responsible again for his own well-being. Our relationship is better now because we are closer emotionally. It’s a nice feeling to have closeness with your partner and feel that you are looking forward to a good future together.* (F 31; 54)

*He’s more patient. It’s been good – he’s easier to get on with. It’s better because we are closer and talk about things more.* (F 43; 42)

*He’s less irritable. I can cope much better with the whole situation when he is not so irritable. He’s more prepared to say “oh that doesn’t matter”. He was always dominant before. Now he’s more insecure and dependent and asks for advice. I welcomed the change – it’s been good to see him mellow a bit.* (F 7; 69)

*He is happier and calmer. This has made me feel better. We do more together. Go bowling together which we didn’t do before. There is more...*
togetherness. I am enjoying the time we spend together, and the fact that he is well enough to do more. (F 3; 69)

Mood change is all to the good. He is quieter, not as temperamental – easier to live with. (F 25; 56)

In the cases where the husband’s mood had changed for the worse but the relationship had changed for the better, the responses suggested that there seemed to be something specific underlying the mood shift and this was somehow helping the relationship.

He’s fearful of the future and wondering if he should retire. This has made me think about the future as well – not so confident now – financial concerns – we have our own business. Thinking about seeing our children grow. I made him take responsibility for his own health. He punished me for it. He was angry with me and shut me out. There is an improvement now. We are talking more about our own feelings. We talk more now he’s taken responsibility for himself. (F 26; 55)

He’s more depressed and tires easily. I tend to worry a bit more and become a bit impatient with him. We’re probably closer. I realize time may be running out. (F 41; 60)

In the single case where the husband’s mood had changed for the better but the relationship had changed for the worse, the response suggested a shift from a partner role to a caregiver role.

He’s more easy-going. This has made me more relaxed too. We are together all the time – it’s a bit like having a baby. Not as physically close – tiredness (F 8; 77)

In the cases where the husband’s mood had changed for the worse, worse relationships were attributed to poor communication, less emotional closeness, and husbands being moody, demanding and dependent (not taking responsibility for themselves). The women said they felt isolated (left out), and felt anger, resentment and hatred towards their husbands.

His mood is bad – he’s moody. It’s hard work trying to keep up with all the mood swings. I’m nervous of upsetting him. Feeling like I have to be careful about not saying/doing the wrong thing (F 46; 64)

He gets agitated more quickly. I get the brunt of it – I try to shrug it off, but it can be really frustrating when he gets upset over things so quickly. He expects me to be around all the time and with him. I’m conscious I need to be around. If he goes out he wants me to be with him. I encouraged him to do a short course so he can do something for himself and have an interest now he’s stopped work. (F 34; 59)
He’s very stressed about smoking – depressed – life not worth living. Makes life with him very stressful all the time. He’s dependent – needs lots of emotional support. It’s very hard to be responsible for the way everyone feels. I have the children and my mother to look after too. I want him to take responsibility for himself. I feel anger and resentment. (F 33; 44)

He’s extremely black and white. Impatient. Mental outlook is not good. I feel I should be given more time and appreciation and understanding. Communication is not good. At times he’s so tired he just has to go to sleep. I don’t feel we communicate very well. I’m worried about his constant fatigue (F 21; 53)

My husband has become very demanding and anxious about his own health – impossible to live with. This has led me to become argumentative and has resulted in feelings of resentment and hatred toward him. We have grown apart and there is now a lot of tension between us. (F 1; 42)

He’s not as tolerant/placid as before. This is not great. It can be very frustrating. We are trying to adjust. We are more withheld. Both of us seem to be more isolated. I often feel left out (F 14; 42)

My husband doesn’t believe it’s happened (angioplasty). This has made me more wary of what I say – I have to be more discreet. The relationship is more difficult and we are not as close. (F 15; 55)

An additional point of difference between the men and the women was average age in the different mood change x relationship change groups. Results for male and female spouses are presented in Table 3.3 and Table 3.4 respectively.

Table 3-3

<table>
<thead>
<tr>
<th>Wife’s Mood</th>
<th>Relationship</th>
<th>No Change</th>
<th>Better</th>
<th>Worse</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean Age (SD)</td>
<td>Mean Age (SD)</td>
<td>Mean Age (SD)</td>
<td></td>
</tr>
<tr>
<td>No Change</td>
<td>72.4 (5.72)</td>
<td>67.0 (0.00)</td>
<td>No Respondents</td>
<td></td>
</tr>
<tr>
<td>Better</td>
<td>74.0 (0.00)</td>
<td>51.5 (4.95)</td>
<td>No Respondents</td>
<td></td>
</tr>
<tr>
<td>Worse</td>
<td>71.0 (1.41)</td>
<td>58.0 (0.00)</td>
<td>No Respondents</td>
<td></td>
</tr>
</tbody>
</table>

Note: Numbers represent age in years.
As shown in Table 3.3, the men who perceived their relationship had improved since the cardiac event were generally younger than the men who perceived no relationship change. In particular, the group who reported an improvement in both their wife’s mood and in their relationship were the youngest on average.

The results in Table 3.4 suggest the trend for the women was similar in as much as the women who reported better relationships were generally younger than the women who reported no change in relationship. However, the youngest group on average was the group of women who reported both their husband’s mood and their relationship had changed for the worse.

Table 3-4

*Mean and Standard Deviation of Age for Female Spouses Reporting on Patient's Mood and Relationship Changes*

<table>
<thead>
<tr>
<th>Husband’s Mood</th>
<th>Relationship</th>
<th>Mean Age (SD)</th>
<th>Mean Age (SD)</th>
<th>Mean Age (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Change</td>
<td>No Change</td>
<td>65.1 (6.47)</td>
<td>58.2 (10.18)</td>
<td>No Respondents</td>
</tr>
<tr>
<td></td>
<td>Better</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Worse</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Change</td>
<td>No Respondents</td>
<td></td>
<td>60.5 (11.04)</td>
<td>77.0 (0.00)</td>
</tr>
<tr>
<td>Better</td>
<td></td>
<td>61.3 (9.66)</td>
<td>52.3 (9.29)</td>
<td>48.9 (9.14)</td>
</tr>
</tbody>
</table>

*Note: Numbers represent age in years*

Thus the results suggest that the youngest men reported better spousal moods and better relationships after their wives had experienced a cardiac event, but the youngest women reported worse spousal moods and worse relationships after their husband’s cardiac event.

### 3.6 Discussion

The results suggest that when asked open-ended questions about their experiences, spouses of cardiac patients reported on a very broad range of personal experiences following their partner’s cardiac event. Some of these experiences were the same for men and women. Some experiences were gender specific, with women reporting on a substantial number of experiences that were not reflected in the responses.
of the men. Finally, some experiences appeared similar, but closer inspection revealed sometimes subtle and sometimes substantial differences between the experiences of men and women.

### 3.6.1 Experiences Common to Both Men and Women

Many of the common experiences reported by both the male and female spouses were what might be expected following any sudden traumatic event. Shock and disbelief coupled with anxiety seem logical initial responses to such a situation. It is also unsurprising that spouses reported increased support from family, friends and medical personnel, and their subsequent gratitude for this support. It is noteworthy however, that some of this support was perceived as unhelpful when people became overprotective of the patient. The common reports that the most stressful part of the cardiac event was waiting for procedures to take place and then for results, seems reasonable, as these events would be completely uncontrollable, particularly for the spouse. The common expression of financial concerns is also unsurprising given the high costs of the necessary medical procedures and treatments.

A few of the common experiences seemed more reflective. When asked to look back at what would have been helpful at the time of the cardiac event, all of the responses given to this question focused on earlier action. Both male and female spouses commented on the importance of seeking medical tests sooner, going to the hospital sooner, and calling an ambulance instead of driving their partner to the hospital themselves. These responses suggest a continued need for public education regarding the need for prompt action in dealing with suspected cardiac events.

The cardiac event also prompted many spouses to reflect on their own health. Most spouses increased their level of exercise, but many also had overdue check-ups in response to heightened awareness of their health habits. Several people also commented they had become more aware of their own emotions. Others reflected on their coping strategies, and commented that they had become more adaptable and resourceful since their partner’s cardiac event. Many spouses expressed a need for spending more quality time with partners (including several expressions of a need for a holiday together). This need is likely to be related to the expressed fears of losing a loved one and a need to have a break away from the stresses resulting from the cardiac event.

Of the experiences common to both men and women, perhaps the most interesting was the expression of perceived benefits following the cardiac event. Some
of these perceived benefits were reflected in the comments on improved health habits and coping strategies in response to the questions regarding changes made. However, most comments about perceived benefits resulted from an invitation to make any further comments at the end of the survey. This invitation elicited comments on further perceived benefits that had not previously been mentioned. Here comments on perceived benefits focused on improved health of patients (both physical and emotional), improved personal relationships and changed perspectives on life.

The finding that a number of respondents spoke of positive outcomes as a result of the cardiac event is in keeping with findings from studies with partners of patients with AIDS (Folkman & Moskowitz, 2000), and with cardiac patients themselves (Affleck, Tennen, Croog, & Levine, 1987; Laerum, Johnsen, Smith, & Larsen, 1987). This finding of reporting positive outcomes is notable in light of the fact that much of the research in this area has focused on the negative impact of a cardiac event. It is perhaps particularly significant that several of the respondents who reported perceived benefits had also reported considerable anxiety and/or distress. It seems that these respondents were able to assess the global impact of the event and acknowledge that positive outcomes were possible in spite of considerable difficulties also being experienced. This is in keeping with Tedeschi and Calhoun’s (1995) argument regarding the potential for posttraumatic growth resulting from a struggle to cope with a traumatic experience. Following this argument, and together with the suggestions of Affleck et al. (1987) and Laerum et al. (1987) that unexpected reports of positive outcomes following trauma should be investigated in more depth, it would seem appropriate to include a measure of posttraumatic growth in further research on the impact of a cardiac event.

### 3.6.2 Gender Specific Experiences

The men and women in this sample reported a number of gender specific experiences. Two of the men reported that their wife’s hospital stay had been the most stressful part of the cardiac event for them. One man commented on the unfavorable response from family who did not seem to take the cardiac event seriously. This response seems quite different from other reports of family and friends being pessimistic about the patient’s recovery. One might interpret family members not taking a cardiac event seriously as reflecting a denial by the family that such a serious illness could have happened to a loved one. Alternatively, such a response may also be a reflection of the relative neglect of media coverage regarding the prevalence of coronary
heart disease in women, leading to denial or disbelief that a woman could have experienced a cardiac event. One man commented on his confidence in his wife’s general ability to overcome physical problems. This was the only comment that seemed to focus exclusively on the physical aspect of the cardiac event in a positive way. It was more common for both male and female respondents to express concern about their partner’s physical recovery, or to comment that they were concerned their partner was doing too much too soon.

The women reported a substantial number of experiences that were not mentioned by any of the men. In general terms these experiences focused mostly on the psychological impact of the cardiac event (on both the patient and their family) and on the women’s emotional needs. The most commonly expressed need by the vast majority of the women was for personal time/space. This was expressed in a variety of ways and seemed to reflect a need to for the women to rest, regain control of their own lives and distance themselves from the many demands placed on their physical and emotional resources as a result of the cardiac event. It is noteworthy that none of the men expressed this need, and in fact two of the men commented that their wives had encouraged them to maintain their own interests. This finding is in stark contrast to male patients’ perceptions of the impact of their cardiac event on their wives. Croog and Levine (1982) reported that only 3 out of 175 of the married men in their study thought their wife’s social and recreational activities were reduced since their cardiac event. By contrast, most of the wives in the current study felt much of their time was centred on their husband’s needs with little time available for their own social and recreational needs.

Many of the women also expressed the need for emotional support. Some said they would have liked counseling, but mostly they expressed a need for someone to talk to and more specifically someone who could just listen to them “mouth off”. This was mentioned a number of times and the women specifically wanted “an interested stranger” with whom they did not need to restrain their emotions for fear of adding to a friend or family member’s worries, or of needing to “keep up a front” with them. These expressions of a need for emotional support from an interested stranger are particularly interesting in light of the fairly strong negative emotions expressed by some of the women. Perhaps responding to the current study gave some women an opportunity to vent some of the negative emotions that they would not otherwise feel able to do. This expressed need for emotional support from an interested stranger also warrants further
investigation, because there could be implications for the kind of resources routinely made available to partners of cardiac patients.

Women expressed a broader range of negative emotions than the men. This was evident in both their discussion of their husband’s response to his cardiac event (e.g., angering easily, being demanding, being dependent) and also in discussion of their own emotional responses. This seemed particularly evident when examining the link between perceptions of patients’ mood changes and perceptions of relationship changes. As noted, none of the men reported relationships changing for the worse, but over one quarter of the women did. These same women also expressed some very negative emotions towards their husbands. Perhaps this result needs to be interpreted with some caution in that perhaps the men are less likely in general to report on emotional experiences. However, men did seem willing to report positive emotions. The fact they did not report any negative emotions may indicate that either they did not experience these or that they chose not to report any negative feelings. Nonetheless, the strong negative emotions expressed by the women have not been previously reported in the literature on wives of cardiac patients, and therefore warrant further investigation.

Expressions of emotional turmoil were also common for the women. It was evident from their responses that they were experiencing highs and lows following their partner’s cardiac event. They expressed this emotional turmoil in many ways, and terms such as “feeling like a yo-yo” and “living on a roller coaster” were among the analogies used. Comparable responses were not evident in the men’s reports. This again begs the question of whether the men did not experience emotional turmoil, or whether they simply did not report it.

Communication difficulties with partners were reported by a number of women. Unsurprisingly, poor communication was cited as one of the reasons for relationship difficulties. Two of the women reported that their partner had not told them of prior cardiac events, and this was distressing for them. While it is impossible to determine why the patients chose not to tell their partner about prior cardiac events, there is evidence to suggest that care recipients’ unwillingness to share emotions is particularly distressing for female partners. Monin, Martire, Schultz and Clark (2009) investigated the relationship between care recipients’ willingness to express emotion to their caregivers and caregiving stress for spouses. Their sample was comprised of 262 people with osteoarthritis (71% female) and their spouses. Their findings showed that male care-recipients’ willingness to express emotions (fear, anger, happiness, sadness, guilt,
compassion, anxiety) was associated with less caregiving stress in wives. Female care-recipients’ willingness to express emotions was not associated with level of caregiving stress in husbands. Thus female partners seem to benefit from their spouse’s willingness to share emotions but male partners do not. In the case of the patients who withheld information from their wives about their earlier cardiac events, we can not speculate on whether this was done as a result of the patients’ unwillingness to share their emotions about the event or as a means of trying to emotionally protect their wives. In any event, the female partners perceived the withholding of the information as a communication difficulty.

While several men and women commented that communication was better (“we talk more”) since the cardiac event, only women reported communication difficulties. It is possible that none of the male partners experienced communication difficulties with their wives, but it may also be possible that men and women have different styles of communication and differing perceptions of communication difficulties. Gilligan (1993) suggests that “men and women may speak different languages that they assume are the same, using similar words to encode disparate experiences of self and social relationships” (p.173).

A number of women expressed the point that while they had been given plenty of information about the physical aspects of the cardiac event, little or no information had been given about the potential psychological impact of the cardiac event on the patient or the family. Given that past research shows that a cardiac event can have significant psychological consequences for the patient and their partner, this expression of a need to provide this information has implications for the type of information and/or resources made available to cardiac patients and partners.

Finally, most of the women reported some lack of understanding following their partner’s cardiac event. Some women commented on lack of understanding for their experiences by their husbands; other women commented that family and friends did not understand their situation. A few women also commented on lack of understanding shown towards their husband. The women who reported lack of understanding from their husbands commented that their husbands had become self-focused and did not even realize that their cardiac event had impacted on their wife as well. These women reported that their husbands had become demanding, expecting their wives to be with them all the time, but remaining calm and unaffected by the cardiac event themselves. The women who reported a lack of understanding from other people (family, friends,
medical personnel) mostly reported that they felt that others were minimizing their experience and their feelings by not acknowledging that the cardiac event had a direct effect on them as well as on the patient. Some women also reported a lack of understanding towards their husband as they adjusted to living with heart disease. These women reported on friends or family members not realizing that their husband was struggling to accept the idea of heart disease, sometimes minimizing his adjustment process or making inappropriate jokes.

Prior research with partners (mostly wives) of cardiac patients has shown that a cardiac event can have significant psychological consequences for partners as well as patients. In some cases, partners are more distressed than patients following the cardiac event (e.g., Helgeson, 1993a; Mayou et al., 1978; McGee et al., 1994; Michela, 1987). Results from the current study may help to shed some light on why this might be particularly true for female partners, especially when considering the large number of experiences that seem to be specific to women.

3.6.3 Experiences With Overlapping Themes but Differentiated Gender Responses

The differences in the overlapping experiences for men and women varied between subtle and substantial. Overall, the results suggest that the women made a greater number of changes in their daily routines than the men following their partner’s cardiac event. Female spouses were more likely to change their own diet, stop smoking, experience problems related to transport and increase their involvement in heavier household tasks and household finances. These reported changes in the women’s daily routines are largely consistent with male patients’ perceptions of the impact of their cardiac event on their wives (Croog & Levine, 1982). Male spouses were more likely to decrease their working hours and increase the amount of housework they did.

While only one man reported his wife’s focus on just the negative aspects of her cardiac event as being an additional stressor, several women reported having additional stressors such as personal illness, caring for children and/or elderly parents, and dealing with problems of their adult children (including illness and relationship breakdowns).

The difference in the pattern of perceived spousal mood and relationship changes for the men and the women was substantial. The majority of the men reported no relationship changes; some men reported their relationships had changed for the better; and none of the men reported their relationships had changed for the worse since
the cardiac event. The men attributed better relationships to greater emotional closeness, positive outlook and an awareness of vulnerability.

The perceived changes in relationship were more evenly spread for the women between no change and change for the better. Similar to the men, improved relationships were attributed to greater emotional closeness and awareness of vulnerability. However, improved relationships were also attributed to husbands taking responsibility for their own well-being and being easier to live/get on with. The men did not echo these responses. Perhaps most notable was that over one quarter of the women responded that their relationship had changed for the worse since their partner’s cardiac event. This is an appreciably higher proportion than previously reported (6%) by Schott and Badura (1988). In these cases, in the present study, women reported that both their husband’s mood and their relationship had changed for the worse. Worse relationships were attributed to poor communication, less emotional closeness, and husbands being moody, demanding and dependent (not taking responsibility for themselves). This last finding is in keeping with Astin, Atkin and Darr’s (2008) findings that tensions arose in couples where patients lacked motivation to take control of their recovery in spite of having full support of spouses. Thus the link between patient’s mood and couple’s relationship warrants further investigation. This is perhaps particularly relevant in light of the different patterns of responses for the youngest men and women, with the youngest men reporting better spousal moods and better relationships following their wife’s cardiac event, but the youngest women reporting worse spousal moods and worse relationships after their husband’s cardiac event.

3.7 CONCLUSION

The qualitative findings of Study 1 suggest that spouses of cardiac patients experience a broad range of responses to their partner’s cardiac event. These responses can have either a positive or a negative impact (or some combination of both) on the spouse themselves and on the relationship of the couple. It seems apparent that men’s and women’s experiences differ following a spouse’s cardiac event. This leads one to question whether these differences in response are primarily due to inherent gender differences, or whether the differences can more accurately be interpreted as resulting from differences in role. That is, when facing the prospect of adjusting to living with heart disease, could we expect similarity of experience based on gender (male vs female
experiences irrespective of role) or based on role (patient vs partner experiences irrespective of gender). Exploring this question formed the basis of Study 2.

The following chapter reviews the literature on research with couples where one member of the couple had experienced a cardiac event. In particular, research exploring gender and/or role differences in response to the cardiac event is highlighted.
Chapter 4: COUPLES AND HEART DISEASE

4.1 CHAPTER OVERVIEW

This chapter presents an overview of the research literature on couples and heart disease. In particular, there is a focus on quantitative research relating to the themes which emerged from the qualitative responses provided by the Study 1 respondents, namely self-rated health (Section 4.2), lifestyle changes (Section 4.3), distress (Section 4.4), perceived support (Section 4.5), relationship satisfaction (Section 4.6), perceived benefits (Section 4.7) and life satisfaction (Section 4.8). While some of the studies reviewed report on more than one of these themes, they have been grouped according to their main focus. Section 4.9 reviews a selection of qualitative studies with cardiac patients and their partners. Since there appeared to be gender differences in some of the Study 1 partners’ responses, an additional area of interest in the literature reviewed was how gender and/or role are related to the psychosocial variables of interest. Section 4.10 gives a general overview of the findings from the literature reviewed, providing a rationale for Study 2.

As previously noted, the focus of this thesis is on people in an intimate relationship and in this context, no distinction is made between married people and people living in a de facto relationship. This is in keeping with the ABS definition of a couple as “Two people in a registered or de facto marriage, who usually live in the same household” (ABS, 2007a, p.108). Because it is deemed to be more inclusive, the term relationship is used in preference to the term marriage (unless reporting on research where a distinction has been made).

4.2 SELF-REPORTED HEALTH

Global self-ratings of health have been shown to be useful determinants of health, and independent predictors of mortality among the aged, even after controlling for demographic and psychosocial variables such as age, sex, major illness and social support (Bardage, Isacson, & Pedersen, 2001; Benyamini, Blumstein, Lusky & Modan, 2003; Benyamini, Leventhal & Leventhal, 2000; Ford, Spallek & Dobson, 2008; Lee,
In general, results from these studies show that low health ratings (“poor” or “bad”) are associated with higher mortality at follow-up (ranging from 4 years to 12 years) than high health ratings (“very good” or “excellent”). This finding appears to be robust with similar findings across different countries (Australia, Israel, South Korea and Sweden), and with large samples drawn from both general community studies (Bardage et al., 2001; Benyamini, Blumstein et al., 2003; Ford et al., 2008; Lee, 2000; McCallum et al., 1994) and retirement communities (Benyamini, Leventhal et al., 2000).

While the majority of these studies selected people aged over 70 years, Bardage et al.’s (2001) 628 respondents (60% women) were aged between 36 and 93 years (with an average age of 65 years) making the study findings more applicable when considering younger cohorts. In this longitudinal study, data were collected five times over a 12-year period. Among other things, Bardage et al. asked respondents to rate their health at the time of the study (“good”, “between”, “bad”) and “compared to 5 years ago”(using the same ratings), allowing for assessment of perceived changes in self-rated health over time. In addition, Bardage et al. looked at the development of cardiovascular disease in their respondents over the course of the study, and found that 34.4% of the respondents developed cardiovascular disease during the 12-year follow-up period. Self ratings of health remained relatively stable over a 6-year period with 82% of respondents maintaining their initial “good” health rating and 69% of respondents maintaining their initial “bad” health rating. However, the development of cardiovascular disease was related to a decline in self perceived health.

With regard to mortality rates, Bardage et al. (2001) found that for both men and women, mortality was higher for people with “bad” self-rated health compared to those with “good” self-rated health. While mortality was higher for people with cardiovascular disease than for people who were disease free, the highest mortality rate was for people with unchanged “bad” self-rated health. Thus, the combination of cardiovascular disease and a long-term perception of “bad” health was clearly associated with higher mortality rates. Taken together, the findings suggest that respondents “know themselves” and self ratings of health are useful global measures of health for research purposes.

Self-rated health has been assessed for the Australian population (aged 18+) several times between 1995 and 2008 (ABS, 2006, 2007a, 2009). At each data collection time, the majority of Australians considered themselves to be in very good or
excellent health (1995 = 54.3%; 2001 = 51.5%; 2002 = 59.2%; 2004-05 = 56.4%; 2006 = 57.6%). Far smaller proportions of the Australian population rated their health as fair or poor (1995 = 15.8%; 2001 = 18.2%; 2002 = 15.9%; 2004-05 = 17.2%; 2006 = 15.8%). The figures for 2007-08 are not specified, but are said to be “considered directly comparable between the 2004-05 and 2007-08 surveys” (ABS, 2009, p. 49).

When data are examined based on gender and age, the results indicate that the proportion of people reporting fair or poor health increases with age. However, the data consistently shows that both men and women aged 18 – 74 years are most likely to report excellent or very good health, and only men and women aged 75+ are most likely to report fair or poor health (ABS, 2006, 2007a). Unpublished ABS data (2006a cited in ABS, 2007b) indicates that 43% of people with cancer or heart and circulatory problems report very good or excellent health. Thus, self rated health for the Australian population tends to be quite high, even for people with serious illnesses.

While most studies tend to use a single question relating to global health ratings, Lee (2000) proposes the use of separate ratings of physical and mental health, as perception of specific health domains may not be equivalent to overall health. Given that cardiac events have been shown to have both physical and psychological consequences, it seems prudent to assess perceptions of physical and emotional health separately.

### 4.2.1 Health Concordance Within Couples

There is evidence to suggest health concordance (i.e., similar objective and/or self-reported health status) within couples. Knuiman, Divitini, Welborn and Bartholomew (1996) investigated the familial correlations for cardiac risk factors (blood pressure, cholesterol, body mass index, and triceps fatfold) in a large Australian community sample. While they found that risk factors for spouses were correlated, they suggested that the observed correlations were “primarily due to assortative mating rather than cohabitational effects” (p.192). Assortative mating refers to the idea that people are more likely to marry someone who has similar demographic or personal characteristics to themselves (Vandenberg, 1972).

Meyler, Stimpson and Peek (2007) reviewed 103 health concordance articles and concluded that there was overwhelming evidence to suggest concordance between couples for mental and physical health and for health behaviours. Mental health concordance (largely studies of depressive symptoms) has been the most frequently
explored. Results for the majority of studies (55/58) indicated concordance between couples, with researchers suggesting mental health concordance was more likely due to mental health convergence / affective contagion, rather than assortative mating or shared environment factors. Affective contagion refers to the idea that people living in interdependent relationships tend to have emotions that are linked to those of their partner (Meyler et al., 2007).

Of the 26 studies which examined physical health concordance, almost all (24/26) found concordance within couples. The most often explored area was heart disease. As opposed to Knuiman et al.’s (1996) suggestion that health concordance is most likely explained by assortative mating, the majority of studies reviewed by Meyler et al. (2007) suggested shared environment explained physical health concordance.

Research into concordance of health behaviours examined dietary intake, smoking, alcohol consumption, and illegal drug use (Meyler et al., 2007). All of the studies (19/19) indicated concordance between couples, although explanations for this were more diverse, including convergence and assortative mating. Taken together, Meyler et al.’s review indicates that there is concordance between couples for mental and physical health and for health behaviours.

While there appears to be substantial support for the notion of health concordance within couples, another important aspect of health appraisal within couples is self-ratings and other-ratings of health. Franks, Hong, Pierce and Ketterer (2002) examined the self and spouse ratings of global health for 61 male heart patients. They found that in couples where there was agreement between patients and spouses about the patient’s global health rating, patients reported greater positive affect. Where there was disagreement, lower spouse than patient self-rating predicted lower patient positive affect, while higher spouse than patient self-rating predicted lower patient marital satisfaction. Franks et al. concluded that agreement between couples regarding the patient’s health status may result in a more supportive and less conflictual environment. They suggest that agreement may protect couples from conflicts regarding patients’ ability to resume prior activities, or their need to reduce work or household responsibilities. Franks et al. did not compare self and other ratings for spouses, but it would be reasonable to assume that disagreements within couples about the spouse’s health status may also impact on the spouse.
4.3 Lifestyle Changes

The links between CHD and lifestyle factors such as smoking, lack of physical activity and diets high in saturated fats have been well established (e.g., Oldenburg, Owen, Gomel & Graham-Clarke, 1992; Yusuf et al., 2004). In Australia there are now population-level initiatives aimed at reduction and prevention of risk factors for CVD and CHD. These include public awareness campaigns, laws, regulations, taxes and price interventions (AIHW, 2009b). In addition, the National Heart Foundation of Australia (NHFA, 2004) and the Australian Cardiovascular Health and Rehabilitation Association (ACRA, 2008) recommend that cardiac rehabilitation services should be available and offered to everyone with cardiovascular disease. Broad aims of cardiac rehabilitation are: “1. Maximise physical, psychological and social functioning to enable people with cardiac disease to lead fulfilling lives with confidence. 2. Introduce and encourage behaviours that may minimise the risk of further cardiac events and conditions” (NHFA, 2004, p.1). Broad guidelines for outpatient program inclusion are assessment, low to moderate intensity physical activity, education, discussion and counselling (ACRA, 2008; AIHW, 2008).

Participation in cardiac rehabilitation programs has been shown to be beneficial, with benefits including reduction in mortality, improved sense of well-being, smoking cessation, increased exercise tolerance and reduced depression (ACRA, 2008; Briffa et al., 2009). In spite of these benefits, cardiac rehabilitation services are underutilised (Briffa et al., 2009; NHFA, 2004) with participation rates ranging between 37% and 72% (Higgins et al., 2008). Traditionally cardiac rehabilitation programs have been geared towards patients’ needs, but there is a growing trend among researchers to suggest the benefits of involving family members in cardiac rehabilitation courses (Karner, Dahlgren & Bergdahl, 2004; Oldenburg, Gomel & Graham-Clarke, 1992; Theobald & McMurray, 2004).

Based on Kaplan (1985), Oldenburg, Gomel, et al. (1992) contend that there are four assumptions underlying the practice of health promotion and lifestyle change. With regard to CHD these assumptions are: “(a) that certain components of lifestyle increase the risk of CHD; (b) that changes in lifestyle can reduce the risk of CHD; (c) that lifestyle can be changed easily; and (d) that interventions with a lifestyle focus can be shown to be cost effective” (pp. 114-115). Cardiac rehabilitation programs can address assumptions a, b and d, but perceived ease of making changes (assumption c) can only
be determined by the individual making the change. While patients are routinely encouraged to make lifestyle changes as a means of maximising health benefits following a cardiac event and reducing the risk of further cardiac events, Oldenburg, Gomel, et al. (1992) argue that involving family members may be necessary in order to achieve and maintain successful lifestyle changes. This assumes a willingness by family members to make changes in their own lifestyle based on the needs of someone else. If this is the case, the ease of making the change(s) may be perceived differently if the change(s) are not made for one’s own benefit.

Karner et al. (2004) interviewed 25 spouses of cardiac patients about their views on supporting their partner in making lifestyle changes. They concluded that the spouse’s role could be classified into five broad categories: participative (taking a practical part in lifestyle changes); regulative (attempting to control the patient and enforce behaviour change); observational (passive support, sometimes complying with suggestions for change); incapacitated (positive attitude to change but an inability to provide support due to personal problems); and dissociative (not aiming to be supportive and separating own lifestyle from that of the partner). Karner et al. found that the participative and regulative roles were most common and were assumed in at least one domain (e.g., diet, physical activity) by the majority of spouses (participative = 80%; regulative = 60%). Spouses used different supportive roles for different situations, adjusting the type of support based on their partner’s needs and their own capacity and willingness to provide support in any given context (e.g., the dissociative role was the least common and was related to changes in diet and smoking). While it would seem spousal support in making lifestyle changes would be beneficial, spouses’ own capacity and willingness to provide support cannot be assumed.

Even when spousal support is given, the proffered support may not be viewed in the same way by patients and partners. Baric (1969) contends that adjusting to a healthier lifestyle means accepting an “at risk” identity which is different from the “well” or “normal” pre-illness identity or the “sick role” which is adopted during the acute phase of illness. Goldsmith, Lindholm and Bute (2006) interviewed 25 patients and 16 partners regarding how they spoke with their partners about lifestyle changes. Their findings showed that while some partners’ attempts at support were received as such by the patients and facilitated lifestyle changes, there was also the potential for patients to interpret support attempts as undesired control or criticism which might highlight or remind them that things were not as they used to be, or threaten the
patient’s autonomy (Goldsmith et al., 2006). In their attempts to be supportive, partners commented on a need to find a balance between “nagging” (which has the potential to be interpreted as critical or controlling) and not saying anything (which has the potential to be interpreted as not caring).

Goldsmith et al. (2006) make the point that partners may feel an expectation that they will take some responsibility for the patient’s behaviour. This expectation can be either self-imposed or may come from other sources. Thus partners may feel obliged to take on a “gatekeeper” role which they may or may not wish to do, and which the patients may not want either. Goldsmith et al. provide a cautionary note about considering the implications of expecting partners to provide support in lifestyle changes and note the importance of education for couples about the “relational dynamics of lifestyle changes” (p. 2088). Given that partners are often confronting their own anxieties about the patient’s condition and the resultant necessary adjustments, this cautionary note seems warranted.

While certain lifestyle modifications are generally recommended to patients through cardiac rehabilitation programs (e.g., healthy diet, smoking cessation, regular exercise), some changes in lifestyle may be made through necessity (e.g., changes in working hours). Partners may also find themselves making lifestyle changes as a necessary result of changes the patient has made. In order to examine the variety of lifestyle changes made following a cardiac event, partners in Study 1 were asked an open-ended question to that effect. Apart from the changes which coincided with recommendations usually made to patients, a number of other changes in lifestyle were also noted (e.g., changes in work status, changes in the time spent on hobbies and with friends). Since some lifestyle changes may be easier to make than others, and since Oldenburg, Gomel, et al. (1992) suggest that one of the underlying assumptions which facilitates change is the perception that it will be easy, it is somewhat surprising that it does not appear that any research has been conducted which has asked cardiac patients and their partners how hard it was for them to make lifestyle changes that were either recommended to them or were necessitated by their particular circumstances.

4.4 Psychological Distress

A cardiac event is a major life event and is perceived as stressful by both patients and their partners. Some of the literature regarding partners’ distress has been
reviewed in an earlier chapter, but it is worth further considering some of the research which has examined distress of both patients and partners. Gilliss (1984) compared the subjective stress of patients and their partners following CABG surgery. She found that spouses reported significantly higher levels of subjective stress than patients. Since the patients in the sample were predominantly male, Gilliss (1984) tested whether the greater levels of stress reported by spouses could be attributed to gender, since questions had been raised about whether women report more stress than men (Mitchell & Betrus, 1982 cited in Gilliss, 1984). She found that the difference in reported stress following CABG surgery was associated with the role of spouse rather than with gender.

Moore (1994) found that partners were significantly more distressed than patients six weeks after coronary artery bypass surgery. In addition she found no gender differences for levels of partners’ distress and concluded that it was the role of spouse which accounted for higher psychological distress in spouses. Finally, Moore found that for spouses, psychological distress was related to age such that younger spouses reported higher distress. Moore did not find the same association between age and psychological distress for patients. By contrast, Lukkarinen (2005) found that younger patients reported poorer quality of life one year after a cardiac event than did older patients. Lukkarinen argued that while older patients accepted their changed health circumstances and adjusted their life goals, younger patients did not accept the unexpected change in their life and rather than adjusting their life goals, they merely postponed them and denied the significance of their illness.

Rose, Suls, Green, Lounsbury and Gordon (1996) examined gender and role differences for male and female cardiac patients and their partners. While both patients and partners were distressed by the patient’s heart attack, distress lasted longer for partners. Similar to Moore (1994), Rose et al. found that male and female partners were equally distressed shortly after the patient’s discharge from hospital. They concluded that the absence of gender differences in partners’ distress may be due to the burden and uncertainty produced by the heart attack. Rose et al. did find gender differences for patients’ resumption of household activities which tended to follow traditional gender roles. While male partners took over some household tasks immediately after the patient’s heart attack, female patients had returned to their pre-MI levels of household activity by six months post-MI. Because the roles traditionally taken on by women (cleaning, cooking, laundry) are more ongoing than the traditional roles taken on by
men (sporadic repairs/maintenance), Rose et al. concluded that the overall burden for women, whether patient or spouse may be greater than for men.

Rohrbaugh, Cranford, Shoham, Nicklas, Sonnega and Coyne (2002) examined gender and role differences in psychological distress for couples coping with congestive heart failure (CHF). While CHF is somewhat different from the other cardiac events reviewed, this study is included here because Rohrbaugh et al. compared distress levels of their respondents with those of post-MI patients and their spouses (Coyne & Smith, 1991; Suls, Green, Rose, Lounsbury & Gordon, 1997) and found that their results were not significantly different from those reported by Coyne and Smith or Suls et al. who used the same distress measure. Rohrbaugh et al. found a significant gender x role interaction indicating that patient-spouse differences in distress varied with respondent’s gender. Patients were generally more distressed than partners, but female patients were more distressed than male patients and female partners were more distressed than male partners. The finding that patients were more distressed than partners in Rohrbaugh et al.’s study is different from findings in other studies reviewed so far, which reported spouses as more distressed than patients. Rohrbaugh et al. argue that in their sample, the difference in distress scores between patients and partners is mainly due to male spouses reporting low distress. They suggest that “women coping with CHF bear a greater proportion of the burden than men, regardless of whether they are patients or spouses” (p. 11). In addition Rohrbaugh et al. found that female-patient couples reported better relationship quality than male-patient couples and that gender differences in spouse distress could be explained by marital quality. This study highlights the interplay between gender, role and marital quality.

Moser and Dracup (2004) found that spouses had higher levels of anxiety and depression and expressed lower perceived control than did patients in the first month following a cardiac event (MI, CABG surgery or angioplasty). In addition, patients’ psychological adjustment to illness was related to partners’ anxiety and depression. Patients’ psychological adjustment was best when the patients themselves were more anxious or depressed than their partners and it was worse when partners were more anxious or depressed than patients (Moser & Dracup, 2004). Given that patients’ psychosocial outcomes were associated with partners’ emotional state, Moser and Dracup advocate assessing anxiety and depression in both patients and partners to determine where interventions may be appropriate. In seeking to explain why partners reported higher anxiety and depression, Moser and Dracup suggest that partners may
respond more negatively to the cardiac event than patients do partly because of the demands of caregiving and also because the bulk of health care support and resources are directed towards the patients’ needs. For partners who may be feeling burdened by the responsibilities of supporting patients, having a sense that there is inadequate support available to them from health care providers may add additional strain to their own emotional resources.

Preparedness for hospital discharge can be an important factor associated with adjusting to a cardiac event. Leske and Pelczynski (1999) found that the majority of carers did not feel adequately prepared for the patient’s discharge from hospital and their responsibility for patient care. Similarly, Davies (2000b) found that following cardiac surgery, both patients and their carers reported similarly elevated levels of anxiety, and carers in particular felt ill-prepared for the responsibility of providing physical and emotional support to the patient. In addition, carers were less satisfied with the information they received from health professionals than patients were, resulting in feelings of insecurity about assuming responsibility for looking after the patient at home.

4.5 PERCEIVED SUPPORT

There is a large body of literature investigating the potential benefits of social support when adjusting to an illness. It is beyond the scope of this thesis to provide a full review of this literature, but social support is generally considered an important factor in the recovery process for patients. With regard to heart disease, various aspects of social support have been researched in relation to adjustment following a cardiac event (Rankin-Esquer et al., 2000). Support can be received from a number of sources including family, friends and health care providers, and support can be instrumental, emotional or informational (Rankin-Esquer et al., 2000).

Coyne et al. (1990) conducted focus groups with 56 couples where one member had experienced an uncomplicated myocardial infarction. They regarded these couples as “consultants” to help with identifying key research questions that emerged from these discussions. They found that both patients and partners were distressed by the MI and that about one third of the spouses met or exceeded a standardized cutoff score for psychological referral. With regard to the responses of spouses, one of the most interesting findings was that while spouses provided support they saw this more as a
responsibility than a choice. “Although the spouses were generally loving they also felt a sense of responsibility for the situation and did not view being helpful and supportive as a choice, but rather as an automatic and necessary response. As a spouse, they owed this to the patient” (p.135). While Coyne et al. commented on the benefits for the patients of having supportive spouses, they also argued that “being in a couple creates obligations to protect the emotional and practical investment of the spouse and look after the spouse’s needs … At critical points, being in a marriage can be a mixed blessing and even a burden” (p.135). Coyne et al. stated that the process of adjustment for patients and their partners was “fundamentally a dyadic process in which each partner struggled to preserve his or her own well-being, as well as the other’s, while attempting to master the specific tasks of adaptation and recovery” (p. 138).

Kulik and Mahler (1993) examined the relationship between emotional support and adjustment in 82 male patients following CABG surgery. They found that married patients reported higher emotional support than unmarried patients. They also reported that higher emotional support was predictive of lower anxiety and depression, higher quality of life, and greater adherence to recommended behaviours (reduced smoking and more ambulation). This study confirmed the important role of partners’ support in patients’ adjustment following CABG surgery.

While support is generally reported to be beneficial, some forms of support may have adverse outcomes. There may be a tendency to overprotect patients in the recovery phase following an illness. While Coyne and Fiske (1992) suggest that overprotectiveness may reflect family members’ efforts to manage their own anxieties, Clarke, Walker and Cuddy (1996) found that patients who perceived they were being overprotected by their spouse following their heart attack reported higher anxiety and depression than those who did not perceive overprotectiveness from their spouse. In a similar vein, family members may engage in “protective buffering” which Coyne and Smith (1991) define as “a matter of hiding concerns, denying worries, and yielding to the partner to avoid disagreements” (p. 405). Although protective buffering may be done in an attempt to support and protect the patient from undue stress, Coyne and Smith (1991) found that wives’ distress was related to their use of protective buffering. That is, greater attempts to manage emotions and avoid upsetting the patients were associated with higher distress for wives. Thus partners’ attempts at supporting the patient may not always be perceived in the same way by the patients and partners, and partners’ attempts to protect the patients may prove detrimental to their own well being.
Suls et al. (1997) extended on Coyne and Smith’s (1991) study and examined the use of protective buffering by both patients and their partners one month and six months after hospital discharge. They found that patients who reported hiding their concerns about their illness from their wives also reported higher levels of distress at both one month and six months following hospital discharge. Similarly, wives who reported engaging in more protective buffering also reported higher psychological distress at both times. Thus it appears that well-intentioned attempts at hiding concerns from one’s partner can be detrimental to psychological well-being.

Research using social support as a predictor of wellbeing in spouses of cardiac patients has indicated that perceived social support was a better predictor of psychological adjustment than received social support (Helgeson, 1993b), and that perceived social support buffered and lowered mood disturbance over a two-month period (Rankin & Monahan, 1991). King, Reis, Porter and Norsen (1993) found that perceived social support was positively related to both physical and emotional health, for patients and spouses, at one-month, four-months and one-year following CABG surgery. However, perceived social support at Time 1 did not predict either physical or emotional health at Time 2 or Time 3.

Rankin and Monahan (1991) examined perceived support for 117 patients (94 male and 23 female) and their partners in the early recovery period following cardiac surgery. They found that patients reported significantly higher perceived support than did spouses. They also found that for spouses who reported high levels of caregiving burden, higher levels of perceived social support were associated with lower mood disturbance. Thus perceived support had a buffering effect on mood disturbance for spouses. For patients, there was no association between perceived support and mood disturbance. Rankin and Monahan suggested that social support may not operate in the same way for patients and caregivers. It is interesting to note that Rankin and Monahan did not ask the spouses about the amount of social support they received from the patients. There was no explanation given for this exclusion. While it can be assumed that recovering patients may not be in a position to provide practical support due to physical limitations during the recovery process, it is possible that patients may be able to provide emotional support to their spouses. This is an area worth further investigation since emotional support may be as important as instrumental support.

Yates (1995) examined the short- and long-term recovery outcomes of 93 male cardiac patients (MI, angioplasty, CABG surgery), with regard to social support
received from both spouses and health care providers. Overall, patients were more satisfied with spouse support than with support from health care providers. Spouse support was related to psychological recovery and health care support was related to physical recovery. Yates’ findings show that better psychological recovery outcomes (at both 2 months and 1 year) were associated with availability of, and satisfaction with, emotional support and tangible support from the spouse (in this case wife). Physical recovery was not associated with any form of support from spouses, but overall satisfaction with support from health care providers was associated with better physical recovery at both data collection times. Yates notes that there is an (often covert) expectation by health care providers that spouses will provide for most of the patient’s needs after discharge from hospital, and her data showed that wives were providing very high levels of support for the patients’ recovery. Yates adds the cautionary note that while spouse support is important for patient recovery, spouses should not be overburdened with tasks and responsibilities, which may have negative health outcomes for them.

Stolarik, Lindsay, Sherrard and Woodend (2000) examined the burden of care in 124 carers of patients one week and six weeks after discharge from hospital following CABG surgery. The carers (all family members) reported that the most difficult aspect of caregiving was providing emotional support to patients and that coping with the patient’s mood swings was the second most difficult aspect of caregiving. Stolarik et al. note that these aspects can be considered “the invisible work of caregiving”. In addition, assuming additional tasks in the home, behaviour management and monitoring patients’ progress where also burdensome for carers. These indirect care tasks were more burdensome than the direct care tasks such as ‘nursing’ patients and providing assistance with personal care or mobility.

Halm, Treat-Jacobson, Lindquist and Savic (2007) used a cross-sectional design to examine the potential burden of care in 166 spouses of patients 3 months, 6 months and 12 months following CABG surgery. They found that the spouses reported that of all the caregiving tasks, providing emotional support to the patient demanded the greatest amount of their time. This finding was the same across the three study groups. Similarly, spouses in all groups reported that providing emotional support and managing patients’ behaviour problems were the most difficult of the caregiving tasks. These findings are in keeping with other studies which indicated that providing emotional support was perceived to be the most burdensome caregiving task. In contrast
to other studies, Halm et al. found that the burden of care was significantly higher for male spouses than for female spouses. They suggested this may have been due to differences in personal characteristics of their sample whereby male spouses in the study were older, less educated, and reported poorer health than female spouses.

Coyne et al. (1990) argued that in the social support literature, a couple under stress due to the illness of one member is not really appropriately researched since the partner of the sick person is generally considered as the support provider, with little or no attention given to the needs and subjective experiences of that person. Coyne et al. proposed that individuals in such couples need to be considered as interdependent and that the well-being of one person can have a direct bearing on the well-being of the other. They argue that the most crucial sources of support are intimate or close relationships but suggested the possibility of a “contagion effect” for stress whereby the partner may become stressed with repeated exposure to a patient who is in distress. They also noted that it is problematic to simply see the spouse as the support provider and the patient as the recipient, since the spouse is also vulnerable to psychological distress as a result of the cardiac event. The literature reviewed in this section has supported some of Coyne et al.’s contentions, but also highlights the fact that in many cases partners are still primarily viewed for their capacity to provide support for the patient’s recovery. An important omission in much of the research is an examination of perceived support reported by partners, and in particular an examination of the support partners receive from their spouse (the patient).

### 4.6 Relationship Satisfaction

In a report commissioned by the Commonwealth of Australia, Halford (2000) undertook a major review of the literature pertaining to research on marriage and relationship education. Some aspects of Halford’s report are particularly relevant in the context of the current study. Halford defines relationship satisfaction as “an individual partner’s global sentiment about, or evaluation of, their relationship” (p. 6). Halford points out that this does not define an ideal relationship, “but rather asks partners to rate the extent to which their relationship satisfies their individual expectations” (p.6). Halford contends that one of the characteristics of satisfied couples is that they “undertake a range of positive activities on a regular basis” (p.8) and that these positive activities are a balance of spouse’s independent activities, couple activities and couples’
shared activities with family and friends. In addition, strong couple relationships are characterized by positive communication, mutual support and effective conflict management. Halford also cites literature which indicates gender differences in perceptions of intimacy, with women more likely to relate intimacy with self-disclosure and men more likely to relate intimacy with shared activities. In a similar vein, women are reported to be more emotionally expressive when discussing relationship issues and more likely to report dissatisfaction with a lack of emotional closeness. Finally, Halford notes that significant life events (including major illness in one partner) have the potential to either increase or decrease relationship satisfaction.

4.6.1 The Impact of Illness on Relationship Satisfaction

In a literature review on couples and illness, Burman and Margolin (1992) identified three types of couple variables that could have an impact on health variables: (a) relationship status (whether or not one is in a relationship); (b) relationship quality (satisfied or dissatisfied); and (c) relationship interaction, as observed through samples of behaviour. They argue that while the link between interpersonal variables and health is most likely interactional, such that poor health can affect interpersonal relationships and conversely interpersonal relationships can affect health, it is still worthwhile considering these two directions separately. Of particular interest to the current thesis is their review of the effect of health problems on relationship quality.

Burman and Margolin (1992) note that the data for disease as a stressor on relationship quality is contradictory. Citing research from both patients’ and partners’ perspectives on the effects of illness on relationship quality, Burman and Margolin report that increases, decreases and no change in relationship satisfaction, have all been reported following the onset of health problems. They suggest that the type of illness and specific characteristics of illness (intensity, severity, time since onset) may account for some of these inconsistencies in the findings.

A major problem with research on couples and illness, according to Burman and Margolin (1992), is that because there is either no data or only retrospective data on the quality of the relationship before the onset of the illness, “the data seems to indicate more about how health problems alter perceptions of marital quality than how health problems actually affect the marital quality” (p.53). It could be argued that, rather than being a problem, “perceptions of [relationship] quality” (p.53) are the only thing that
can be researched when people are asked about their relationships. It seems unclear how a person in an intimate relationship could reasonably differentiate between their perceptions of the quality of their relationship and the actual quality of their relationship.

Burman and Margolin (1992) also elaborate on how attempts to reduce cognitive dissonance after the onset of illness can result in patients and partners evaluating either their premorbid or their postmorbid intimate relationships positively. Suggested reasons for these elevated positive evaluations include contrasting premorbid and postmorbid relationships; spousal feelings of guilt about negative feelings towards patients in view of the patient’s illness; spousal feelings of obligation to remain in a relationship to care for the patient; and patients’ focus on the positive dimensions of their relationship due to their dependence on their spouse for caregiving. While there may be some merit in Burman and Margolin’s interpretation, it could be also argued that changes in perceptions of relationship quality, for whatever reason, are nonetheless real changes in the relationship that can affect the well-being of the individuals and the functioning of the couple. Furthermore, if the perceptions of relationship quality are different for each member of the couple, or perceptions of changes in relationship quality are dissimilar for each member of the couple after the onset of illness, there may be a compounding negative effect on individual well-being or couple functioning.

4.6.2 The Influence of Patient or Partner Role on Relationship Satisfaction

There is some evidence to suggest that patient or partner role may be a factor in the effect of health problems on relationship quality. Hafstrom and Schram (1984) found that wives of chronically ill husbands reported lower relationship satisfaction than a control group of wives whose husbands did not have a chronic illness. In contrast, there was no significant difference in relationship satisfaction between chronically ill wives and the control group of wives who did not have a chronic illness. Thus wives’ relationship satisfaction was related to the husbands’, but not to the wives’, chronic illness. Hafstrom and Schram concluded that when a wife is chronically ill she may be satisfied with the attention she receives from her husband or with the time he spends with her and the children, thus her satisfaction levels would be similar to those of other wives. On the other hand, Hafstrom and Schram suggest, “When a husband has a chronic illness, a wife may feel sorry for herself and tend to be less satisfied with their
husband-wife interrelations. Thus, they would have lower satisfaction levels than other wives” (p.201).

Hafstrom and Schram’s (1984) conclusion seems inadequate at best, as there are potentially reasons other than a wife feeling sorry for herself which could explain the findings. In addition, there were a number of limitations to this study. Firstly, husbands’ relationship satisfaction was not assessed, so no comparisons could be made on the basis of gender. The authors acknowledge this as a limitation of the study and cite “another study in which the senior author was involved” (p.198) where relationship satisfaction did not differ significantly on the basis of gender. However in this earlier study the method of assessment of relationship satisfaction was not the same for all the participants, so their conclusion of no gender differences would have to be taken with some caution. Secondly, Hafstrom and Schram pooled the data from several types of chronic illness including heart conditions, cancer, migraine headaches, asthma, diabetes, digestive problems and unspecified “other”. These conditions potentially have very different symptoms and levels of patient impairment, thus pooling the data may mask actual differences between groups. Thirdly, no information was provided on the time since the onset of the partners’ illness, so it is unclear if all couples were in similar stages of adjusting to living with a chronic illness. Finally, there were substantial differences in the number of participants within the different chronic conditions, with most conditions being represented by very small numbers. The most common chronic illness for husbands was hypertension/heart conditions (37%, \( n =20 \)), while the most common chronic illness for wives was “other” (30%, \( n =11 \)). In light of these numbers, perhaps the wives of chronically ill husbands were less satisfied with their relationships than other wives, because of the type of illness, rather than because they were feeling sorry for themselves. It could be that living with a husband’s heart condition has a particularly detrimental effect on relationship satisfaction for women.

### 4.6.3 The Influence of Gender on Relationship Satisfaction

There is some evidence to suggest that men and women differ in the emphasis they place on the importance of social connectedness. Gilligan (1982, 1993) argues that men and women have a different conception of social reality and that central to this difference is the emphasis placed on attachment and separateness. Over a series of studies with children, college students and adults, Gilligan explored the perceptions of
males and females with regard to conceptions of self and morality. Based on her findings, Gilligan suggests that from an early age males and females differ in the degree of social connectedness they require or deem important, with males placing the emphasis on the importance of autonomy and individuality and females emphasising the importance of relationships and connectedness. Lang-Takac and Osterweil’s (1992) findings also support the notion that women express more connectedness than men. They found that men scored higher on measures of self-other differentiation and independence than women did, while women scored higher on measures of empathy and desire for intimacy than men did.

Gilligan (1982, 1993) contends that relationships are experienced differently by men and women, and that for women their gender identity is entwined with connection and care of others. This difference in the emphasis placed on connectedness extends to differences in strategies employed by men and women for conflict resolution (Gilligan, 1982, 1993). In a similar vein, Gottman (1991) reports on gender differences in physiological arousal in response to marital conflict and suggests that men’s longer recovery time from physiological arousal may explain why men are more likely to stonewall than women. Stonewalling is a destructive pattern of withdrawal behaviour which the listener in a verbal conflict displays to the speaker, by avoiding eye contact and showing minimal facial movement (Gottman, 1991). Stonewalling is a way of avoiding conflict and the resultant aversive physiological arousal. Gottman reported that in observations of couples in conflict, husbands stonewall their wives and withdraw emotionally as a means of avoiding conflict and reducing their physiological arousal. The husband’s withdrawal is aversive to the wife and she responds by trying to re-engage her husband. If this is unsuccessful, the wife also withdraws emotionally. Gottman found that in marriages where husbands stonewalled, marital satisfaction decreased over time.

Coyne and Fiske (1992) also considered gender differences in relation to marital satisfaction. They suggested that wives may feel a greater need to deal with any marital short-comings because they are more likely than their husbands to base their own feelings of well-being on the quality of their marriage.

Rolland (1994) considered the impact of illness on relationships and argued that the gender of the ill partner and the caregiver is “a critical dimension in understanding couples’ dynamics with chronic disorders” (p. 339). He states that “typically, a couple’s beliefs are gender-related” (p. 339) and so from this perspective women are more
prepared for the role of caregiver. By extension, men may have more difficulty adjusting to the caregiver role because this does not fit their role expectations. He goes on to say “this may be accompanied by increased anger for being put in an unanticipated position and by guilt of the affected partner for becoming a burden” (p.339). Thus, gender appears to be an important factor in relationship satisfaction, particularly when a partner has a chronic illness.

4.6.4 Relationship Satisfaction Following a Cardiac Event

Croog and Levine (1982) acknowledged that a cardiac event could have an effect on the relationship between a patient and their partner. In their longitudinal study of 345 men following their first heart attack, they found that 88% of the 205 men taking part in the 8-year follow-up were married, with 95% still married to the woman who had been their wife one year after their cardiac event. Thus the sample had high stability of marriage during the time of the study.

Croog and Levine (1982) were interested in the impact of the cardiac event on family members and asked patients “In what main ways do you think your illness has affected your wife?” (p.156). Sixty-three percent of the married patients reported that they thought their cardiac event had had some effect on their wife. The most commonly reported perceived effect was increased anxiety and insecurity (37.7%) followed by increased protectiveness and care for the patient (20.6%). Other perceived effects on wives were changes in diet/cooking (9.7%), increase in wife’s responsibility for family/household maintenance (8.0%), increase or reduction in wife’s paid employment (8.0%), changes in life-style or spending patterns (2.9%) and changes in wife’s social and recreational activities (1.7%). Thus, the patients primarily perceived an emotional impact on their wives, but did not consider practical or social impacts to be as significant. It is noteworthy that over one-third of the patients did not consider their cardiac event had any impact on their wife. Croog and Levine note that patients may have used denial mechanisms as a means of coping with their illness and thus may have underestimated the impact of their illness on their family. They suggest, “we can assume that the reported perceptions …provide only a minimal estimate” (p.157).

Croog and Levine (1982) also asked the men to rate their own marital happiness and that of their wives. The men rated their own and their wives degree of marital happiness very similarly (“very happy”: own 49.5%, wife 46%; “happy”: own 33%,
wife 35%; “average”: own 15%, wife 16%; “unhappy” or “very unhappy”: own 2%, wife 3%). Furthermore, patients’ perceptions of their own or their wife’s degree of marital happiness or marital disagreement were not related to the patient’s health status or the level of severity of the patient’s illness. Croog and Levine reported that the most useful predictor of the couple’s total pattern of reported marital happiness and disagreement at 8 years was their happiness and disagreement one year after the cardiac event. Thus, the vast majority of patients in this study perceived their marriages as happy or very happy, regardless of the severity of their illness, and believed their wives felt the same way.

Croog and Levine (1982) were among the first researchers to consider the impact of a cardiac event not only on the patient but also on their wife and on the couple’s relationship. However, their data was taken only from the perspective of male patients and their perceptions of their wives’ responses. While Croog and Levine acknowledge this and suggest that “denial and other emotional factors may affect such perceptions” (p.164), their summary conclusions need to be treated with some caution. In particular, their statement that “relatively few of the women had changed lifestyles or roles in the family as a result of the illness” (p. 174) may be misleading as these were merely the perceptions of the men and may not have been an accurate reflection of how the wives themselves saw their situation.

Waltz (1986) examined the subjective well-being (defined as the balance between positive affect and negative affect) of male cardiac patients following their first myocardial infarction, over a one year period. He found that subjective well-being was highest in married patients reporting high intimacy with their partners, and lowest in unmarried patients or patients reporting low intimacy attachment with their partners. He also found that “without exception, the high-intimacy group was found to be adjusting better than [other groups] on every outcome measure” (p.798). Waltz concluded “that love resources are a major determinant of effective coping with the sequelae of illness and long-term adaptation” (p.802). Furthermore, Waltz emphasized the importance of intimate relationships by suggesting that an emotionally fulfilling relationship may “serve as a substitute for the loss of previous health and prized social roles” (p.803).

Although Waltz’s (1986) study demonstrated the importance of intimate relationships in adjusting to living with heart disease, and it is often cited in research on couples and heart disease, some limitations of this study should be noted. Although
Waltz collected data from the patients’ wives, this data was not reported separately but was mainly used to calculate composite measures from both spouses. Thus any differences in responses to living with heart disease between the male patients and their wives could not be examined. This seems unfortunate, particularly when Waltz notes that one item relating to intimacy attachment discriminated between various types of marriages (high or low intimacy), and that the responses to this item “varied somewhat … between the spouses” (p.796). Waltz, however, does not elaborate on this variation between spouses. In fact the only specific information provided about the wives’ reports was “the wives answered in a similar manner at Time 3” (p.797), in regard to patients’ reports about their quality of marriage. In this instance two fifths of the patients reported their marriage was “above average”, 4% responded “below average” and the rest responded “average”. The only other comment related to wives’ satisfaction with marriage was “70 – 85% of the spouses reported being satisfied with their marriages” (p.800). However, it is unclear whether this statement referred to the wives only, or whether the different percentages reflect differences for patients and their wives. In spite of the relatively high proportions of respondents reporting marital satisfaction, Waltz also notes that approximately half of the patients reported “frequent to moderate marital friction and dissention” (p.797) 6 and 12 months after the cardiac event. Waltz does not comment on wives’ reports at these times. In a later follow-up of this sample, Waltz, Badura, Pfaff and Schott (1988) reported that intimacy appeared to discriminate between patients with more moderate and more severe depressive mood. They found that patient reported intimacy was inversely related to patients’ level of depressive mood and suggested that this indicated a buffering effect of the patient’s social support system.

Gilliss, Neuhaus, and Hauck (1990) examined family functioning with patients and their spouses before cardiac surgery and at 3 and 6 months following cardiac surgery. The sample was comprised of 67 couples, with 80% being male-patient couples. These couples were randomly assigned to either a control group receiving standard care or an intervention group receiving additional educational materials and regular phone calls from the study nurse. This assignment of couples to either a control group or an intervention group resulted in four groups of participants, i.e., control group patients and partners, and intervention group patients and partners. Gilliss et al. found that all groups reported decreased family functioning between baseline and three months, and that all control participants and intervention group patients (but not
spouses) reported increases in family functioning at six months. The intervention group spouses did not report increases in family functioning at six months. In all groups, the reported level of family functioning at six months was lower than the level reported at baseline. Gilliss et al. argue that the baseline family functioning scores may be inflated due to fears regarding the upcoming surgery, and an idealization of the family at this stressful time. By three months after the surgery, the family members are dealing with the day-to-day stresses of dealing with the changes resulting from the surgery. Thus the reports of family functioning are likely to be lower. Gilliss et al. argue that the spouses in the intervention group may have failed to report higher family functioning at six months because they were in the intervention group and thus they may have been more aware of their situation or may be trying to introduce new patterns into their family life.

Miller, Wikoff, McMahon, Garrett and Ringel (1990) surveyed 136 couples with regard to marital functioning, marital responsibility and patient compliance to prescribed medical regimen (diet, smoking, activity, medication, stress). They found that marital functioning for both patients and spouses was predicted by marital responsibility agreement and by patient compliance with medical regimen.

In a longitudinal study of 17 couples, Beach et al. (1992) examined the relationships between the spouse’s social support, family stress, marital satisfaction and sexual comfort and the patient’s recovery after MI at hospitalization (T1), three weeks (T2), three months (T3) and six months (T4). They did not find any consistent relationships between the spouse’s social support and patient recovery. However, they reported a positive association between the spouse’s stress and the patient’s recovery at T3 and T4. It should be noted that this reported positive association actually reflects lower spouse stress being associated with better patient recovery, due to the scoring system Beach et al. used for their stress measure. In addition, they found a positive relationship between the spouse’s marital satisfaction and the patient’s recovery at T3. Spouses’ comfort with sexual activity was positively associated with patient recovery at T3 and spouse’s marital satisfaction at T3. Beach et al. noted that this was the first study which examined sexual intimacy (hugging, foreplay) and the important role it played in maintaining marital satisfaction.

Hilbert (1993) examined family functioning and affect in 35 couples. She found that patients’ and partners’ scores were significantly correlated on measures of positive affect, negative affect and family functioning. In addition she found that satisfaction with family functioning was significantly correlated with positive affect for spouses but
not for patients. Hilbert suggests this might be due to gender differences since all the spouses in her sample were women.

The literature suggests that illness, including cardiac events, can affect a couple’s relationship in many ways, however the findings regarding differences in relationship satisfaction based on gender and role are mixed and warrant further investigation. In addition, it is important to gauge perceptions of relationship change and relationship satisfaction from both patients and partners as assumptions can not be made that both members of a couple will share the same perception. Essentially, both patients and partners need to be given the opportunity to speak for themselves.

4.7 Perceived Benefits of a Crisis

The Chinese character for the word “crisis” is a combination of two pictograms. The first represents “danger”; the second represents “opportunity”. Thus, inherent in the written Chinese language is the notion that a crisis is multifaceted and includes not only danger but also an opportunity of some sort.

Caplan (1964) expresses a similar view in his discussion of crisis as a turning point in life. He contends that a crisis is a transitional period, which presents an individual with “both an opportunity for psychological growth and the danger of psychological deterioration” (p. 53). He contrasts this view with earlier views that stress or trauma was never helpful, and suggests that individuals who successfully master a distressing experience can appear strengthened and are often able to deal effectively in the future not only with similar situations, but with other difficulties as well.

During the normal course of events, Caplan (1964) argues that individuals operate in certain consistent patterns with minimal self-awareness and sense of strain. Whilst there may be some fluctuations, the individual is able to maintain a sense of consistency or equilibrium and continues functioning successfully within their own particular patterns. A crisis is seen as a relatively short period of psychological disequilibrium when a person is confronted by a situation they perceive as dangerous and which, for the time being, they can neither escape nor solve with their usual resources. During this time of psychological disequilibrium the individual may need to develop new behaviour patterns in a short period of time. These new behaviour patterns or ways of coping may then become an integral part of the individual’s problem-solving repertoire and remain stable in the long term as mechanisms for maintaining
equilibrium. There is potential for these new behaviour patterns for equilibrium to be better or worse than in the past.

Caplan (1964) goes on to acknowledge that individuals do not generally face a crisis alone, but may be helped or hindered by those around them. Individuals tend to become more dependent on personal relationships in times of crisis and good family relationships can be integral to successful management of a crisis. Caplan also acknowledges that a crisis can change the mental health not only of the referent individual, but also the mental health of others within the social network, and that these changes in mental health may be different from or greater than for the referent individual.

Over 40 years ago Caplan (1964) suggested that there was potential for psychological growth following a crisis and that if we could learn about the factors that determine outcomes during the disequilibrium of a crisis, we might be able to develop interventions to increase the possibility of healthy outcomes. More recently Tedeschi, Park, and Calhoun (1998) argued that prior research findings of perceived benefits or personal growth following a traumatic event had been largely incidental and were viewed as illusory or as defense mechanisms. It has only been since the 1980s that researchers have taken up Caplan’s suggestion and have started to shift the focus away from investigating only the negative consequences of trauma to investigating the potential for posttraumatic growth.

Tedeschi et al. (1998) argue that “posttraumatic growth is both a process and an outcome” (p.1) and that it arises from the struggle with trauma (Tedeschi & Calhoun, 1996). Tedeschi et al. suggest that traumas have inherent losses such as loss of loved ones, loss of personal capabilities or loss of one’s accepted way of understanding life. They contend that the struggle to deal with trauma can bring into question assumptions about one’s future and how to move toward that future, resulting in anxiety and psychic pain. This is in keeping with Caplan’s (1964) idea of psychological disequilibrium, and even more in keeping with Janoff-Bulman (1992) about shattered assumptions. Some people are not only able to rebuild their assumptive worlds, but use the traumatic experience as an opportunity to build better life structures. Tedeschi et al. consider this to be posttraumatic growth (PTG), which they see as “a significant beneficial change in cognitive and emotional life that may have behavioural implications as well” (p. 3).

Cohen, Hettler, and Pane (1998) note that “virtually all attempts to assess posttraumatic growth have focused on the individual” (p.39). They suggest, however,
that it is easy to imagine that posttraumatic growth could occur in a group, such as a family, following a traumatic event. This echoes Caplan’s (1964) suggestion that a crisis can change the mental health not only of the referent individual, but also the mental health of others within the social network.

Weiss (2004) examined the potential for posttraumatic growth in spouses. A sample of 72 husbands of breast cancer survivors (who were up to 5.5 years post-diagnosis) were surveyed regarding the social context variables associated with posttraumatic growth following the wives’ cancer diagnosis. Weiss found that the number of supportive individuals in the husbands’ social network, positive qualities of the marital relationship and the wife’s posttraumatic growth were significantly associated with husbands’ personal growth. Posttraumatic growth in husbands was related to the number of supportive individuals in the husbands’ social network, but not to their satisfaction with the support. Posttraumatic growth in husbands was also related to positive marital qualities, with depth of commitment being a significant predictor of husband’s posttraumatic growth in multiple regression analysis, but wife’s support was not. Weiss contends that the husband’s global perception of the positive role the wife plays in his life is more closely related to posttraumatic growth than is her support. Weiss argues that despite the wife being in the sick role, she is the most important factor in the development of personal growth for the husband. There was a significant correlation between husbands’ and wives’ posttraumatic growth scores although wives’ scores were higher on average than husbands’ scores. Weiss argues that wives who demonstrated posttraumatic growth following breast cancer diagnosis acted as a model of positive change for their husbands, more so than observations of other people who perceived benefits from the struggle with breast cancer. Weiss posits this may be a more positive manifestation of the “stress contagion” phenomenon (Coyne et al., 1990) whereby there is a risk of becoming distressed through intimate contact with a distressed individual. Weiss suggests that exposure to a wife who makes positive interpretations of the negative cancer experience is “contagious”, or that there is a transmission of posttraumatic growth between marital partners.

4.7.1 Perceived Benefits (Posttraumatic Growth) Following a Cardiac Event

Traditionally, most research into the psychological effects of experiencing a cardiac event has focused on negative consequences such as depression, anxiety and
negative changes in personal relationships. However, a few studies were designed to include an investigation of potential positive outcomes following a cardiac event.

Possibly the earliest exploration of perceived benefits following a cardiac event was that of White and Liddon (1972) who interviewed 10 survivors of cardiac arrest with resuscitation, where one of their stated aims was “special attention … to the religious or philosophical experiences of the patient himself” (p.220). White and Liddon found that the two most marked reactions of the patients were either the use of denial or “a transcendental redirection of their lives” (p.224), with 30% of the patients in the first category and 50% of the patients in the second category. Notably, the reactions were mutually exclusive as no patients reported both types of responses. White and Liddon reported that patients who experienced a transcendental redirection expressed “a desire to change their lives by giving up old ways which they felt were wrong” (p.224), citing as an example one woman who resolved to place less emphasis on material concerns and more emphasis on her personal relationships.

Croog and Levine (1982) conducted a longitudinal study over an 8-year period with 345 men who had recently suffered a first myocardial infarction with noncomplicated recovery. At 8 years the original sample of 345 men was reduced to 205, primarily due to death. Two questions related to the potential for positive outcomes: “Despite all the problems and worries which your illness has involved over the years, do you see any possible gains or advantages coming out of this experience?” and “Do you think your illness experience has made a difference in the way you think about life?” (p. 206). Responses to the first question were measured as “yes” or “no”, while responses to the second question were measured as “positive”, “no change” or “other than positive”. At the 8-year follow-up, overall results indicated that 59.8% of the men responded “yes” to the question regarding perceived gains following the heart attack and 37.6% of the men reported “positive” changes in attitudes toward life. When the results were analyzed in more detail, there was no significant difference in the proportion of men who reported positive changes in attitudes toward life between men who had been hospitalized in the preceding 2 years and those who had not. However, a significantly higher proportion of men who had not been hospitalized in the preceding 2 years (64.2%) reported perceived gains following the heart attack than men who had been hospitalized during that time (50.0%).
Affleck et al. (1987) provide somewhat more detail regarding the potential for positive outcomes from Croog and Levine’s (1982) longitudinal study. Affleck et al. started from the premise that a search for meaning was one of the central themes in theories of coping with serious illness. They reported on interviews with 287 men 7 weeks and 8 years after their heart attack. At both times, the men were asked “Despite all the problems and worries which your illness has involved, do you see any possible benefits, gains or advantages in this experience? If so, what are they?” (p.31). This is a slight variation from the question as reported in Croog and Levine. However, it is assumed to be the same question with the participants having the opportunity to expand their answers beyond the yes/no option reported by Croog and Levine. Just under 60% (58.2% at 7 weeks, \( n = 287 \); 59.5% at 8 years, \( n = 205 \)) of the men reported benefits from the heart attack at both times. The most frequent comments related to learning the benefits of preventive health behaviours and making life-style changes to increase enjoyment of life and survival. However, patients also commonly reported changes in “philosophy of life”, values and religious views.

Affleck et al. (1987) tested the use of perceived benefits as a predictor of further infarcts and morbidity. They found that when patients’ ages, socioeconomic status and prognostic severity were controlled, the failure to perceive benefits at 7 weeks was associated with higher incidence of reinfarction and greater morbidity at 8 years. Thus men who perceived benefits following their first heart attack were less likely to have a subsequent attack and showed less morbidity 8 years later. Affleck et al. note that the most commonly cited benefit following the cardiac event was learning the advantages of preventive health behaviour. This could account for the findings of fewer reinfarctions and less morbidity among participants who reported perceived benefits. However, Affleck et al. also note that “a substantial number of participants” (p.33) reported that the heart attack had caused them to reconsider their interpersonal relationships, values and religious views. Changes in these beliefs have been associated with bringing meaning or a sense of purpose to what might otherwise be considered a meaningless tragedy (Janoff-Bulman & Frieze, 1983; Taylor, Wood & Lichtman, 1983). Affleck et al. suggest that redefining a crisis as having positive attributes may help to bolster a sense of well-being. Michela (1987) reported that men who reevaluated their lives after a heart attack reported less depression and greater marital satisfaction.

Laerum et al. (1987) conducted a study where they aimed to investigate the potential for positive effects after a myocardial infarction. They interviewed 84 male
patients 12 to 21 weeks after the cardiac event. Included in the interview was the question “If you summarize all conceivable negative and positive changes and consequences of the myocardial infarction, as you see it today, will you then consider your total life situation to be much or somewhat worsened, unchanged, or somewhat or much improved?” (p.303). Twenty percent of the patients said their total life situation had worsened, 46% said it was unchanged and 33% said their total life situation had improved since the myocardial infarction. In addition, patients were asked about perceived changes in various aspects of their relationships with their spouse or family. Within each of the perceived change categories, between 7% and 79% of the patients who had judged their total life situation as improved since the cardiac event also reported experiencing positive changes in their spouse and family relationships. The corresponding figures in the other two groups (life situation unchanged and life situation worsened) were between 0% and 50%.

Laerum et al. (1987) argued that the fact that one third of the patients had reported an improved life situation, including family relationships, was “a high and important proportion of the total patient numbers and contrasts with several other investigations, which uniformly report negative consequences of myocardial infarction” (p. 304). Laerum et al. acknowledge that their findings may have been biased toward people who have a more general positive attitude because they chose to participate in the study. However, since a higher proportion of participants reported no change in their life situation, and some participants reported a change for the worse, this self-selection bias seems somewhat unlikely. Perhaps a more plausible explanation for the findings is that, as Laerum et al. point out, other studies may have overlooked the possibility of positive outcomes following a cardiac event. Laerum et al. (1987) pointed out, in passing, that their study did not include female cardiac patients, and that it is unknown whether their findings are representative of females with myocardial infarction.

Tennen and Affleck (1998) note that there is a paucity of information regarding possible gender differences in posttraumatic growth. Tedeschi and Calhoun (1996) and Park, Cohen and Murch (1996) found that women scored higher than men on measures of stress-related growth, but Tennen and Affleck suggested more research is necessary before this trend can be considered a reliable gender difference. Only two studies have been identified which examined gender differences in perceived benefits following a cardiac event (Petrie, Buick, Weinman & Booth, 1999; Sheikh, 2004) and both studies found no gender differences. Petrie et al. compared positive effects following illness in
a sample of female breast cancer survivors with a sample of mostly male MI survivors. They found that MI patients were more likely to report positive effects than breast cancer patients were. The most common positive effect reported by MI patients was healthy lifestyle change followed by greater appreciation of health and life, and improved close relationships. Sheikh (2004) examined posttraumatic growth in relation to gender, personality characteristics and social support satisfaction. The findings suggested that only extraversion was predictive of posttraumatic growth. Thus it seems that gender differences in posttraumatic growth are still unclear. This was also suggested by Linley and Joseph (2004) who found mixed results in their review of 39 articles related to posttraumatic growth.

To date, research on perceived benefits / posttraumatic growth following a cardiac event has been limited and has only considered patients. However, there is emerging literature to suggest that partners may also experience growth following a spouse’s traumatic event (e.g., Weiss, 2004). It remains to be seen whether partners of cardiac patients experience posttraumatic growth following their spouse’s cardiac event.

### 4.8 Life Satisfaction

The respondents in Study 1 were not asked directly about their degree of satisfaction with life. Nonetheless the results suggested this was a fruitful area of further investigation since varying degrees of life satisfaction were implicit in the qualitative responses provided by the Study 1 respondents.

Bookwala and Schulz (1996) examined subjective well-being in a large cohort of 1,040 couples aged over 65 years. Among other measures, they included a measure of “feelings about life as a whole” and of “satisfaction with the meaning and purpose in life” (p.585). They found that, on average, ratings for both measures were generally high. In addition mean scores for both measures were very similar for husbands and wives and were significantly correlated. This is in keeping with other findings of concordance between spouses (Knumin et al., 1996; Meyler et al., 2007). Finally, Bookwala and Schulz found that the best predictor of a particular component of subjective well-being in a respondent was the corresponding measure in his or her spouse. They suggested that individuals may communicate cues about their well-being to their spouse which in turn may affect the spouse’s assessment of their own well-being. Bookwala and Schulz suggested this may have implications within the
framework of caregiving where the well-being of the care recipient may act as a
determinant of the well-being of the caregiver.

Bookwala and Schulz’s (1996) participants were not selected on the basis of any
particular medical condition. By contrast, Fox et al. (2004) examined the quality of life
of 852 male and female patients who had undergone CABG surgery an average of 4.3
years prior to the start of their study. Respondents completed questionnaires, which
included a global life satisfaction measure, at baseline and then 2 and 4 years later. Fox
et al.’s results show that mean scores on the global life satisfaction measure were high at
baseline and remained almost identical over the duration of the study. Fox et al.
comment that these findings are noteworthy but suggest that the generally “positive
scores” (p. 493) on all components of their quality of life assessments may reflect
selection of participants into their study who were more able to participate in a
longitudinal clinical trial.

Kirkevold, Gotner, Berg and Saltvold (1996) examined life satisfaction ratings
of 91 patients (95% men) at hospital admission and again 8 weeks after CABG surgery.
They found that ratings of satisfaction with life changed over time, with post surgery
ratings being high, and significantly higher than at hospital admission. Kirkevold et al.
note that patients consistently reported high levels of social support from their partners.
They compared this observation with findings reported by Kulik and Mahler (1993),
which indicated a positive relationship between level of spousal emotional support and
quality of life for patients. Kirkevold et al. speculate that the reported high degree of
spousal support may in part explain the patients’ high ratings of satisfaction with life,
although they did not measure this relationship.

Apart from the examination of concordance between couples, Bookwala and
Schulz (1996) found some negative associations between satisfaction with life and
difficulty of performing daily living tasks, but other psychosocial correlates of
satisfaction with life were not examined in this study, or by Fox et al. (2004). Although
Kirkevold et al. (1996), speculated on a possible association between social support
from spouse and life satisfaction for patients, they did not measure this potential
relationship. In light of the previously reported variety of responses to a cardiac event, it
seems appropriate to examine a broader range of correlates of general satisfaction with
life following a cardiac event in both patients and partners.
4.9 Qualitative Studies with Couples

There appears to be a recent trend towards qualitative studies with couples following a cardiac event. A selection of these studies was reviewed in order to gain an understanding of the emerging themes.

Stewart, Davidson, Meade, Hirth and Makrides (2000) report on responses from 14 couples (one female-patient couple) who participated in a 12-week support group intervention. Many issues were raised by patients and partners relating to stress associated with the illness (for patients) and caregiving (for partners). The majority of patients reported on the emotional impact of their MI ranging from denial to fear, confusion and frustration. The need to make lifestyle changes was also cited as a stressor by most patients, and often caused conflict with spouses. Many patients reported that over-protectiveness by their spouse was a concern for them. Spouses reported that managing lifestyle changes was stressful, and also reported difficulty in dealing with patients’ emotional reactions and mood changes. Some spouses reported being constantly vigilant and worried about the patient. The majority of spouses reported some degree of emotional turmoil, with the most often reported emotion being fear. Some spouses also reported on the negative effects of the MI on their marital relationship. Both patients and partners engaged in “protective buffering” in an effort to protect their spouse from stressful information, and both patients and partners commented on insufficient information from health care professionals. Stewart et al. conclude that “the predominant stressors described by both survivors and spouses pertained to the emotional effect of the cardiac event, lifestyle changes, dealing with health professionals and the system, and their spouses’ reactions” (p. 1358).

Theobald and McMurray (2004) interviewed 30 patients and their carers (24 partners; 5 family members; 1 other) to examine the post discharge issues and concerns one year after cardiac surgery. While there was some overlap between patients and partners in the issues they raised (e.g., shock at the need for surgery and the value of mutual support and sharing experiences with others in the same position), this qualitative study also highlighted the experiences that were specific to patients and carers. Patients reported changes in their physical abilities and a heightened awareness of such changes. They also expressed concerns about loss of previous lifestyle and concerns about the future. Carers expressed a sense of responsibility and reported on vigilance in watching over the patient. Carers also commented on role changes, many
taking on additional household chores and reducing paid working hours. Some changes in relationships were noted, with some carers reporting closer relationships with the patient, but at least one carer noted marital problems which intensified as a result of the illness and surgery. While all carers felt supported by others (family and friends), some noted that they would have found additional services, such as counselling, useful during the recovery period. Although some mention was made of relationship changes following cardiac surgery, this was only mentioned from the perspective of the carers. A comparison of qualitative responses from patients and their partners would be useful in providing a deeper insight into the impact that cardiac surgery can have on a couple’s relationship.

Mahrer-Imhof, Hoffmann and Froelicher (2007) conducted interviews with 24 couples following hospitalisation for a cardiac event and participation in cardiac rehabilitation. The main findings reported by Mahrer-Imhof et al. related to three patterns of dealing with the illness. Firstly, some couples assessed the illness as a transformative experience with opportunities for change which ultimately brought them closer together. These couples perceived changes as a mutual task and saw themselves as successful in adapting to cardiac disease and in improving their relationship. Secondly, some couples perceived the illness as a threat which created insecurities in their lives and future plans. Partners tried to shield each other from their worries, but ultimately the perceived threat brought the partners closer together. Finally, some couples missed opportunities for positive change through mismatched expectations or an unwillingness to change old patterns. There was evidence of misunderstanding and withdrawal from each other within these couples.

The information gained from these studies is perhaps particularly useful in determining which issues are considered important for patients and carers. Open-ended questions allow the respondents to highlight the issues that they deem important, as opposed to responding only to researcher-determined issues.

4.10 Conclusion

The literature reviewed in this chapter was guided by the themes which emerged from the qualitative responses in Study 1. These themes were the issues that partners of cardiac patients deemed important for them following their spouse’s cardiac event. While the literature reviewed in this chapter provides evidence that these themes have
been researched to some degree with cardiac patients and their partners, no study has looked at the interplay among these issues for cardiac patients and their partners. In addition many of the studies reviewed did not examine gender differences or the possibility of gender x role interaction effects for the outcome variables. Rankin-Esquer et al. (2000) note that more research is needed in exploring gender difference for patients with regard to the development and rehabilitation of CHD, and it can be argued that there is also a need for research examining gender differences in the adjustment of partners.

For these reasons a study was designed where this group of issues could be examined in more detail in order to gain a better understanding of the subjective experiences of patients and their partners following a cardiac event. A study design using both qualitative and quantitative methods was deemed most appropriate for this purpose. Chapter 5 describes the aims, research questions and design for the study of patients and their partners. In addition it details the participant characteristics, survey instruments, recruitment procedures and overall participation rate.
Chapter 5: **STUDY 2 METHODS**

5.1 **CHAPTER OVERVIEW**

This chapter starts with the rationale for the study (Section 5.2). Within this section are the overall aims (Section 5.2.1), research questions (Section 5.2.2) and design (Section 5.2.3) for Study 2. Following this, information is provided about the study participants (Section 5.3) and survey instruments (Section 5.4) including advertising materials (Section 5.4.1) and survey measures (Sections 5.4.2 to 5.4.4). Procedures are detailed in Section 5.5 with information for advertising the study and recruiting participants through a variety of sources explained in Sections 5.5.1. Finally information is provided about the overall response rate taking into account the various recruitment strategies (Section 5.5.2).

5.2 **RATIONALE FOR STUDY 2**

The results from Study 1 and the literature reviewed in Chapter 4 informed the design of Study 2. The qualitative responses from Study 1 indicated that spouses of cardiac patients experienced a wide range of responses to their partner’s cardiac event, with male and female spouses reporting some differences in these experiences. As noted previously, many of the studies reviewed in Chapter 4 did not examine gender differences, or the possibility of gender x role interaction effects on outcome variables (e.g. Affleck et al., 1987; Croog & Levine, 1982; Kulik & Mahler, 1993; Mahrer-Imhof et al., 2007; Stewart et al., 2000; Suls et al., 1997; Waltz, 1986; Yates, 1995). In order to explore whether the differences in experiences reported by Study 1 participants were primarily due to inherent gender differences, or whether they were due to role differences, or due to some interaction between gender and role, a second study was designed to obtain responses from couples where one member of the couple had recently experienced a cardiac event. Both male-patient and female-patient couples were sought so that comparisons could be made across genders and across roles. This is in keeping with grounded theory methodology, which uses theoretical sampling, whereby emerging findings guide the collection of further data, and the nature of the sample of respondents (Ezzy, 2002). Thus the focus of Study 2 was to examine the
effects of a cardiac event on patients (male and female), on their partner and on the couple’s relationship, within the framework of exploring gender and role differences.

5.2.1 Aim of the Study

The overarching research question in the current study was how one’s sense of wellbeing can be affected when adjusting to a major life issue such as a cardiac event. Wellbeing has been conceptualized in many ways and the general consensus is that wellbeing is a multi faceted construct. The current study was concerned with adjustment to a specific event which had the potential to disrupt one’s sense of normality and wellbeing. For the purpose of this study adjustment and wellbeing were considered in light of subjective reports of physical and emotional health before and since the cardiac event, ongoing distress following the cardiac event, relationship satisfaction, general life satisfaction and perceptions of personal growth as a result of the cardiac event.

Following a review of the literature and based on the findings of Study 1, the overall aim of Study 2 was to compare the subjective experiences of cardiac patients and their partners, and to examine whether any differences in reported experiences following the cardiac event were based on gender, role (patient or partner), or an interaction between gender and role. To this end, analyses were conducted to examine the psychosocial outcomes of the cardiac event separately for patients and partners. Psychosocial outcomes included measures of health, distress, life satisfaction, relationship satisfaction and posttraumatic growth. In addition, couples’ experiences were examined using within-couple comparisons of self-reported health, reported changes in daily routines and lifestyle, perceived social support and perceived changes in mood and relationship.

5.2.2 Research Questions

There were three broad research questions for this study which addressed the overall aim. A separate chapter is devoted to the exploration of each question. The research questions were as follows:

Research Question One: The first research question related to respondents’ own psychosocial outcomes following the cardiac event. It was designed to explore the effects of gender and/or role on psychosocial experiences following a cardiac event. Quantitative data from the entire sample of male and female patients and partners was used to explore this question. Analyses and findings for Study 2 Part A are presented in
Chapter 6. The specific question under investigation was: *How do gender and/or role contribute to any differences in self-rated levels of physical and emotional health, lifestyle, psychological distress, life satisfaction, perceived support, relationship satisfaction and posttraumatic growth following a cardiac event?*

**Research Question Two:** The second research question was conceptualized as relating to couples’ shared experiences. It was designed to examine within-couple experiences of the psychosocial outcomes for patients and their partners. Quantitative data from the couples was used to explore this question. Analyses and findings for Study 2 Part B are presented in Chapter 7. The specific question under investigation was: *What are the couples’ experiences of changes in lifestyle, mood, and relationship and how are these perceptions associated with self-rated levels of distress, life satisfaction, perceived support, relationship satisfaction and posttraumatic growth?*

**Research Question Three:** The final question related to the issues raised by respondents regarding the cardiac event and its consequences. This question was addressed using open-ended questions which allowed respondents to indicate the issues that were important to them. Qualitative analyses and findings for the full sample of male and female patients and partners for Study 2 Part C are presented in Chapter 8. The specific question under investigation was: *What are the important issues for patients and partners following the cardiac event and do these differ based on gender and/or role?*

### 5.2.3 Study Design

In order to address the research aims, a study which used a mixed-methods approach (Clarke, 2004; Todd et al., 2004), with both quantitative and qualitative methods, was utilized. This approach was used in order to examine the themes that emerged from Study 1 in a more structured way (quantitative method). The addition of open-ended questions (qualitative method) allowed for further exploration of quantitative findings and also allowed for comparisons between the Study 1 and Study 2 findings. This combination of quantitative and qualitative methods was deemed the most appropriate way to capture the depth of the subjective experiences of cardiac patients and their partners.
5.3 Participants

Participants were male and female cardiac patients and their partners. Thirty couples took part in the study. All couples were heterosexual, although this was not a selection criterion for the study. There were 27 male-patient couples and 3 female-patient couples. In addition, there were four patients (3 female, 1 male) and five partners (all female) who returned questionnaires without corresponding questionnaires being returned by the other member of their couple. These “non-matching” participants were included in some analyses, resulting in a total sample of 69 participants.

Age of participants ranged from 27 years to 82 years (M = 63.25, SD = 12.39). Women (M = 60.37 years, SD = 12.89 years, n = 38) were significantly younger on average than men (M = 66.77 years, SD = 10.95 years, n = 31), (t(67) = -2.19, p < .05), and participants who responded alone (M = 47.56 years, SD = 12.25 years, n = 9) were significantly younger than participants who responded as a couple (M = 65.60 years, SD = 10.65 years, n = 60) (t(67) = 4.65, p < .001).

The length of time couples had been together ranged from 5 years to 55 years (M = 35.28 years, SD = 16.70). The majority of couples (87%) had at least one child, with most having either two children (21.7%) or three children (30.4%). Almost all children (90.2%) were adults (> 21 years). Only one couple and one “single” respondent permanently cared for another relative in their home. In each case it was the mother of the female respondent. The highest level of education completed by most respondents was secondary school (39.1%) while 31.9% had completed a tertiary qualification. The remaining respondents had either completed primary school (17.4%) or held a post graduate qualification (11.6%).

The main selection criterion for inclusion in the study was the experience of a cardiac event. Using data from all patients and from spouses whose partner did not respond, there were 39 cardiac events. Events included 14 CABG, 7 angioplasties, 10 angioplasties following heart attacks, 6 CABG following heart attacks and two valve replacements.

The time since the cardiac event ranged from one month to twelve years (M = 18.85 months, SD = 27.64 months, n = 39), with 92.3% of events occurring within the past three years. Fifty-nine percent of events had occurred within the past year (1 month = 20.5%; 2-6 months = 15.4%; 7-12 months = 23.1%). A further 20% were 13-24 months and 12.8% were 25-36 months since the cardiac event. The final group (7.7%)
ranged from 59-144 months since the cardiac event. These cardiac events were the first experience of cardiac problems for the majority of patients (69.2%). The remaining 30.8% of patients had previously experienced a cardiac event ranging from 1-37 years ago ($M = 10.00$ years, $SD = 9.75$ years, $n = 12$), with most of these being heart attacks (50.0%) or CABG (25.0%) and the remainder being angina (8.3%) or angioplasty (16.7%).

The majority of respondents (67.6% of patients; 52.9% of partners) had attended cardiac rehabilitation sessions. Patients had attended between 1 and 25 sessions ($M = 5$, $SD = 6$, $n = 34$), while partners had attended between 1 and 10 sessions ($M = 2$, $SD = 3$, $n = 35$). Of the patients who did not attend cardiac rehabilitation sessions, 11.8% reported they were unable to attend, 2.9% reported they chose not to go and 17.6% reported that cardiac rehabilitation sessions had not been offered to them. Of the partners who did not attend cardiac rehabilitation sessions 11.8% reported they were unable to attend, 11.8% reported they chose not to attend and 23.5% reported that cardiac rehabilitation sessions were not offered to them.

Employment status changed for a number of respondents as a result of the cardiac event. Prior to the cardiac event 47.8% were employed, 43.5% were retired, 7.2% were involved in home duties/child care and 1.4% were doing voluntary work. Following the cardiac event 31.9% were employed, 56.5% were retired, 5.8% were involved in home duties/child care, 2.9% were doing voluntary work and 2.9% were unemployed and looking for work.

Questionnaires were available both online and as printed copies. The majority of responses (71%) were from Australian respondents who returned printed copies. The remaining responses were online from America (20.3%), New Zealand (2.9%), Croatia (2.9%), UK (1.4%) and India (1.4%). People who responded online were significantly younger on average ($M = 51.30$ years, $SD = 10.96$ years, $n = 20$) than people who responded using paper-based questionnaires ($M = 68.92$ years, $SD = 9.28$ years, $n = 49$), ($t(67) = -6.48$, $p < .0001$).

### 5.4 Materials

#### 5.4.1 Advertising Materials

In order to maximize the potential to recruit a community sample of cardiac patients and their partners, Study 2 was advertised in a number of different ways.
Bookmarks and flyers were created on coloured card so that they could be posted on notice boards and left in public venues. Bookmarks were also included in all questionnaire packets. Advertising through Swinburne University included a media release and a story in the Alumni News. In addition, advertising materials were created for the Swinburne University first year psychology students’ Research Experience Program. Internet advertising was done through messages posted on selected cardiac support group websites and through the creation of a website where online surveys could be completed. All advertising materials included the project title, information about the project, inclusion criteria, the researcher’s and supervisors’ contact details and the web address for online surveys.

Brief explanations of advertising materials and the specially created website are provided in Appendix B. Copies of all advertising materials are also provided in Appendix B.

5.4.2 Questionnaire Packets

Paper-based questionnaires were presented as a packet to prospective couples. Each packet contained an introductory letter introducing the researcher and the study. This letter also provided instructions for creating a “couple identification code”. Separate questionnaire booklets were provided for the patient (coloured green) and partner (coloured yellow), each containing a disclosure form before the start of the questionnaire. Separate reply paid envelopes for the return of each questionnaire were provided. Two bookmarks were also included in each packet with a suggestion that these could be passed on to someone else who might be interested in taking part in the study. Copies of the introductory letter and patients’ and partners’ questionnaire booklets are provided in Appendix C.

5.4.3 Internet Surveys

Online surveys were available at the specially created web page. Separate links labeled “Patient Survey” and “Partner Survey” were provided. Once the survey link was activated, the disclosure form was displayed before the start of the survey. For both paper-based and internet surveys, return of the questionnaires was considered to constitute implicit written consent to participate in the study (Ladwig et al., 1999)
5.4.4 Questionnaire Content

Separate questionnaires were designed for patients and partners, with the only difference being appropriate wording to suit either the patient or the partner. Questionnaires included demographic information, and a combination of open-ended questions and standard scales designed to examine the psychosocial outcomes of the cardiac event and the couples’ experiences of the cardiac event.

5.4.4.1 Demographic Information

Couples were asked to create a couple identification code for themselves, thus ensuring anonymity, while still allowing the researcher to do within-couple analyses of responses. Participants were asked demographic questions regarding their age, sex, education level, employment status both before and after the cardiac event, family structure, the type of cardiac event, the patient’s cardiac history and participation in cardiac rehabilitation sessions.

5.4.4.2 Quantitative Measures of Psychosocial Outcomes of the Cardiac Event

5.4.4.2.1 Self-Reported Physical and Emotional Health

Estimates of physical and emotional health before and after the cardiac event were requested on a self-report basis rather than using any functional or psychological measures. This was done partly because it would have been impossible to get functional and psychological measures prior to the cardiac event and therefore no direct comparisons could be made following the cardiac event. In addition, one’s perception of health is important. Wiklund, Dimenas and Wahl (1990) cite evidence which shows that the concordance between patients’ perceptions of their own health and physicians’ assessments of patients’ health is often low. Wiklund et al. suggest that how patients perceive their own health is a key factor in adjustment to major illness, and should be taken into account in clinical decision making. Thus self-reported health may be more useful for research purposes than an objective measure. For example, two people each experiencing similar symptoms as based on some objective measure, may perceive their health differently, one person my consider their health to be average while someone else with similar symptoms may rate their health as very good. Equally, when reflecting on any changes in health, one’s perception of change may be a more useful measure than
an objective measure of change. Whether one feels better or worse is a useful assessment of one’s health and perceived changes in health (Bardage et al., 2001).

Participants were asked to rate their own physical and emotional health, both before and after the cardiac event, using a scale that ranged from 1 (very poor) to 5 (excellent). In order to check for comorbidity, participants were asked if they had any ongoing/chronic physical or emotional condition. To allow within-couple comparisons of health ratings, participants were asked to rate their partner’s physical and emotional health, before and after the cardiac event, using the same 5-point rating scale from very poor to excellent.

5.4.4.2.2 Changes to Daily Routines

Based on prior research (Bruce, 2000), participants were asked to respond either Increased, Decreased or No Change to a set of 16 items regarding changes in daily routines/lifestyle following the cardiac event (e.g., Following a “heart healthy” diet; Working in paid employment; Spending time with friends). No Change responses were coded “0”. Since both Increased and Decreased responses indicated change, they were coded “1”. All Increased and Decreased responses were summed, resulting in a possible score range from 0 – 16, with higher scores indicating a greater number of lifestyle changes made following the cardiac event.

For each item where some changes had been made, respondents were asked to rate how difficult making the change had been for them. Difficulty scores were rated: 1 (making the change has been very easy); 2 (making the change has been easy); 3 (making the change has been hard); 4 (making the change has been very hard). Scores were summed and divided by the total number of changes made to derive an average change difficulty score which ranged from 0 – 4.

5.4.4.2.3 Psychological Distress

The Impact of Event Scale (IES) (Horowitz, Wilner, & Alvarez, 1979) was used as a measure of psychological distress. It is a 15-item self-report scale designed to “assess current subjective distress for any life event” (Horowitz et al., p. 209). A review by Joseph (2000) points out the IES has been used with a wide variety of “survivor” populations including survivors of assault, disasters at sea, natural disasters, motor vehicle accidents and firefighters. It has also been used with cardiac patient samples.
(Bennett, Owen, Koutsakis, & Bisson, 2002; Ladwig et al., 1999; O'Reilly, Grubb, & O'Carroll, 2004) and couples (Gillis, 1984), and was therefore chosen as a suitable measure of psychological distress for the current study.

The IES is comprised of two subscales that reflect the two most commonly reported categories of experiences following stressful events. The intrusion subscale is comprised of 7 items (e.g., “I thought about it when I didn’t mean to”; “I had dreams about it”), and the avoidance subscale is comprised of 8 items (“I tried to remove it from my memory”; “I felt as if it hadn’t happened or it wasn’t real”). Responses for the 15 items are weighted 0 (not at all), 1 (rarely), 3 (sometimes), 5 (often), yielding a possible score range of 0-35 for the intrusion subscale, 0-40 for the avoidance subscale and 0-75 for the total scale. Horowitz (1982) identified thresholds for low, medium and high symptom levels using total IES scores that he suggests correspond to levels of clinical concern (low < 8.5; medium 8.6 – 19.0; high > 19). However, Joseph (2000) argues that these cut-off points are arbitrary because the categorization is not indicative of any specific diagnosis.

Horowitz et al. (1979) reported satisfactory internal reliability for the IES with Cronbach’s alpha of .86 for the total IES, .78 for intrusion and .82 for avoidance. Horowitz et al. also reported acceptable test-retest reliability over a one-week period (r = .87 for total distress scores, r = .89 for the intrusion subscale, r = .79 for the avoidance subscale). Zilberg, Weiss, and Horowitz (1982) reported satisfactory internal reliability with both patient (people who sought treatment following the death of their parent) and non-patient samples of people who had experienced parental bereavement. Zilberg et al. reported Cronbach’s alpha ranging from .79 to .91 for intrusion and from .82 to .91 for avoidance.

Zilberg et al. (1982) suggest that subscale scores should be used in favour of total IES scores, and Joseph (2000) presents a review of several studies where the two-factor structure was examined. In general the two-factor structure is confirmed, but some researchers argue that the IES items reflect a single dimension of general distress (Solomon, Mikulincer & Arad, 1991, cited in Joseph, 2000). For the current study it was deemed more appropriate to examine the intrusion and avoidance subscales separately as it was considered likely that they may be related in different ways to the other variables of interest. Using a total IES score would not allow a full examination of these potentially different relationships.
5.4.4.2.4 Life satisfaction

The Satisfaction With Life Scale (SWLS) (Diener, Emmons, Larsen, & Griffin, 1985) is a widely used five-item self-report measure of global life satisfaction (e.g., “In most ways my life is close to my ideal”). Items are rated on a 7-point Likert scale from 1 (strongly disagree) to 7 (strongly agree). The possible score range is from 5 to 35, with higher scores indicating higher satisfaction with life. Diener et al. reported Cronbach’s alpha of .87 and test-retest reliability of .82 over a two-month period. Diener et al. argue the SWLS demonstrates good validity as correlations with selected measures suggest individuals who had higher scores on the SWLS were generally well-adjusted and free from psychopathology. Diener et al. also argue that the SWLS leaves respondents free to weight various aspects of their lives (health, relationships, feeling states) in whatever way they choose. This aspect of the scale makes it particularly suitable for the current study, as a cardiac event can challenge one’s sense of life satisfaction in any or all of these ways.

5.4.4.2.5 Perceived Social Support

The Perceived Social Support Scale (PSSS) (based on Blumenthal et al., 1987; modified by Hardie, 1994; and revised by Buzwell, Hardie, & Frantz, 1999) is a 25-item self-report scale designed to measure perceived support from four different domains: work, spouse, family and friends. However, since there is evidence that spouses of cardiac patients receive most of their support from relatives and friends (Thompson & Cordle, 1988), only the spouse, family and friends domains were used for the present study. The spouse, family and friends domains were each measured with 6 items (e.g., “I can talk about my problems with my spouse/family/friends”). Responses were measured on a 10-point scale from 1 (very strongly disagree) to 10 (very strongly agree). Scores in each domain were summed with a possible score range from 0 to 60 for each domain, and higher scores indicating greater perceived support. Blumenthal et al. (1987) reported alpha reliabilities ranging from .72 to .91. Buzwell et al. (1999) reported alpha reliabilities ranging from .85 to .97.

A factor analysis of the PSSS in the current sample indicated that all items had high factor loadings (ranging from .77 to .97). In addition each item loaded only on the appropriate factor (partner, family, friends) supporting the factor structure proposed by Buzwell et al. (1999).
5.4.4.2.6 Relationship Satisfaction

To assess relationship satisfaction, a scale was developed for the current study using five items from the Quality Marriage Index (QMI) (Norton, 1983) and four modified items from the Relationship Assessment Scale (RAS) (Hendrick, 1988). While both the QMI (Norton, 1983) and the RAS (Hendrick, 1988) were considered for use as a means of assessing relationship satisfaction, a number of potentially problematic issues were identified in each measure, and a decision was made to construct a scale which overcame some of these issues, while maintaining the essence of both of the original measures. A full rationale for the newly devised Relationship Satisfaction Scale (RSS) is given in Appendix D.

The RSS is comprised of nine items scored on a 7-point scale from 1 (very strongly disagree) to 7 (very strongly agree), with a possible score range from 9 to 63, and higher scores representing a greater degree of satisfaction with the relationship. Since the RSS was developed as a measure of general relationship satisfaction, it was expected that factor analysis of the nine items would reveal a single factor. This was found to be the case, with all nine items loading on a single factor explaining 80.75% of the variance in relationship satisfaction. Furthermore, there was evidence for convergent and discriminant validity, with the RSS correlating as expected with theoretically relevant measures. Full details of factor and validity analyses for the RSS are available in Appendix D.

5.4.4.2.7 Posttraumatic Growth

The Posttraumatic Growth Inventory (PTGI) (Tedeschi & Calhoun, 1996) is a 21-item scale designed to measure benefits perceived as arising from the struggle with trauma. The authors suggest the scale has five factors (Relating to Others; New Possibilities; Personal Strength; Appreciation of Life; and Spiritual Change), but can also be used as an overall measure of posttraumatic growth. Items are rated using a 6-point Likert scale ranging from 0 (I did not experience this change as a result of my crisis) to 5 (I experienced this change to a very great degree as a result of my crisis). Possible score range for the total scale is 0-105. Tedeschi and Calhoun (1996) reported good internal consistency for the total scale (α = .90) and for the five factors (α ranging from .67 to .85). Test-retest reliability over a two-month period was assessed with a sample of 28 people. Tedeschi and Calhoun (1996) reported acceptable test-retest reliability for the total scale (r = .71) and somewhat weaker test-retest reliability for the
factors (ranging from $r = .37$ to $r = .74$). Tedeschi and Calhoun (1996) argue that the PTGI has good validity since it is unrelated to social desirability, but is related to optimism and openness to experience. In addition, persons experiencing severe trauma tended to report a greater degree of change than persons who did not experience a traumatic event.

A factor analysis of the PTGI (Tedeschi & Calhoun, 1996) for the current sample did not show evidence for the five-factor structure proposed by the authors (see Appendix E). It was therefore deemed more appropriate to use the overall total score for posttraumatic growth, rather than using the subscales separately.

5.4.4.3 Qualitative Measures of Subjective Experiences of Cardiac Event

Patients and their partners were asked a number of open-ended questions relating to their subjective experience of the cardiac event. These questions were a subset of the questions asked in Study 1. Since Study 1 only included a group of partners of cardiac patients, it was deemed important to examine whether experiences reported following a cardiac event were similar for patients and partners, or whether there were qualitative differences in the experiences of the two groups. In addition, asking the same questions of patients and partners allowed comparative analyses of responses on the basis of gender as well as patient/partner role. The following open-ended questions were chosen from Study 1 as they were deemed appropriate for both patients and partners adjusting to living with heart disease.

5.4.4.3.1 Reflecting Back

Respondents were asked three questions which prompted them to reflect back over their own experience of the cardiac event. Words in brackets indicate wording on the partner questionnaire.

_Briefly describe what it has been like for you following your (your partner’s) most recent cardiac event._

_Looking back, what would you have found most helpful at the time of your (your partner’s) cardiac event?_

_Do you have any other comments?_
5.4.4.3.2 Perceived Changes in Patient’s Mood

The results in Study 1 indicated that many spouses perceived changes in the patient’s mood following the cardiac event and that these perceived changes in mood impacted the spouse in a variety of ways. It was deemed appropriate to ask this question of both patients and partners in order to compare the subjective experiences of couples in relation to perceived changes in the patient’s mood. To this end respondents were asked:

Have you noticed any change in your (your partner’s) moods or temperament since your (his/her) cardiac event? [no change; yes – better; yes – worse]. If yes, please specify what kind of change(s) you have noticed, and how the change(s) affected you?

5.4.4.3.3 Perceived Changes in the Couple’s Relationship

The results in Study 1 also indicated that many spouses perceived the relationship with their partner had changed as a result of the cardiac event. Some spouses noted changes for the better, some noted changes for the worse and others perceived no change in their relationship following the cardiac event. It was deemed important to examine whether there was agreement within a couple about the nature of their relationship before and after the cardiac event, and what effect any perceived changes might have had on the individual. With this in mind, perceived changes in relationship were assessed in two ways.

First, respondents were asked to rate their relationship before and after the cardiac event using one of five categories. This allowed for a categorical assessment of relationship quality which could be used as an indicator of baseline relationship satisfaction within the sample, and could also be used for comparison within couples and over time. The categories were based on the questions proposed by Heyman, Sayers and Bellack (1994), who asked spouses to indicate whether they felt their relationship was “successful overall”; “troubled but not needing professional help”; “troubled and needing professional help”; or “so troubled I plan to seek marital therapy for myself and my spouse”. (p. 435). These questions were slightly modified for the current study to reflect the fact that both members of a couple were asked the same question and also to make the wording appropriate for the two timeframes in question (i.e., before and since the cardiac event). In addition, it was felt that Heyman et al.’s questions did not offer an option for respondents who felt very happy with their relationship (i.e., beyond
“successful overall”), so an additional item was formulated. The resulting questions were:

“Which of the following statements best describes your relationship with your partner before (since) your (your partner’s) most recent cardiac event? “extremely happy and thriving”; “successful overall”; “somewhat troubled but not needing professional help”; “troubled and needing professional help”; “so troubled I/we got (are getting) professional help”.

Second, respondents were asked a similar question to the one regarding perceived changes in the patient’s mood. This question allowed respondents to elaborate on the exact nature of any perceived changes in their relationship and on how these changes affected them.

Have you noticed any change in your relationship with your partner since your (his/her) cardiac event? [no change; yes – better; yes – worse]. If yes, please specify what kind of change(s) you have noticed, and how the change(s) affected you?

5.5 Procedure

5.5.1 Advertising the Study and Recruiting Participants

Following approval from the Swinburne University Research Ethics Committee (see Appendix F), participants were sought through a number of different sources. These included Cardiac Rehabilitation programs, cardiac support groups, Internet, radio, community notice boards, Swinburne student organizations and personal contacts. Advertising materials (see Section 5.4.1) were used as appropriate. Permission was sought from the relevant person wherever flyers and bookmarks were displayed in public places. A sample of cardiac patients and their partners drawn from the general community was considered desirable, since this would allow for recruitment of participants who had been living with heart disease for varying lengths of time. The advertising methods used were deemed appropriate for recruitment of a broad sample of patients and their partners. Full details of each recruitment strategy are provided in Appendix G.

5.5.2 Response Rate

Forty-nine paper-based questionnaires and 20 online surveys were completed, but exact response rates are somewhat difficult to calculate. Although 159 questionnaire
packets (318 questionnaires) were distributed, it is impossible to determine whether all of these were passed on to eligible couples, even though no unused packets were returned to the researcher. If the assumption is made that all packets were passed on, then the response rate for paper-based questionnaires is 49/318 or 15.41%.

Similarly, it is impossible to determine an exact response rate for online surveys. There were 20 completed surveys, 12 partially completed surveys (9 patient; 3 partner) and 24 surveys that had been activated but were blank (14 patient; 10 partner). It should be noted that none of the couple ID codes on the partially completed surveys matched the couple ID codes of the “single” respondents whose data was included in the study. It should also be noted that there were no matching couple ID codes among the partially completed surveys, indicating that these people all responded independently of their partners.

It seems plausible that some of the blank surveys may have been activated by people who were not eligible to take part in the study, but who may have been interested in the survey content. For the purpose of estimating a response rate for online surveys, it is assumed that 50% of blank surveys were activated by people who were not eligible to take part in the study. The response rate would then be the proportion of completed surveys to incomplete and blank surveys: 20 / (20+12 +12) or 45.45 %

If paper-based and online surveys are taken together, the overall response rate is therefore estimated at 69 / (318+44) or 19.06 %. Typical response rates for community surveys can be difficult to gauge. While Ruane (2005) suggests a recommended minimum response rate of 50 – 60 percent for questionnaires, she acknowledges that response rates of around 30% are more common. This is more in keeping with Winter and Munn-Giddings (2001) who suggest that for questionnaires a typical response rate is 20% to 30%. Since the current study was seeking a specialized sample of participants (i.e., couples where one member had experienced a cardiac event), the estimated response rate of 19% was deemed acceptable.

The following chapter provides information regarding data screening, normality testing and preliminary analyses which were conducted prior to the main analyses. The focus is on examining the effects of gender and/or role for self-reported health and psychosocial outcomes for patients and partners.
Chapter 6: STUDY 2 PART A - QUANTITATIVE RESULTS FOR GENDER AND ROLE EFFECTS ON HEALTH AND PSYCHOSOCIAL OUTCOMES

6.1 CHAPTER OVERVIEW

This chapter presents the quantitative results of analyses used to examine the effects of gender and role on self-reported health and psychosocial outcomes for the full sample. Section 6.2 provides details of the analytic strategies that were used. Section 6.3 describes normality testing of the data and the strategy used to determine acceptable significance levels. Section 6.4 provides information regarding the reliability of the scales and the descriptive statistics for the sample. Section 6.5 examines the effects of gender and role on self-reported health and psychosocial outcomes following the cardiac event. Preliminary analyses of medical and demographic factors were conducted (Section 6.5.1) prior to the main analyses (Section 6.5.2). Findings are discussed in Section 6.6 with concluding remarks given in Section 6.7.

6.2 ANALYTIC STRATEGY

In order to address the first research question, quantitative data for the full sample of male and female patients and partners (N = 69), were analysed using SPSS 17.0 for Windows statistical package. Data were initially screened for normality of distribution and the presence of outliers. Following this all scales were tested for reliability. Preliminary analyses were then conducted to examine whether self-rated health, number and difficulty of lifestyle changes and reported levels of distress (intrusion and avoidance), satisfaction with life, perceived support, relationship satisfaction and posttraumatic growth differed based on the type of cardiac event, whether a prior cardiac event had been experienced, the length of time since the cardiac event, age of the respondents, whether both members of the couple had taken part in the study and whether respondents had attended a cardiac rehabilitation program. Following this, analyses of variance were conducted to examine the first research question; that is
whether there were differences in self-reported health or the psychosocial outcomes (number and difficulty of lifestyle changes, distress, life satisfaction, perceived support, relationship satisfaction, and posttraumatic growth) based on gender or role (patient or partner).

### 6.3 Normality Testing and Determining Acceptable Significance Levels Prior to Analyses

Data for all variables were screened for normality of distribution and presence of outliers, defined as having $z$ scores greater than 3.29. Only one outlier was detected with a $z$ score of -3.43 for relationship satisfaction. Other $z$ scores for this participant were examined and all were found to be within acceptable parameters, so the case was included in all analyses. Age and posttraumatic growth were normally distributed. Intrusion and avoidance were positively skewed, while satisfaction with life and relationship satisfaction were negatively skewed. Appropriate transformations were performed on these variables and analyses were conducted with both the untransformed and the transformed data. No appreciable differences were found in the pattern of results for the two data sets. Accordingly the results using the original untransformed data are presented since these were considered more meaningful and more easily interpretable (Tabachnick & Fidell, 1989).

In considering the appropriate alpha level for significance testing, the relatively small sample size was taken into consideration. Hair, Anderson, Tatham and Black (1998) suggest that if a small effect size is anticipated, then a less restrictive alpha level of .05 or .10 is appropriate. Similarly Tabachnick and Fidell (1996) favour an alpha level of .05 in order to increase power. Taking these suggestions into consideration, an alpha level of .05 was used for all significance testing.

### 6.4 Reliability Testing and Sample Descriptives

Reliability analyses were conducted to assess the internal consistency of all psychosocial measures. All showed moderate to high levels of internal reliability. Sample means, standard deviations and Cronbach’s alpha for all psychosocial variables are presented in Table 6.1
Table 6-1

**Descriptive Statistics for Health and Psychosocial Variables for the Full Sample of Respondents**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sample Range</th>
<th>M</th>
<th>SD</th>
<th>Theoretical Range</th>
<th>Scale Midpoint</th>
<th>Cronbach's Alpha</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>PH Generally</td>
<td>3 - 5</td>
<td>3.78</td>
<td>0.66</td>
<td>1 - 5</td>
<td>3</td>
<td>N/A</td>
<td>69</td>
</tr>
<tr>
<td>PH Since CE</td>
<td>1 - 5</td>
<td>3.25</td>
<td>0.85</td>
<td>1 - 5</td>
<td>3</td>
<td>N/A</td>
<td>69</td>
</tr>
<tr>
<td>EH Generally</td>
<td>1 - 5</td>
<td>3.67</td>
<td>0.85</td>
<td>1 - 5</td>
<td>3</td>
<td>N/A</td>
<td>69</td>
</tr>
<tr>
<td>EH Since CE</td>
<td>1 - 5</td>
<td>3.19</td>
<td>0.96</td>
<td>1 - 5</td>
<td>3</td>
<td>N/A</td>
<td>69</td>
</tr>
<tr>
<td>Number of Lifestyle Changes</td>
<td>0 – 14</td>
<td>5.90</td>
<td>3.82</td>
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<tr>
<td>Difficulty of Lifestyle Changes</td>
<td>0 – 4</td>
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<tr>
<td>IES Intrusion</td>
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<td>0 - 35</td>
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<tr>
<td>IES Avoidance</td>
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<td>9.22</td>
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<td>20</td>
<td>.85</td>
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<tr>
<td>Partner Support</td>
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<td>47.41</td>
<td>15.84</td>
<td>6 – 60</td>
<td>33</td>
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<tr>
<td>Family Support</td>
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<td>45.51</td>
<td>16.68</td>
<td>6 – 60</td>
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<td>68</td>
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<tr>
<td>Friend Support</td>
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<td>40.75</td>
<td>14.21</td>
<td>6 – 60</td>
<td>33</td>
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<td>69</td>
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<tr>
<td>Life Satisfaction</td>
<td>8 - 35</td>
<td>23.86</td>
<td>8.53</td>
<td>5 - 35</td>
<td>20</td>
<td>.93</td>
<td>69</td>
</tr>
<tr>
<td>Relationship Satisfaction</td>
<td>11 - 63</td>
<td>53.65</td>
<td>12.44</td>
<td>9 - 63</td>
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<tr>
<td>Posttraumatic Growth</td>
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<td>47.01</td>
<td>26.41</td>
<td>0 - 105</td>
<td>52.5</td>
<td>.96</td>
<td>68</td>
</tr>
</tbody>
</table>

Notes: PH = Self-reported Physical Health; EH = Self-reported Emotional Health; CE = Cardiac Event; IES = Impact of Event Scale
The sample means suggest that, on average, respondents rated their physical and emotional health in the “average” to “very good” range. In addition, the impact of the event had not been extreme and overall distress levels were quite low. Perceived support from partner, family and friends was relatively high, and most people were generally satisfied with their life and very satisfied with their relationship. Finally, there was a moderate degree of posttraumatic growth reported by the respondents.

These results would suggest that the sample overall had adjusted well to the cardiac event experienced by the patient. However, it is possible that combining the means for male and female patients and partners may mask important differences between these groups for each of the health and psychosocial variables.

### 6.5 Effects of Gender and Role on Health and Psychosocial Outcomes

#### 6.5.1 Preliminary Analyses of Medical and Demographic Factors

Preliminary analyses using One way ANOVA revealed that there were no differences \( p > .05 \) in any of the self-reported health ratings or the psychosocial outcomes based on the type of cardiac event (e.g., MI, CABG surgery, angioplasty). Since some of the patients had experienced earlier cardiac events, further analyses using independent samples t-tests were conducted to examine potential differences in the self-reported health or psychosocial variables based on whether the patients had experienced a prior cardiac event. Results indicated no significant differences (all \( p > .05 \)) in any of the self-reported health or psychosocial variables between people who had experienced a prior cardiac event and those who had not.

Further analyses were performed using bivariate correlations (see Table 6.2) to examine whether there were any significant relationships between the self-reported health or the psychosocial variables and the age of the respondents or the length of time since the cardiac event. The results indicated that only self-reported physical health since the cardiac event and satisfaction with life were somewhat related to time since the cardiac event (both \( r = .27, p < .05 \)), such that longer time since the cardiac event was related to better self-reported physical health and greater life satisfaction.
Table 6-2

Bivariate Correlations for Age of Respondents, Time Since the Cardiac Event and Health and Psychosocial Outcome Variables

<table>
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<tr>
<th></th>
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<th>2</th>
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<td>2. Time Since CE</td>
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<td>3. PH Generally</td>
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</tr>
<tr>
<td>4. PH Since CE</td>
<td>.35**</td>
<td>.27*</td>
<td>.54***</td>
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<td></td>
<td></td>
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<tr>
<td>5. EH Generally</td>
<td>.13</td>
<td>.07</td>
<td>.50***</td>
<td>.54***</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>6. EH Since CE</td>
<td>.45***</td>
<td>.19</td>
<td>.30*</td>
<td>.70***</td>
<td>.62***</td>
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</tr>
<tr>
<td>7. No. LS Change</td>
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<td>-.02</td>
<td>.07</td>
<td>-.40**</td>
<td>-.18</td>
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<td>8. Diff LS Change</td>
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<td>-.04</td>
<td>-.16</td>
<td>-.14</td>
<td>-.24</td>
<td>.32*</td>
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<td>9. Intrusion</td>
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<td>-.14</td>
<td>-.57***</td>
<td>-.37**</td>
<td>-.68***</td>
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<td>.42**</td>
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<td>10. Avoidance</td>
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<td>-.04</td>
<td>-.41**</td>
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<td>.67***</td>
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<tr>
<td>11. SS Partner</td>
<td>.29*</td>
<td>.12</td>
<td>.16</td>
<td>.37**</td>
<td>.62***</td>
<td>.45***</td>
<td>-.36**</td>
<td>-.47***</td>
<td>-.36**</td>
<td>-.31*</td>
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<td></td>
</tr>
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<td>12. SS Family</td>
<td>.37**</td>
<td>.23</td>
<td>.03</td>
<td>.40**</td>
<td>.34**</td>
<td>.35**</td>
<td>-.44***</td>
<td>-.23</td>
<td>-.54**</td>
<td>-.20</td>
<td>.68***</td>
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<td>13. SS Friend</td>
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<td>.15</td>
<td>.38**</td>
<td>.54***</td>
<td>.36**</td>
<td>.39**</td>
<td>-.32*</td>
<td>.10</td>
<td>-.23</td>
<td>-.11</td>
<td>.23</td>
<td>.37**</td>
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<td></td>
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<tr>
<td>14. Life Sat</td>
<td>.38**</td>
<td>.27*</td>
<td>.29*</td>
<td>.64***</td>
<td>.50***</td>
<td>.61***</td>
<td>-.53***</td>
<td>-.20</td>
<td>-.53**</td>
<td>-.42***</td>
<td>.58***</td>
<td>.58***</td>
<td>.57***</td>
<td></td>
<td></td>
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<tr>
<td>15. Rel Sat</td>
<td>.21</td>
<td>.11</td>
<td>.10</td>
<td>.24*</td>
<td>.40**</td>
<td>.35**</td>
<td>-.31*</td>
<td>-.49***</td>
<td>-.21</td>
<td>-.18</td>
<td>.76***</td>
<td>.51***</td>
<td>.21</td>
<td>.51***</td>
<td></td>
</tr>
<tr>
<td>16. PTG</td>
<td>-.18</td>
<td>.03</td>
<td>.08</td>
<td>.06</td>
<td>-.03</td>
<td>-.05</td>
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<td>.17</td>
<td>-.07</td>
<td>.09</td>
<td>.36**</td>
<td>.06</td>
<td>.13</td>
</tr>
</tbody>
</table>

Note: * p< .05; ** p< .01; *** p< .001; N = 69;
PH = Physical Health; EH = Emotional Health; CE = Cardiac Event; LS = Lifestyle; No. = Number; Diff = Difficulty; SS = Social Support;
Rel = Relationship; Sat = Satisfaction; PTG = Posttraumatic Growth
By contrast, age of the respondents was significantly positively correlated with self-reported physical health since the cardiac event ($r = .35, p < .01$), self-reported emotional health since the cardiac event ($r = .45, p < .001$), perceived support from partner ($r = .29, p < .05$), perceived support from family ($r = .38, p < .01$) and life satisfaction ($r = .38, p < .01$). Age was also significantly negatively correlated with the number of lifestyle changes made ($r = -.45, p < .001$), difficulty making lifestyle changes ($r = -.30, p < .05$) and reported distress (intrusion: $r = -.54, p < .01$; avoidance: $r = -.43, p < .01$). Older people reported better physical and emotional health since the cardiac event than younger people. They also reported higher life satisfaction and higher support from their partner and family than did younger people. Finally, older people reported lower intrusion and avoidance than did younger people. Relationship satisfaction and posttraumatic growth were unrelated to age.

Since not all study participants were intact couples, and there were a small number of participants whose partner did not take part in the study, independent sample $t$-tests were conducted to examine whether there were differences in the psychosocial variables based on whether the respondents took part in the study as a couple or on their own. Significant differences ($p < .05$) were found for number and difficulty of making lifestyle changes and scores on intrusion, avoidance, satisfaction with life and relationship satisfaction. However, since the number of participants who took part in the study on their own was quite small (patients = 4; partners = 5) these results must be interpreted with caution. Analyses and results for these comparisons are presented in Appendix H.

Since not all participants had taken part in a cardiac rehabilitation program, independent samples $t$-tests were conducted to examine whether there were any differences in mean scores for any of the psychosocial variables based on whether respondents had participated in a cardiac rehabilitation program or not. The number of participants who took part in a cardiac rehabilitation program ($n = 38$) was roughly equal to the number who did not ($n = 31$). Results of the independent samples $t$-tests indicated that only the ratings for intrusion and avoidance differed between the groups. People who took part in cardiac rehabilitation reported significantly lower intrusion ($M = 9.89, SD = 8.72$) than those who did not ($M = 14.81, SD = 10.91$) ($t (67) = 2.08, p < .05$) as well as significantly lower avoidance ($M = 7.13, SD = 7.61$) than those who did not ($M = 13.06, SD = 10.05$) ($t (67) = 2.79, p < .01$).
6.5.2 Main Analyses of Gender and Role Effects on Health and Psychosocial Variables

Based on the findings of the preliminary analyses, data for all study participants were pooled in the main analyses of self-rated health and psychosocial outcomes. Analyses were conducted to examine whether differences existed in the health and psychosocial variables based on gender and role (patient or partner). Since age of participants was significantly correlated with most of the psychosocial variables, age was used as a covariate. To this end, 2 (gender) x 2 (role) analyses of covariance (ANCOVA) were conducted for the self-reported health variables and for number and difficulty of lifestyle changes, perceived support, reported distress (intrusion, avoidance), life satisfaction, relationship satisfaction and posttraumatic growth.

6.5.2.1 Self-Reported Health

In order to examine potential gender or role effects, on self-reported health, 2 (gender) x 2 (role) analyses of covariance (ANCOVA), using age as a covariate, were conducted for self reported physical and emotional health scores (both generally and since the cardiac event).

The results indicated that age did not make a significant adjustment to mean scores for self-reported physical health generally ($F(1,64) = 0.20, p > .05, \text{partial } \eta^2 = .003$). The gender x role interaction was non-significant ($F(1,64) = 0.44, p > .05, \text{partial } \eta^2 = .01$), as were the main effects for both gender ($F(1,64) = 0.21, p > .05, \text{partial } \eta^2 = .003$) and role ($F(1,64) = 1.79, p > .05, \text{partial } \eta^2 = .03$). These results indicate that respondents’ reported levels of physical health generally were similar regardless of whether they were patients or partners, or male or female (see sample means in Table 6.1).

Similarly, age did not have a significant influence on mean scores for self-reported emotional health generally ($F(1,64) = 2.15, p > .05, \text{partial } \eta^2 = .02$). The gender x role interaction was non-significant ($F(1,64) = 0.12, p > .05, \text{partial } \eta^2 = .002$), as were the main effects for both gender ($F(1,64) = 0.49, p > .05, \text{partial } \eta^2 = .01$) and role ($F(1,64) = 1.56, p > .05, \text{partial } \eta^2 = .02$). These results indicate that respondents’ reported levels of emotional health generally were similar regardless of whether they were patients or partners, or male or female (see sample means in Table 6.1).
By contrast, age made a significant adjustment to mean scores for self-reported physical and emotional health since the cardiac event. Table 6.3 shows adjusted and unadjusted mean scores for patients and partners.

### Table 6-3

**Adjusted and Unadjusted Means for Self-Reported Physical and Emotional Health Since the Cardiac Event for Male and Female Patients and Partners**

<table>
<thead>
<tr>
<th></th>
<th>Adjusted Means</th>
<th>Unadjusted Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SE</td>
</tr>
<tr>
<td><strong>PH Since CE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female Patient</td>
<td>3.13</td>
<td>0.34</td>
</tr>
<tr>
<td>Female Spouse</td>
<td>3.31</td>
<td>0.15</td>
</tr>
<tr>
<td>Male Patient</td>
<td>3.18</td>
<td>0.16</td>
</tr>
<tr>
<td>Male Spouse</td>
<td>3.43</td>
<td>0.48</td>
</tr>
<tr>
<td><strong>EH Since CE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female Patient</td>
<td>2.85</td>
<td>0.36</td>
</tr>
<tr>
<td>Female Spouse</td>
<td>3.27</td>
<td>0.16</td>
</tr>
<tr>
<td>Male Patient</td>
<td>3.15</td>
<td>0.17</td>
</tr>
<tr>
<td>Male Spouse</td>
<td>3.33</td>
<td>0.51</td>
</tr>
</tbody>
</table>

*N = 69; PH = Self-reported Physical Health; EH = Self-reported Emotional Health; CE = Cardiac Event*

As shown in Table 6.3, age made a significant adjustment to mean scores for self-reported physical health since the cardiac event (*F*(1,64) = 8.49, *p* < .01, partial η² = .12). After adjusting for age, the gender x role interaction was non-significant (*F*(1,64) = 0.01, *p* > .05, partial η² = .00), as were the main effects for both gender (*F*(1,64) = 0.08, *p* > .05, partial η² = .001) and role (*F*(1,64) = 0.49, *p* > .05, partial η² = .01). These results indicate that, after adjusting for age, respondents’ reported levels of self-reported physical health since the cardiac event were similar regardless of whether they were patients or partners, or male or female.

Similarly, the results in Table 6.3 show that age made a significant adjustment to mean scores for self-reported emotional health since the cardiac event (*F*(1,64) = 14.65, *p* < .0001, partial η² = .19). After adjusting for age, the gender x role interaction was non-significant (*F*(1,64) = 0.14, *p* > .05, partial η² = .002), as were the main effects for both gender (*F*(1,64) = 0.29, *p* > .05, partial η² = .01) and role (*F*(1,64) = 0.83, *p* > .05, partial η² = .01). These results indicate that, after adjusting for age, respondents’
reported levels of emotional health since the cardiac event were similar regardless of whether they were patients or partners, or male or female.

Since there were no differences in self-reported health variables based on gender or role, further analyses of these variables were done using pooled results for all respondents. Paired samples *t*-tests showed that there were significant within subject differences indicating perceived changes in self-reported health following the patient’s cardiac event. Respondents reported significantly poorer physical health (*t* (68) = 6.03; *p* < .001) and poorer emotional health (*t* (68) = 4.98; *p* < .001) since the patient’s cardiac event.

### 6.5.2.2 Lifestyle Changes Since the Cardiac Event

For the majority of participants (73.5% of patients and 71.4% of partners), this was the first time they had had to adjust to life following a cardiac event. Based on the findings of Study 1, participants were asked whether they had made changes to 16 areas of daily routine or lifestyle and how difficult it had been making these changes. Results indicated that most of the participants (93.1% of patients and 91.2% of partners) had made some changes in daily routines and lifestyle since the cardiac event.

In order to examine potential gender or role effects on the reported number of changes and difficulty of making lifestyle changes, two separate 2 (gender) x 2 (role) analyses of covariance were performed, using age as a covariate. Adjusted and unadjusted means for reported number of lifestyle changes are presented in Table 6.4.

<table>
<thead>
<tr>
<th>Number of Changes</th>
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<th>Unadjusted Means</th>
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<tr>
<td></td>
<td><em>M</em></td>
<td><em>SE</em></td>
</tr>
<tr>
<td>Female Patient</td>
<td>5.17</td>
<td>1.51</td>
</tr>
<tr>
<td>Female Spouse</td>
<td>5.52</td>
<td>0.61</td>
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<tr>
<td>Male Patient</td>
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</tr>
<tr>
<td>Male Spouse</td>
<td>2.32</td>
<td>1.96</td>
</tr>
</tbody>
</table>

*N* = 63
As shown in Table 6.4, age made a significant adjustment to mean scores for the number of lifestyle changes made following the cardiac event \( (F(1, 58) = 15.27, p < .001, \text{partial } \eta^2 = 0.21) \). The gender \( \times \) role interaction was non-significant \( (F(1, 58) = 3.71, p > .05, \text{partial } \eta^2 = 0.06) \) as were the main effects for both gender \( (F(1, 58) = 0.25, p > .05, \text{partial } \eta^2 = 0.00) \) and role \( (F(1, 58) = 2.69, p > .05, \text{partial } \eta^2 = 0.04) \). The results suggest that, after adjusting for age, respondents made a similar number of lifestyle changes following the cardiac event regardless of whether they were male or female or patients or partners.

Age did not make a significant adjustment to mean scores for the average difficulty of making lifestyle changes \( (F(1, 53) = 3.72, p > .05, \text{partial } \eta^2 = 0.07) \). The gender \( \times \) role interaction was significant \( (F(1, 53) = 8.30, p < .01, \text{partial } \eta^2 = 0.14) \) but the main effects for both gender \( (F(1, 53) = 2.33, p > .05, \text{partial } \eta^2 = 0.04) \) and role \( (F(1, 53) = 0.45, p > .05, \text{partial } \eta^2 = 0.01) \) were not. The results suggest that male patients and female partners reported greater difficulty making changes than female patients and male partners, with the latter group reporting very little difficulty in making lifestyle changes (see Table 6.5).

**Table 6-5**

*Mean Difficulty of Making Lifestyle Changes Since the Cardiac Event for Male and Female Patients and Partners*

<table>
<thead>
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<th></th>
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<td>M</td>
<td>SD</td>
</tr>
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<td>0.74</td>
<td>2.57</td>
<td>0.70</td>
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</table>

\( N = 63 \)

### 6.5.2.3 Perceived Social Support

Respondents were asked to rate the level of perceived social support from their partner, family and friends. In order to examine potential gender and role effects for perceived support, three separate 2 (gender) \( \times \) 2 (role) analyses of covariance were performed, using age as a covariate.
Age did not make a significant adjustment to mean scores for perceived support from partner \((F(1,64) = 3.62, p > .05, \text{partial } \eta^2 = .05)\). The gender x role interaction was non-significant \((F(1,64) = 0.13, p > .05, \text{partial } \eta^2 = .00)\), as were the main effects for both gender \((F(1,64) = 1.34, p > .05, \text{partial } \eta^2 = .02)\) and role \((F(1,64) = 0.00, p > .05, \text{partial } \eta^2 = .00)\). These results indicate that respondents perceived similar support from their partner regardless of whether they were patients or partners, or male or female (see sample means in Table 6.1).

Age made a significant adjustment to mean scores for perceived support from family. Adjusted and unadjusted means for male and female patients and partners are presented in Table 6.6.

Table 6-6

*Adjusted and Unadjusted Means for Perceived Social Support from Family for Male and Female Patients and Partners*

<table>
<thead>
<tr>
<th></th>
<th>Adjusted Means</th>
<th>Unadjusted Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(M)</td>
<td>(SE)</td>
</tr>
<tr>
<td>Female Patient</td>
<td>47.99</td>
<td>6.54</td>
</tr>
<tr>
<td>Female Spouse</td>
<td>45.79</td>
<td>2.84</td>
</tr>
<tr>
<td>Male Patient</td>
<td>44.01</td>
<td>3.10</td>
</tr>
<tr>
<td>Male Spouse</td>
<td>51.16</td>
<td>9.31</td>
</tr>
</tbody>
</table>

\(N = 68\)

As shown in Table 6.6 age made a significant adjustment to mean scores for perceived support from family \((F(1,64) = 9.40, p < .01, \text{partial } \eta^2 = .13)\). After adjusting for age, the gender x role interaction was non-significant \((F(1,64) = 0.61, p > .05, \text{partial } \eta^2 = .01)\), as were the main effects for both gender \((F(1,64) = 0.01, p > .05, \text{partial } \eta^2 = .00)\) and role \((F(1,64) = 0.17, p > .05, \text{partial } \eta^2 = .00)\). These results indicate that, after adjusting for age, respondents reported similar perceived support from family regardless of whether they were patients or partners, or male or female.

Age did not have a significant influence on mean scores for perceived support from friends \((F(1,64) = 0.90, p > .05, \text{partial } \eta^2 = .01)\). The gender x role interaction was non-significant \((F(1,64) = 0.18, p > .05, \text{partial } \eta^2 = .00)\), as were the main effects for both gender \((F(1,64) = 1.51, p > .05, \text{partial } \eta^2 = .02)\) and role \((F(1,64) = 0.74, p > .05, \text{partial } \eta^2 = .00)\). These results indicate that, after adjusting for age, respondents reported similar perceived support from friends regardless of whether they were patients or partners, or male or female.
These results indicate that respondents reported similar perceived support from friends regardless of whether they were patients or partners, or male or female (see sample means in Table 6.1).

6.5.2.4 Psychological Distress

The two components of intrusion and avoidance from the Impact of Event Scale (Horowitz et al., 1979) were used as a measure of ongoing distress as a result of the cardiac event. Since preliminary analyses indicated that mean scores for intrusion and avoidance differed between people who attended cardiac rehabilitation and those who did not, attendance in cardiac rehabilitation was included in the following analyses. Accordingly, separate 2 (gender) x 2 (role) x 2 (rehabilitation attendance) analyses of covariance (ANCOVA), using age as a covariate, were conducted for intrusion and avoidance scores. The adjusted means (from the gender x role x rehab interaction analysis) and unadjusted means are shown in Table 6.7 (intrusion) and Table 6.8 (avoidance).

As shown in Table 6.7, age made a significant adjustment to mean scores for intrusion ($F(1,60) = 14.65$, $p < .001$, partial $\eta^2 = .20$). After adjusting for age, the gender x role x cardiac rehabilitation interaction was non-significant ($F(1,60) = 0.00$, $p > .05$, partial $\eta^2 = .00$), as were the other interactions (all $p > .05$). The main effects for gender ($F(1,60) = 2.10$, $p > .05$, partial $\eta^2 = .03$), role ($F(1,60) = 0.76$, $p > .05$, partial $\eta^2 = .01$) and cardiac rehabilitation ($F(1,60) = 0.43$, $p > .05$, partial $\eta^2 = .007$) were all non-significant. These results indicate that, once age was adjusted for, respondents’ reported levels of intrusion were similar regardless of whether they were patients or partners, male or female, or had attended cardiac rehabilitation or not.

As shown in Table 6.8, age also made a significant adjustment to mean scores for avoidance ($F(1,60) = 9.26$, $p < .01$, partial $\eta^2 = .13$ ). After adjusting for age, the gender x role x cardiac rehabilitation interaction was non-significant ($F(1,60) = 2.13$, $p > .05$, partial $\eta^2 = .03$) as were the other interactions (all $p > .05$). However, in contrast to the findings for intrusion scores, there were significant main effects for both gender ($F(1,60) = 4.38$, $p < .05$ partial $\eta^2 = .07$) and role ($F(1,60) = 6.46$, $p < .05$ partial $\eta^2 = .09$). On average, women reported higher levels of avoidance ($M = 13.56$, $Std \ Error = 1.76$) than men did ($M = 6.68$, $Std \ Error = 2.59$), and patients reported higher levels of avoidance ($M = 13.95$, $Std \ Error = 1.79$) than partners did ($M = 6.09$, $Std \ Error = 2.51$).
Table 6-7

*Adjusted and Unadjusted Means for Intrusion Scores for Male and Female Patients and Partners*

<table>
<thead>
<tr>
<th>Intrusion</th>
<th>Gender</th>
<th>Role</th>
<th>Rehab</th>
<th>Adjusted Means</th>
<th>Unadjusted means</th>
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</thead>
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<td></td>
<td></td>
<td></td>
<td>M</td>
<td>SE</td>
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<tr>
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<td>Female</td>
<td>Patient</td>
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<td>15.60</td>
<td>5.05</td>
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<tr>
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<td></td>
<td>Yes</td>
<td>11.09</td>
<td>4.88</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Patient</td>
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<td>16.25</td>
<td>2.05</td>
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<td></td>
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<td>3.00</td>
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<td></td>
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<td>11.92</td>
<td>1.90</td>
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<td>5.48</td>
<td>8.55</td>
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Table 6-8

*Adjusted and Unadjusted Means for Avoidance Scores for Male and Female Patients and Partners*

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<th>Role</th>
<th>Rehab</th>
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<th>$SE$</th>
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<th>$SD$</th>
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<td>3</td>
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<tr>
<td></td>
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<td></td>
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<td></td>
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<td>8</td>
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<td>4.02</td>
<td>7.90</td>
<td>0.00</td>
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</table>
6.5.2.5 Life Satisfaction

The Satisfaction With Life scale (Diener et al., 1985) was used as a measure of overall life satisfaction. A 2 (gender) x 2 (role) analysis of covariance (ANCOVA), using age as a covariate, was conducted for satisfaction with life scores. The adjusted and unadjusted means for male and female patients and partners are shown in Table 6.9.

Table 6-9

<table>
<thead>
<tr>
<th></th>
<th>Adjusted Means</th>
<th>Unadjusted Means</th>
</tr>
</thead>
<tbody>
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<td></td>
<td>$M$</td>
<td>$SE$</td>
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<tr>
<td>Female Patient</td>
<td>23.88</td>
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</tr>
<tr>
<td>Female Spouse</td>
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<td>1.42</td>
</tr>
<tr>
<td>Male Patient</td>
<td>22.30</td>
<td>1.52</td>
</tr>
<tr>
<td>Male Spouse</td>
<td>21.46</td>
<td>4.67</td>
</tr>
</tbody>
</table>

As shown in Table 6.9, age made a significant adjustment to mean scores for satisfaction with life ($F(1,64) = 13.09, p < .001$, partial $\eta^2 = .17$). After adjusting for age, the gender x role interaction was non-significant ($F(1,64) = 0.16, p > .05$, partial $\eta^2 = .002$), as were the main effects for both gender ($F(1,64) = 0.80, p > .05$, partial $\eta^2 = .01$) and role ($F(1,64) = 0.10, p > .05$, partial $\eta^2 = .00$). These results indicate that, after adjusting for age, respondents’ reported levels of satisfaction with life were similar regardless of whether they were patients or partners, or male or female.

6.5.2.6 Relationship Satisfaction

A Relationship Satisfaction Scale (see Appendix D) was used as a measure of overall relationship satisfaction. A 2 (gender) x 2 (role) analysis of covariance (ANCOVA), using age as a covariate, was conducted for relationship satisfaction scores. The results indicated that age did not make a significant adjustment to mean scores for relationship satisfaction ($F(1,64) = 2.15, p > .05$, partial $\eta^2 = .03$). The gender x role interaction was non-significant ($F(1,64) = 0.42, p > .05$, partial $\eta^2 = .007$), as were the main effects for both gender ($F(1,64) = 0.17, p > .05$, partial $\eta^2 = .003$) and role ($F(1,64) = 0.002, p > .05$, partial $\eta^2 = .00$). These results indicate that respondents’ reported levels of
relationship satisfaction were similar regardless of whether they were patients or partners, or male or female (see sample means in Table 6.1).

### 6.5.2.7 Posttraumatic Growth

The Posttraumatic Growth Inventory (Tedeschi & Calhoun, 1996) was designed to be used as either an overall measure of growth or to examine a number of different aspects of growth. Since the factor structure for the current sample was not in keeping with the factors suggested by the authors (see Appendix E), only the overall score was used in all analyses. A 2 (gender) x 2 (role) analysis of covariance (ANCOVA), using age as a covariate, was conducted for posttraumatic growth scores.

The results indicated that age did not make a significant adjustment to mean scores for posttraumatic growth \( (F(1,63) = 0.72, p > .05, \text{partial } \eta^2 = .01) \). The gender x role interaction was non-significant \( (F(1,64) = 0.49, p > .05, \text{partial } \eta^2 = .008) \), as was the main effect for role \( (F(1,63) = 0.13, p > .05, \text{partial } \eta^2 = .04) \). By contrast there was a significant main effect for gender, with mean scores for women \( (M = 58.78, \text{Std Error} = 5.79) \) being higher than mean scores for men \( (M = 38.25, \text{Std Error} = 7.97) \), \( (F(1,63) = 4.19, p < .05, \text{partial } \eta^2 = .06) \). These results indicate that respondents’ reported levels of posttraumatic growth did not differ based on whether they were patients or partners. However women reported higher levels of posttraumatic growth than men did.

### 6.6 Discussion

Initial examination of descriptive statistics indicated that this sample of respondents generally rated their health average to very good. Distress levels seemed relatively low while life satisfaction and relationship satisfaction were relatively high, and reported posttraumatic growth was only moderate. Preliminary analyses revealed that the type of cardiac event and the experience of prior cardiac events did not account for any significant differences in self-reported health, distress, life satisfaction, relationship satisfaction or posttraumatic growth. Time since the cardiac event, participation in cardiac rehabilitation programs and participation in the study as a couple as opposed to individually were related to some variability in a few of the psychosocial variables. By contrast age of the respondents was related to most of the psychosocial variables and was therefore used as a covariate in all further analyses. However, age was found to be a significant covariate in only some of the results.
6.6.1 Preliminary Analyses of Medical and Demographic Factors

Cardiac events for this sample of respondents included heart attacks, angioplasties (with and without a preceding heart attack), CABG surgery (with and without a preceding heart attack), and valve replacements. The nature of these events would appear to be different – for example angioplasty is a much less medically invasive procedure than CABG surgery or valve replacement. The initial findings that ratings for self-reported health and the psychosocial outcomes did not differ based on the type of cardiac event or the time since the event were somewhat unexpected. At least with regard to reported distress, it would seem reasonable to expect that people who were adjusting to life following CABG surgery might be more distressed than those whose cardiac event was an angioplasty. Similarly, it would be reasonable to expect that people for whom the cardiac event was more recent might be more distressed than those people for whom the cardiac event was further in the past (Sundin & Horowitz, 2003), but the correlations between time since the cardiac event and measures of distress (intrusion and avoidance) were non-significant.

One possible explanation for the lack of difference in distress scores based on the type of cardiac event may be that distress was related to the fact of the event rather than to the invasiveness of the procedure. Kettunen et al. (1999) reported that for spouses of MI patients, their shock responses and the strength of their fears were not related to the severity of the patient’s MI. It is also interesting to note that the mean scores for the distress measures were quite low, with mean scores falling below the midpoint of the scale. The finding of the relatively low scores on distress measures may in part be due to the fact that the major life event under investigation was an illness. The results from the meta-analysis of the use of the IES (Sundin & Horowitz, 2003) found that IES scores related to an illness or injury were the lowest amongst the trauma scores investigated.

The findings of no significant correlation between time since the cardiac event and reported distress would suggest that the length of time since the cardiac event may not be the most important factor in considering the initial or ongoing impact of a cardiac event. This is supported by the current findings in relation to results for the age of the respondents, where age was an important factor in many of the psychosocial variables (discussed below). This is in contrast to Sundin and Horowitz’s (2003) meta-analysis
which found no effect for age. Perhaps the difference in findings can be accounted for by the fact that the meta-analysis did not include cardiac events among the illnesses investigated. Although heart disease occurs among younger people, it is still generally perceived as a condition that is more likely to affect older people. Under these circumstances, the impact of a cardiac event on a younger person may be greater than on someone of more advanced years, and time since the cardiac event may be a less important factor in reported distress than the age of the respondent.

Age was significantly related to many of the psychosocial variables. The significant correlations indicated that older people reported better physical and emotional health since the cardiac event, higher life satisfaction and higher support from their family than younger people did. In addition, younger people made a greater number of lifestyle changes and found the changes harder to make than older people did. Finally, younger people reported higher intrusion and avoidance than older people did. There were no relationships between age and self-reported physical and emotional health generally, perceived support from partner and friends, relationship satisfaction and posttraumatic growth. Overall, the pattern of results suggests that older people had adjusted better to the cardiac event than younger people had. As noted, heart disease is still generally more associated with older people than it is with younger people. In this case, younger people may need to adjust to the fact that they have a condition that they may perceive they are “too young” to have. This would necessitate not only adjusting to the aftermath of the cardiac event, but also adjusting to the fact of the event itself.

Participation in cardiac rehabilitation programs was initially associated with lower scores for intrusion and avoidance. However, once age was taken into account, there were no differences in intrusion and avoidance scores between people who had attended cardiac rehabilitation and those who had not. This finding was also somewhat unexpected in light of the general findings that attendance at cardiac rehabilitation programs is beneficial in the adjustment process (ACRA, 2008; Briffa et al., 2009). Perhaps the current findings can be accounted for by the fact that, on average, the respondents in this study appear to have adjusted fairly well to life after the cardiac event.

Finally, initial analyses suggested that whether respondents took part in the study as a couple or on their own accounted for differences in distress, life satisfaction, relationship satisfaction, the number of lifestyle changes they had made and the
difficulty of making the changes. The number of people who took part in the study on their own was quite small and the reasons for the non-participation of their spouse are impossible to determine, so the results need to be interpreted with some caution and cannot be generalized to the broader population. However, given the existence of some variability in responses based on whether the respondents took part in the study as a couple or individually, further research along these lines may prove useful in teasing out the factors that contribute to better adjustment following a cardiac event.

### 6.6.2 Main Analyses of Gender and Role Effects on Health and Psychosocial Variables

The majority of respondents reported their physical and emotional health as average or very good both generally and since the cardiac event, although changes in self-reported health were noted as a result of the event (discussed further below). Although not all of the respondents in this study were Australian (70%), the current findings are comparable with the most recent Australian data which showed that 43% of people with cancer or heart and circulatory problems report very good or excellent global health (unpublished ABS data 2006a, cited in ABS, 2007b). In the current sample 40.6% of respondents reported very good or excellent physical health since the cardiac event and 42% reported very good or excellent emotional health since the cardiac event.

Age of the respondents was unrelated to self-reported physical and emotional health generally, but was related to self reported physical and emotional health following the cardiac event. Older people reported better physical and emotional health since the cardiac than younger people did. Once age was taken into account, respondents’ reported levels of health did not differ based on gender or role. That is, respondents reported similar levels of physical and emotional health regardless of whether they were patients or partners or male or female. The results also showed that respondents reported significantly lower physical and emotional health since the patient’s cardiac event, indicating a perceived decline in health following the cardiac event. This reported decline in self-reported health is in keeping with Bardage et al.’s (2001) findings of decline in self-perceived health following development of cardiovascular disease. While this might be expected for patients, the current findings suggest that perceptions of physical and emotional health of spouses is also affected by their partner’s illness.
Analyses of covariance (using age as a covariate) indicated there that were no gender x role interaction effects for any of the psychosocial outcome variables. Once age was taken into account, only scores for avoidance and posttraumatic growth varied based on gender or role. There were main effects for gender and role for avoidance such that women reported higher avoidance than men did and patients reported higher avoidance than partners did. For posttraumatic growth, women reported higher scores than men did.

The results for posttraumatic growth are relatively easy to interpret and are in keeping with other research which found that women tend to report higher scores on measures of stress-related growth than men do (Park et al., 1996; Tedeschi & Calhoun, 1996). The results for avoidance are somewhat more complex given that most of the patients were male and most of the partners were female. Although there was no gender x role interaction effect, an inspection of the mean scores for avoidance showed that female patients had the highest mean score (which was appreciably higher than other scores), male partners had a very low mean score for avoidance and male patients and female partners had very similar scores which fell between those of the female patients and the male partners. This pattern of means may account for the somewhat complex gender and role main effects.

6.7 CONCLUSION

Since there were fewer female-patients and male partners any conclusions about gender and role effects must necessarily be tentative, but the results suggest that there were very few gender or role effects. The findings suggest that the respondents in this study were generally adjusting well to life following a cardiac event. Patients and partners reported similar levels of health, distress, life satisfaction, relationship satisfaction and posttraumatic growth. On average respondents rated their physical and emotional health, both before and after the cardiac event, in the average to very good range and overall distress levels were quite low. Most respondents were generally satisfied with their life, very satisfied with their relationship and reported a moderate degree of posttraumatic growth. In general, this sample of cardiac patients and partners seemed to be a reasonably homogeneous group for whom the impact of the patient’s cardiac event had not been extreme.
Since the focus of the above analyses was on examining the potential effects of gender and role on self-reported health and psychosocial outcomes, by definition these analyses examined the impact of the cardiac event on individuals. Further analyses were conducted to examine experiences of the cardiac event from a couples’ perspective. These analyses and findings are described in the following chapter.
Chapter 7: **STUDY 2 PART B – QUANTITATIVE RESULTS
EXAMINING COUPLES’ EXPERIENCES**

7.1 **CHAPTER OVERVIEW**

This chapter describes the quantitative analyses of data from the 30 intact couples. The focus of this chapter was examining the health and psychosocial variables from a couples’ perspective. Section 7.2 provides details of the analytic strategies used for the analyses of couples’ data. Section 7.3 provides an examination of the inter-relationships among the psychosocial outcome variables separately for patients and their partners. This is followed by a detailed examination of the lifestyle changes made by couples as a result of the cardiac event (Section 7.4) and within-couple comparisons of the health and psychosocial variables (Section 7.5). In Section 7.6 perceived changes since the cardiac event, in the patient’s mood and the couple’s relationship are considered in relation to the psychosocial variables. Findings are discussed in Section 7.7 and concluding remarks are given in Section 7.8.

7.2 **ANALYTIC STRATEGY**

In order to address the second research question, quantitative data from the 30 intact couples were analysed. Initially bivariate correlations were conducted to examine the inter-correlations among the psychosocial outcomes separately for patients and partners. Following this, the proportion of patients and partners who had made changes in each of 16 lifestyle categories was examined, with Chi-square analyses used to determine any significant differences between patients and their partners. Within-couple comparisons using paired-sample $t$-tests were conducted in order to examine whether there were any differences between patients and their partners in ratings of physical and emotional health (before and after the cardiac event), and psychosocial variables. Finally, analyses of variance were used to examine whether there were differences in perceived support, distress, life satisfaction, relationship satisfaction and posttraumatic
growth based on perceived changes (no change, better or worse since the cardiac event) in the patient’s mood and in the couple’s relationship.

7.3 EXAMINATION OF INTER-RELATIONSHIPS AMONG PSYCHOSOCIAL OUTCOME VARIABLES FOR PATIENTS AND THEIR PARTNERS

As an initial exploration of couples’ experiences following the cardiac event, bivariate correlations were conducted to examine the interrelationships among the psychosocial outcome variables (number and difficulty of lifestyle changes, perceived support, psychological distress, life satisfaction, relationship satisfaction, and posttraumatic growth). Interrelationships among variables were examined for patients and partners separately, as well as within couples. Table 7.1 shows patient correlations in the bottom half of the table, while partner correlations are shown in the top half of the table, and within couple correlations are shown in bold type along the diagonal.

Results in Table 7.1 indicate that there were moderate to strong positive correlations within couples for the number of lifestyle changes made, perceived support from partner, intrusion, life satisfaction, relationship satisfaction and posttraumatic growth. The within couple correlations for difficulty making lifestyle changes, avoidance and perceived support from family and friends were non-significant.
Table 7-1

*Inter Correlations Among Psychosocial Variables for Patients, Partners and Within Couples*

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<th></th>
<th>Age</th>
<th>Number Changes</th>
<th>Change Difficulty</th>
<th>Partner Support</th>
<th>Family Support</th>
<th>Friend Support</th>
<th>Intrusion</th>
<th>Avoidance</th>
<th>Life Satisfaction</th>
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<td>.09</td>
<td>-.28</td>
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<tr>
<td>Num Ch</td>
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<td>.51**</td>
<td>.37</td>
<td>-.32</td>
<td>-.26</td>
<td>-.08</td>
<td>.25</td>
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<td>-.28</td>
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<td>.03</td>
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<td>.37</td>
<td>-.54**</td>
<td>-.38</td>
<td>-.10</td>
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<td>-.50**</td>
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<tr>
<td>Fr Support</td>
<td>.12</td>
<td>-.24</td>
<td>-.10</td>
<td>.19</td>
<td>.47*</td>
<td>.27</td>
<td>-.25</td>
<td>-.22</td>
<td>.66**</td>
<td>.28</td>
<td>.16</td>
</tr>
<tr>
<td>Intrusion</td>
<td>-.48**</td>
<td>.48*</td>
<td>.38*</td>
<td>-.19</td>
<td>-.37*</td>
<td>-.06</td>
<td>.36*</td>
<td>.71**</td>
<td>-.30</td>
<td>-.33</td>
<td>.42*</td>
</tr>
<tr>
<td>Avoidance</td>
<td>-.21</td>
<td>-.01</td>
<td>.16</td>
<td>-.13</td>
<td>-.12</td>
<td>.09</td>
<td>.51**</td>
<td>.04</td>
<td>-.34</td>
<td>-.40*</td>
<td>.26</td>
</tr>
<tr>
<td>Life Sat.</td>
<td>.35</td>
<td>-.46*</td>
<td>-.29</td>
<td>.50**</td>
<td>.76**</td>
<td>.57**</td>
<td>-.48**</td>
<td>-.21</td>
<td>.55**</td>
<td>.72**</td>
<td>.04</td>
</tr>
<tr>
<td>Rel Sat.</td>
<td>.13</td>
<td>-.15</td>
<td>-.29</td>
<td>.94**</td>
<td>.68**</td>
<td>.26</td>
<td>-.17</td>
<td>-.04</td>
<td>.50**</td>
<td>.69***</td>
<td>-.01</td>
</tr>
<tr>
<td>PTG</td>
<td>-.09</td>
<td>.09</td>
<td>.11</td>
<td>.04</td>
<td>.17</td>
<td>.52**</td>
<td>.24</td>
<td>.11</td>
<td>.14</td>
<td>.14</td>
<td>.41*</td>
</tr>
</tbody>
</table>

*Note:* *p < .05, **p < .01; ***p < .001

Correlations for patients are shown in the bottom of the table (n = 30)
Correlations for partners are shown in the top of the table (n = 30)
Within couple correlations are shown in bold type on the diagonal
While there were some similarities in the patterns of significant inter-correlations among the variables for patients and partners, there were also some notable differences in the pattern of results. For patients, intrusion was moderately positively correlated with both the number and difficulty of lifestyle changes and moderately negatively correlated with age, perceived support from family and life satisfaction; while for partners intrusion was moderately negatively correlated with perceived support from partner and moderately positively correlated with difficulty in making lifestyle changes and posttraumatic growth. For partners, avoidance was moderately positively correlated with difficulty of making lifestyle changes and moderately negatively correlated with age, perceived support from partner and relationship satisfaction, while it was unrelated to these variables for patients. For patients, life satisfaction was moderately negatively correlated with the total number of lifestyle changes, but life satisfaction was unrelated to lifestyle changes for partners. For partners, relationship satisfaction was moderately negatively correlated to both the number of lifestyle changes and difficulty of making changes, but for patients, relationship satisfaction was unrelated to lifestyle changes. Posttraumatic growth was positively correlated with perceived support from friends for patients, but for partners it was positively correlated with intrusion and somewhat more strongly positively correlated with difficulty of making lifestyle changes.

Also worth noting is the somewhat different pattern of correlations between life satisfaction, relationship satisfaction and perceived support from partner and family. For patients, the correlation between life satisfaction and partner support was the same as between life satisfaction and relationship satisfaction (r = .50, p < .001) and there was a stronger correlation between life satisfaction and perceived support from family (r = .76, p < .001). For partners the correlation between life satisfaction and partner support was also the same as between life satisfaction and relationship satisfaction (r = .72, p < .001), but there was a weaker correlation between life satisfaction and perceived support from family (r = .48, p < .001). These results suggest that for patients higher life satisfaction is more strongly related to higher perceived support from family, while for partners higher life satisfaction is more strongly related to relationship satisfaction and higher perceived support from partners.
7.4 **Couples’ Lifestyle Changes Since the Cardiac Event**

Prior research has focused on the benefits of making lifestyle changes following a cardiac event (ACRA, 2008; Briffa et al., 2009), but there has not been any prior investigation of the range of lifestyle changes made by patients and partners or of the difficulty of making these changes. However, as shown in Section 7.3 above, the number of lifestyle changes made and the difficulty of making changes were both significantly correlated with several of the other psychosocial outcome variables for both patients and partners. For patients, making a greater number of lifestyle changes was associated with higher intrusion scores, lower perceived support from family and lower life satisfaction. In addition, greater reported difficulty making lifestyle changes was also associated with higher intrusion scores for patients. For partners, making a greater number of lifestyle changes was only associated with lower relationship satisfaction. However, greater reported difficulty of making lifestyle changes was associated with lower perceived support from partner and lower relationship satisfaction. In addition, greater reported difficulty making lifestyle changes was associated with higher intrusion, avoidance and posttraumatic growth scores for partners.

Based on the findings in Study 1, respondents were asked whether they had made any changes in 16 areas of lifestyle. Table 7.2 shows the percentage of patients and partners who made changes in each of the lifestyle categories.

The results indicated that most of the participants (92.0% of patients and 89.7% of partners) had made some changes in lifestyle since the cardiac event. While some of these changes related to health promotion and CHD risk reduction behaviours, other changes were not directly related to health promotion or CHD risk reduction.

With regard to health promoting behaviours, the majority of both patients and partners had changed to a healthier diet since the cardiac event. Patients were more likely than partners to change their exercise routines, with approximately half of the patients and one third of the partners reporting increased regular exercise. Of the respondents who changed their smoking and alcohol consumption, all indicated that they decreased smoking and alcohol consumption as a result of the cardiac event.
Table 7-2

Percentage of Patients and Partners Making Lifestyle Changes Following the Patient’s Cardiac Event

<table>
<thead>
<tr>
<th>Lifestyle Change</th>
<th>Patients</th>
<th></th>
<th></th>
<th>Partners</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No Change</td>
<td>Increased</td>
<td>Decreased</td>
<td>No Change</td>
<td>Increased</td>
<td>Decreased</td>
</tr>
<tr>
<td>Healthy diet</td>
<td>24.0</td>
<td>68.0</td>
<td>8.0</td>
<td>24.1</td>
<td>72.4</td>
<td>3.4</td>
</tr>
<tr>
<td>Regular exercise #</td>
<td>36.0&lt;sup&gt;a&lt;/sup&gt;</td>
<td>48.0</td>
<td>16.0</td>
<td>65.5&lt;sup&gt;a&lt;/sup&gt;</td>
<td>31.0</td>
<td>3.4</td>
</tr>
<tr>
<td>Smoking</td>
<td>80.0</td>
<td>0.0</td>
<td>20.0</td>
<td>96.6</td>
<td>0.0</td>
<td>3.4</td>
</tr>
<tr>
<td>Drinking alcohol</td>
<td>60.0</td>
<td>4.0</td>
<td>36.0</td>
<td>79.3</td>
<td>3.4</td>
<td>17.2</td>
</tr>
<tr>
<td>Paid employment</td>
<td>76.0</td>
<td>0.0</td>
<td>24.0</td>
<td>89.7</td>
<td>0.0</td>
<td>10.3</td>
</tr>
<tr>
<td>Voluntary / Unpaid work</td>
<td>80.0</td>
<td>4.0</td>
<td>16.0</td>
<td>82.8</td>
<td>0.0</td>
<td>17.2</td>
</tr>
<tr>
<td>Household chores</td>
<td>72.0</td>
<td>12.0</td>
<td>16.0</td>
<td>82.8</td>
<td>13.8</td>
<td>3.4</td>
</tr>
<tr>
<td>Gardening # *</td>
<td>56.0&lt;sup&gt;a&lt;/sup&gt;</td>
<td>8.0</td>
<td>36.0&lt;sup&gt;c&lt;/sup&gt;</td>
<td>82.8&lt;sup&gt;a&lt;/sup&gt;</td>
<td>10.3</td>
<td>6.9&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>Driving a car # *</td>
<td>68.0</td>
<td>8.0</td>
<td>24.0&lt;sup&gt;c&lt;/sup&gt;</td>
<td>72.4</td>
<td>24.1</td>
<td>3.4&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>Managing finances</td>
<td>80.0</td>
<td>12.0</td>
<td>8.0</td>
<td>93.1</td>
<td>6.9</td>
<td>0.0</td>
</tr>
<tr>
<td>Managing household maintenance #</td>
<td>56.0</td>
<td>12.0</td>
<td>32.0&lt;sup&gt;c&lt;/sup&gt;</td>
<td>75.9</td>
<td>17.2</td>
<td>6.9&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>Spending time on hobbies #</td>
<td>56.0</td>
<td>16.0&lt;sup&gt;b&lt;/sup&gt;</td>
<td>28.0</td>
<td>65.5</td>
<td>0.0&lt;sup&gt;b&lt;/sup&gt;</td>
<td>34.5</td>
</tr>
<tr>
<td>Spending time with friends</td>
<td>68.0</td>
<td>8.0</td>
<td>24.0</td>
<td>65.5</td>
<td>6.9</td>
<td>27.6</td>
</tr>
<tr>
<td>Spending time alone</td>
<td>76.0</td>
<td>16.0</td>
<td>8.0</td>
<td>75.9</td>
<td>6.9</td>
<td>17.2</td>
</tr>
<tr>
<td>Dealing with stressful situations myself #</td>
<td>44.0</td>
<td>32.0</td>
<td>24.0&lt;sup&gt;c&lt;/sup&gt;</td>
<td>58.6</td>
<td>37.9</td>
<td>3.4&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>Helping my partner deal with stressful situations # ***</td>
<td>68.0&lt;sup&gt;a&lt;/sup&gt;</td>
<td>16.0&lt;sup&gt;b&lt;/sup&gt;</td>
<td>16.0&lt;sup&gt;c&lt;/sup&gt;</td>
<td>34.5&lt;sup&gt;a&lt;/sup&gt;</td>
<td>65.5&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.0&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

N = 60; * p < .05 for $\chi^2$; *** p < .001 for $\chi^2$;
# indicates existence of significant differences between cells;
a = significantly different from expected values in No Change cells (Adjusted Residual > ± 1.96, p < .05);
b = significantly different from expected values in Increased cells (Adjusted Residual > ± 1.96, p < .05);
c = significantly different from expected values in Decreased cells (Adjusted Residual > ± 1.96, p < .05);
Where people reported changes in their work status, it was more likely that they decreased the amount of work they did. None of the respondents reported increasing the amount of paid work they did and both patients and partners reported decreasing paid employment. While a very small proportion of patients increased voluntary / unpaid work after their cardiac event, none of the partners increased voluntary work. Roughly similar percentages of patients and partners reported decreasing the amount of voluntary / unpaid work they did.

With regard to managing household activities, the overall pattern of results suggests that patients were more likely to report decreasing these activities, while partners were more likely to report increasing the activities. Patients were more likely than spouses to report decreases in doing gardening ($\chi^2 (2) = 7.03, p < .05$) and driving the car ($\chi^2 (2) = 6.51, p < .05$). Although overall Chi-square for managing household maintenance was non-significant ($\chi^2 (2) = 5.61, p = .06$), there were significant differences in some cells (adjusted residuals $\pm 1.96, p < .05$) which suggested that patients were more likely than partners to report decreasing household maintenance. Relatively few patients and partners reported any changes in their management of household chores or finances.

The pattern of results for reported changes in time spent on hobbies, with friends or alone varied somewhat across the three categories. Although overall Chi-square for reported time spent on hobbies was non-significant ($\chi^2 (2) = 5.02, p = .08$), there were significant differences in some cells (adjusted residuals $\pm 1.96 p < .05$) which suggested that patients were more likely than partners to report increasing time spent on hobbies. The pattern of results for changes in spending time with friends was very similar for patients and partners with roughly one quarter of both patients and partners reporting less time spent with friends. The pattern of reported change in time spent alone was somewhat different for patients and partners. Patients were more likely to report increased time spent alone while partners were more likely to report decreased time spent alone.

There were also difference between patients and partners in the patterns of change in relation to dealing with stressful situations. Although overall Chi-square was non-significant ($\chi^2 (2) = 5.06, p = .08$) there were significant differences in some cells (adjusted residuals $\pm 1.96, p < .05$) which indicated that patients were more likely than partners to report decreases in dealing with stressful situations themselves. The most notable difference in the patterns of change between patients and partners was in
reported changes in helping one’s spouse deal with stressful situations ($\chi^2 (2) = 15.39, p < .001$), where the majority of partners reported increases in helping their spouse (the patient) deal with stressful situations.

7.5 WITHIN COUPLE COMPARISONS OF SELF-REPORTED HEALTH AND PSYCHOSOCIAL VARIABLES

Following on from the ANCOVAs used to examine the effects of gender and/or role on self-reported health and psychosocial variables (described in Chapter 6), analyses were conducted to examine whether there were any differences within couples for these variables. Prior research has found some concordance within couples, particularly for health and lifestyle factors (Franks et al., 2002; Meyler et al., 2007). In this vein, analyses were performed to compare responses of patients and their partners.

7.5.1 Within Couple Comparison of Self-reported Health

As well as rating their own physical and emotional health, all respondents were asked to rate the physical and emotional health of their partner both generally and since the cardiac event. This was done to compare respondents’ self ratings with their partners’ perceptions. Table 7.3 shows the means and standard deviations for ratings of patients’ health while Table 7.4 shows the means and standard deviations for ratings of spouses’ health.

7.5.1.1 Ratings of Patients’ Health

Since data provided by couples can not be assumed to be statistically independent, paired sample $t$-tests were used for within-couple comparisons. Within-couple paired samples $t$-tests revealed that there were no significant differences between the patients’ self ratings of their physical and emotional health (both generally and since the cardiac event), and their spouse’s ratings (see Table 7.3). Thus the patient’s health (generally and since the cardiac event) was rated in a similar way by the patients themselves and by their spouses.
Table 7-3

**Mean Ratings of Patients Physical and Emotional Health**

<table>
<thead>
<tr>
<th></th>
<th>Patients Self-Rating of Health</th>
<th>Spouse Proxy Rating of Patient Health</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>PH Generally</td>
<td>3.90</td>
<td>0.54</td>
</tr>
<tr>
<td>PH Since CE</td>
<td>3.33</td>
<td>0.66</td>
</tr>
<tr>
<td>EH Generally</td>
<td>3.77</td>
<td>0.68</td>
</tr>
<tr>
<td>EH Since CE</td>
<td>3.30</td>
<td>0.84</td>
</tr>
</tbody>
</table>

Note: PH = Physical Health; EH = Emotional Health; CE = Cardiac Event; n = 30

Within-subject paired sample t-tests indicated that spouses perceived a decline in patient’s physical and emotional health after the cardiac event. Spouses reported the patient’s physical health since the cardiac event ($M = 3.23, SD = .73$) was significantly lower than it had been generally ($M = 3.83, SD = .59$) ($t(28) = 3.84, p < .01$). Similarly, spouses reported the patient’s emotional health since the cardiac event ($M = 3.17, SD = .69$) was significantly lower than it had been generally ($M = 3.80, SD = .96$) ($t(28) = 3.25, p < .01$). These results were comparable to the patients’ own reports of decline in health following the cardiac event (described in Chapter 6).

### 7.5.1.2 Ratings of Spouses’ Health

With regard to perceptions about the spouse’s health (see Table 7.4), within-couple paired samples t-tests indicated that there was a significant difference between the spouses’ self rating of emotional health since the cardiac event and the patients’ rating of their partner’s emotional health since the cardiac event. Spouses’ self ratings of emotional health since the cardiac event ($M = 3.38, SD = .82$) were significantly lower than the patients’ ratings of their partner’s emotional health since the cardiac event ($M = 3.69, SD = .89$) ($t(28) = -2.07, p < .05$). The spouses’ physical and emotional health generally, and physical health since the cardiac event were rated in a similar way by the spouses themselves and by the patients ($p > .05$).
Table 7-4

*Mean Ratings of Spouses Physical and Emotional Health*

<table>
<thead>
<tr>
<th></th>
<th>Spouse Self-Rating of Health</th>
<th>Patient’s Rating of Spouse Health</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(M)</td>
<td>(SD)</td>
</tr>
<tr>
<td>PH Generally</td>
<td>3.66</td>
<td>0.67</td>
</tr>
<tr>
<td>PH Since CE</td>
<td>3.34</td>
<td>0.81</td>
</tr>
<tr>
<td>EH Generally</td>
<td>3.59</td>
<td>0.95</td>
</tr>
<tr>
<td>EH Since CE</td>
<td>3.38</td>
<td>0.82</td>
</tr>
</tbody>
</table>

*Note: PH = Physical Health; EH = Emotional Health; CE = Cardiac Event; n = 29*

Patients perceived a decline in their partner’s physical health following the cardiac event, but not in their emotional health. Patient’s reported their partner’s physical health since the cardiac event (\(M = 3.52, SD = .69\)) was significantly lower than it had been generally (\(M = 3.72, SD = .65\)) \((t(28) = 2.26, p < .05)\). Thus, while both patients and spouses perceived a decline in the spouse’s physical health since the cardiac event, only the spouses perceived a decline in their own emotional health since the cardiac event.

### 7.5.1.3 Summary of Health Ratings

Overall, there was agreement between patients and their partners about the patient’s health. Patients and their partners gave similar ratings for patients’ physical and emotional health generally and since the cardiac event. Thus patients’ self-perceptions of decline in health following the cardiac event were matched by spouses’ perceptions of decline in the patients’ health.

While patients and their partners agreed in their perceptions about the spouses’ physical and emotional health generally, and about a decline in spouses’ physical health since the cardiac event, there was disagreement between patients and their partners about the spouses’ emotional health following the cardiac event. Spouses perceived a decline in their own emotional health following the cardiac event, but the patients did not share this perception.
7.5.2 Within Couple Comparison of Psychosocial Outcome Variables

Within-couple paired sample *t*-tests were used to examine whether there were differences between patients and their partners in the number of lifestyle changes they had made since the cardiac event, or in the reported difficulty of making these changes. The results indicated that there were no differences between patients and their partners in the number of lifestyle changes they had made (*p* > .05). However, the average reported difficulty in making lifestyle changes was significantly higher for partners (*M* = 2.35, *SD* = 0.79) than it was for patients (*M* = 1.88, *SD* = 0.96) (*t*(22) = 2.30, *p* < .05). Thus while patients and partners reported making a similar number of lifestyle changes following the cardiac event, partners reported the changes were more difficult to make than patients did.

Within-couple paired sample *t*-tests were also used to examine whether there were differences between patients and their partners for the other psychosocial variables. The results indicated that there were no differences between patients and their partners for reported levels of distress (intrusion, avoidance), life satisfaction, perceived support (partner, family, friends), relationship satisfaction or posttraumatic growth (all *p* > .05). Thus psychosocial outcomes were similar within this sample of couples.

7.6 The Effects of Perceived Changes in Patients’ Mood or Couples’ Relationship on Psychosocial Outcomes

Analyses were conducted to examine whether there were any differences in the psychosocial variables based on perceived changes in the patient’s mood or the couples’ relationship. Results for patients and partners were examined separately.

7.6.1.1 Perceived Changes in Patient’s Mood

For patients reporting on their own mood changes since their cardiac event, 55.17% reported no change, 13.79% reported their mood had changed for the better and 31.03% reported their mood had changed for the worse. For partners reporting on the patient’s mood changes since the cardiac event, 43.33% reported no change, 23.33% reported the patient’s mood had changed for the better and 33.33% reported the patient’s mood had changed for the worse since the cardiac event.
The variability noted between patient’s own reports of mood change and partners’ perceptions of patient mood change was due to some differences in perceptions within couples. An inspection of couples’ questionnaires indicated that 17 couples (56.67%) were in agreement about perceived changes in the patient’s mood following the cardiac event while 13 couples (43.33%) disagreed. Of the 17 couples who were in agreement, 10 couples perceived no change in the patient’s mood since the cardiac event, three couples perceived the patient’s mood was better and four couples perceived the patient’s mood was worse.

Of the 13 couples who disagreed in their perception regarding the patient’s mood change, eight couples showed disagreement with one member reporting no change and the other reporting worse mood, two couples disagreed with one member reporting no change and the other reporting better mood and three couples disagreed completely with one person reporting the patient’s mood was better and the other person reporting the patient’s mood was worse.

7.6.1.1.1 Effects of Patient’s Mood Change on Psychosocial Outcomes

In order to examine whether perceived changes in patient’s mood since the cardiac event were related to differences in reported levels of perceived support, distress, satisfaction with life, relationship satisfaction and posttraumatic growth, a series of one-way ANOVAs were conducted. Mood change was categorised as “no change”, “better mood” and “worse mood”. Mean scores for the psychosocial variables in each change group are shown in Table 7.5 for patients and Table 7.6 for partners.

As shown in Table 7.5 there were significant differences in patients’ reported levels of distress and posttraumatic growth based on the type of perceived change in their own mood following their cardiac event. Student-Newman-Keuls post hoc tests indicated that patients reporting no changes in their mood reported significantly lower intrusion than patients who reported their mood had changed for the worse. In addition, patients who reported no change in their mood since the cardiac event reported significantly lower posttraumatic growth than patients who reported their mood had changed for the better.
Table 7-5

*Patients’ Mean Scores for Psychosocial Outcomes in each of the Patient-Reported Mood Change Groups*

<table>
<thead>
<tr>
<th>Change Groups for Patient-Reported Mood</th>
<th>Worse Mood</th>
<th>No Change</th>
<th>Better Mood</th>
<th>$F(2, 26)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner Support</td>
<td>48.33</td>
<td>55.63</td>
<td>43.75</td>
<td>1.54</td>
</tr>
<tr>
<td>Family Support</td>
<td>36.33</td>
<td>49.75</td>
<td>48.75</td>
<td>1.99</td>
</tr>
<tr>
<td>Friend Support</td>
<td>38.33</td>
<td>40.69</td>
<td>50.25</td>
<td>0.84</td>
</tr>
<tr>
<td>Intrusion</td>
<td>16.67&lt;sub&gt;a&lt;/sub&gt;</td>
<td>6.13&lt;sub&gt;b&lt;/sub&gt;</td>
<td>11.50&lt;sub&gt;a,b&lt;/sub&gt;</td>
<td>7.01**</td>
</tr>
<tr>
<td>Avoidance</td>
<td>15.67</td>
<td>7.50</td>
<td>6.00</td>
<td>3.23</td>
</tr>
<tr>
<td>Life Satisfaction</td>
<td>21.11</td>
<td>25.56</td>
<td>23.50</td>
<td>0.80</td>
</tr>
<tr>
<td>Relationship Satisfaction</td>
<td>54.00</td>
<td>57.50</td>
<td>51.00</td>
<td>0.58</td>
</tr>
<tr>
<td>PTG</td>
<td>45.89&lt;sub&gt;a,b&lt;/sub&gt;</td>
<td>35.69&lt;sub&gt;a&lt;/sub&gt;</td>
<td>74.00&lt;sub&gt;b&lt;/sub&gt;</td>
<td>3.42*</td>
</tr>
</tbody>
</table>

*Note:* PTG = posttraumatic growth, *$p < .05$, **$p < .01$; $n = 30$; means with matching subscripts do not differ

As shown in Table 7.6 spouses’ reported levels of perceived support (from partner and family), avoidance, relationship satisfaction and posttraumatic growth differed based on perceived changes in the patient’s mood. Student-Newman-Keuls post hoc tests indicated that spouses who reported that the patient’s mood had changed for the worse reported significantly lower perceived support from their partner and their family, significantly lower relationship satisfaction and significantly higher avoidance than spouses who reported no changes in the patient’s mood. Spouses who reported the patient’s mood had changed for the better reported significantly higher posttraumatic growth than spouses who reported no change in the patient’s mood.
Table 7-6

Spouses’ Mean Scores for Psychosocial Outcomes in each of the Partner-Reported Patient Mood Change Groups

<table>
<thead>
<tr>
<th>Partner-Reported Patient Mood Change Groups</th>
<th>Worse Mood</th>
<th>No Change</th>
<th>Better Mood</th>
<th>$F(2, 27)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner Support</td>
<td>37.20$_a$</td>
<td>54.15$_b$</td>
<td>45.14$_{a,b}$</td>
<td>4.09$_*$</td>
</tr>
<tr>
<td>Family Support</td>
<td>37.20$_a$</td>
<td>56.08$_b$</td>
<td>44.57$_{a,b}$</td>
<td>6.82$_{**}$</td>
</tr>
<tr>
<td>Friend Support</td>
<td>39.80</td>
<td>44.85</td>
<td>40.43</td>
<td>0.45</td>
</tr>
<tr>
<td>Intrusion</td>
<td>14.60</td>
<td>6.85</td>
<td>13.86</td>
<td>2.54</td>
</tr>
<tr>
<td>Avoidance</td>
<td>12.60$_a$</td>
<td>4.23$_b$</td>
<td>6.57$_{a,b}$</td>
<td>4.65$_*$</td>
</tr>
<tr>
<td>Life Satisfaction</td>
<td>23.40</td>
<td>28.38</td>
<td>26.43</td>
<td>1.26</td>
</tr>
<tr>
<td>Relationship Satisfaction</td>
<td>47.80$_a$</td>
<td>59.85$_b$</td>
<td>54.43$_{a,b}$</td>
<td>3.60$_*$</td>
</tr>
<tr>
<td>PTG</td>
<td>50.60$_{a,b}$</td>
<td>38.69$_a$</td>
<td>66.00$_b$</td>
<td>3.28$_*$</td>
</tr>
</tbody>
</table>

*Note*: PTG = posttraumatic growth, * $p < .05$, ** $p < .01$; $n = 30$

Means with matching subscripts do not differ

In general, perceived changes in the patient’s mood since the cardiac event were related to differences in the reported levels of distress, perceived support, relationship satisfaction and posttraumatic growth for both patients and partners. Perceived worsening of the patient’s mood since the cardiac event was associated with higher levels of distress, while perceived improvement in patient’s mood since the cardiac event was related to higher levels of posttraumatic growth. In addition, for spouses, perceived worsening of the patient’s mood since the cardiac event was associated with lower relationship satisfaction and lower perceived support from partner and family.
7.6.1.2 Perceived Changes in Couples’ Relationship

In order to assess the perceived quality of couples’ relationships, respondents were asked to rate their relationship both before and after the cardiac event in categories ranging from “extremely happy and thriving” to “so troubled I/we got (are getting) professional help. The proportion of patients and partners in each relationship category rating before and after the cardiac event is presented in Table 7.7.

Table 7-7

Percentage of Respondents in Each Relationship Rating Category Before and Since the Cardiac Event

<table>
<thead>
<tr>
<th>Relationship Category</th>
<th>Before the Cardiac Event</th>
<th>Since the Cardiac Event</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Patients</td>
<td>Partners</td>
</tr>
<tr>
<td>Extremely happy and thriving</td>
<td>53.3</td>
<td>40.0</td>
</tr>
<tr>
<td>Successful overall</td>
<td>40.0</td>
<td>46.7</td>
</tr>
<tr>
<td>Somewhat troubled but not needing professional help</td>
<td>3.3</td>
<td>6.7</td>
</tr>
<tr>
<td>Troubled and needing professional help</td>
<td>3.3</td>
<td>6.7</td>
</tr>
<tr>
<td>So troubled I/we got (are getting) professional help</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Patients: N = 30 Partners: N = 30

The results in Table 7.7 indicated that the majority of patients and a high proportion of partners rated their relationship quality as “extremely happy and thriving” before and since the cardiac event. However, an inspection of individual questionnaires indicated that 23.3% of patients and 33.3% of partners had perceived changes in their relationship following the cardiac event and had given different ratings of relationship quality before and since the cardiac event. So, for example, although 53.3% of patients rated their relationship as extremely happy and thriving before the cardiac event, and the same proportion gave this rating after the cardiac event, the 53.3% in each case does not necessarily refer to the same patients.
When asked about perceived changes in their relationship since the cardiac event in terms of “no change”; “better”; “worse”, 34.5% of patients and 53.3% of partners reported some change in their relationship since the cardiac event. Although there seem to be inconsistencies in the proportions of respondents who perceived changes in their relationship, these differences can be accounted for by the fact that a person may consider that their relationship has changed without nominating a different quality category. For example someone who deems their relationship to be successful overall may consider it has improved, but still categorise it as successful overall rather than thriving. For this reason and for consistency with the “patient mood change” question, the results from the second relationship change assessment were used in the following analyses.

With regard to agreement within couples, an inspection of couples’ questionnaires indicated that 13 couples (43.33%) were in agreement about perceived changes in their relationship following the cardiac event while 17 couples (56.67%) disagreed. Of the 13 couples who were in agreement, nine couples perceived no change in their relationship since the cardiac event, three couples perceived their relationship was better and one couple perceived their relationship was worse.

Of the 17 couples who disagreed in their perception regarding their relationship since the cardiac event, five couples showed disagreement with one member reporting no change and the other reporting worse relationship, 11 couples disagreed with one member reporting no change and the other reporting better relationship and one couple disagreed completely with one person reporting the relationship was better and the other person reporting the relationship was worse.

7.6.1.2.1 Effects of Perceived Changes in Relationship on Psychosocial Outcomes

One-way ANOVAs were conducted to examine whether perceived changes in relationship since the cardiac event were related to differences in reported levels of perceived support, distress, satisfaction with life, relationship satisfaction and posttraumatic growth. Mean scores for each of these variables in each relationship change category are shown in Table 7.8 for patients and Table 7.9 for partners.

As shown in Table 7.8, for patients, there were no significant differences in reported levels of perceived support (partner, family, friends), distress, life satisfaction,
relationship satisfaction or posttraumatic growth based on perceived changes in the couple’s relationship following the cardiac event.

Table 7-8

*Patients’ Mean Scores for Psychosocial Outcomes in each of the Relationship Change Groups*

<table>
<thead>
<tr>
<th>Patient Relationship Change Groups</th>
<th>Worse Relationship</th>
<th>No Change</th>
<th>Better Relationship</th>
<th>$F(2,26)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner Support</td>
<td>57.00</td>
<td>49.37</td>
<td>55.86</td>
<td>0.75</td>
</tr>
<tr>
<td>Family Support</td>
<td>38.00</td>
<td>45.68</td>
<td>48.00</td>
<td>0.35</td>
</tr>
<tr>
<td>Friend Support</td>
<td>31.33</td>
<td>41.63</td>
<td>44.57</td>
<td>0.73</td>
</tr>
<tr>
<td>Intrusion</td>
<td>17.33</td>
<td>8.95</td>
<td>10.29</td>
<td>1.42</td>
</tr>
<tr>
<td>Avoidance</td>
<td>7.00</td>
<td>10.68</td>
<td>8.71</td>
<td>0.27</td>
</tr>
<tr>
<td>Life Satisfaction</td>
<td>23.33</td>
<td>24.37</td>
<td>22.86</td>
<td>0.08</td>
</tr>
<tr>
<td>Relationship Satisfaction</td>
<td>56.33</td>
<td>53.58</td>
<td>60.43</td>
<td>0.86</td>
</tr>
<tr>
<td>PTG</td>
<td>31.67</td>
<td>41.58</td>
<td>56.43</td>
<td>1.01</td>
</tr>
</tbody>
</table>

*Note:* PTG = posttraumatic growth; $n = 30$

By contrast, the results in Table 7.9 indicate that, for partners, perceived changes in the couple’s relationship were related to differences in reported levels of perceived support, distress, life satisfaction and relationship satisfaction.
Table 7-9  

*Partners’ Mean Scores for Psychosocial Outcomes in each of the Relationship Change Groups*

<table>
<thead>
<tr>
<th>Partner Relationship Change Groups</th>
<th>Worse Relationship</th>
<th>No Change</th>
<th>Better Relationship</th>
<th>$F(2,26)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner Support</td>
<td>30.60$_a$</td>
<td>47.79$_b$</td>
<td>51.82$_b$</td>
<td>3.96*</td>
</tr>
<tr>
<td>Family Support</td>
<td>37.40</td>
<td>51.14</td>
<td>46.36</td>
<td>1.74</td>
</tr>
<tr>
<td>Friend Support</td>
<td>33.00</td>
<td>43.57</td>
<td>44.45</td>
<td>1.42</td>
</tr>
<tr>
<td>Intrusion</td>
<td>18.20</td>
<td>7.50</td>
<td>12.36</td>
<td>2.85</td>
</tr>
<tr>
<td>Avoidance</td>
<td>14.40$_a$</td>
<td>4.86$_b$</td>
<td>7.91$_{a,b}$</td>
<td>3.66*</td>
</tr>
<tr>
<td>Life Satisfaction</td>
<td>18.00$_a$</td>
<td>26.14$_b$</td>
<td>30.18$_b$</td>
<td>6.03**</td>
</tr>
<tr>
<td>Relationship Satisfaction</td>
<td>44.60$_a$</td>
<td>53.57$_{a,b}$</td>
<td>60.36$_b$</td>
<td>3.94*</td>
</tr>
<tr>
<td>PTG</td>
<td>51.80</td>
<td>41.21</td>
<td>57.73</td>
<td>1.47</td>
</tr>
</tbody>
</table>

*Note:* PTG = posttraumatic growth, *$p < .05$, **$p < .01$; $n = 30$  
Means with matching subscripts do not differ

Student-Newman-Keuls post hoc tests indicated that partners who perceived their relationship had changed for the worse since the cardiac event reported significantly lower satisfaction with life and perceived support from their spouse than partners who perceived no change, or a change for the better in their relationship.  
Partners who perceived no change in their relationship reported significantly lower avoidance than partners who perceived their relationship had changed for the worse.  
Partners who perceived their relationship had improved since the cardiac event reported significantly higher relationship satisfaction than partners who perceived their relationship had changed for the worse.  

In general, perceived changes in the couples’ relationship were not related to differences in psychosocial outcomes for patients. However, for partners, perceived
changes in their relationship were related to differences in reported levels of perceived support, distress, life satisfaction and relationship satisfaction.

7.7 DISCUSSION

The focus of this chapter was to examine the health and psychosocial outcome variables from a couples’ perspective. Accordingly analyses were conducted which examined this in a number of ways in order to gain a better understanding of couples’ experiences following a cardiac event.

7.7.1 Inter-relationships among psychosocial outcome variables

There were moderate to strong positive correlations within couples for the number of lifestyle changes made, perceived support from partner, intrusion, life satisfaction, relationship satisfaction and posttraumatic growth. Within couples correlations for difficulty making lifestyle changes, avoidance, and perceived support from family and friends were non-significant.

The strong positive correlation for relationship satisfaction is unsurprising given the overall high levels of reported relationship satisfaction for both patients and partners. Given this fact, one might have perhaps expected a higher correlation within couples for perceived support from partner. The non-significant within couple correlations for perceived support from family and friends are likely to be an indication that patients and partners receive differing degrees of support from these sources. The moderate correlation for the number of lifestyle changes made is also unsurprising given the general finding that patients and partners made a similar number of changes. The lack of within couple correlation for difficulty of making changes is in keeping with the finding that partners reported more difficulty than patients in making changes. It is worth noting here that number of changes was unrelated to the difficulty of making changes. In this sense it was harder for some people to make a few changes than for other people making a greater number of changes. The within couple correlation for intrusion was the lowest of the significant correlations while the correlation for avoidance was non-significant. This pattern may indicate that perhaps couples shared some of the intrusive experiences about the cardiac event with each other. On the other hand, avoidance by definition does not involve sharing experiences, so the lack of correlation makes conceptual sense in this case. The moderate within couple correlation
for life satisfaction also makes conceptual sense given that patients and partners
reported similar levels of satisfaction with life. This finding is also in keeping with prior
research (Bookwala & Schulz, 1996) which showed concordance between couples for
overall satisfaction with life.

Although the results indicated many similarities between patients and partners
there were some notable differences in the pattern of inter-correlations among the
psychosocial variables when they were examined separately for patients and partners.
One of the main differences was in how lifestyle changes related to distress, life
satisfaction and relationship satisfaction. For patients, making more lifestyle change and
finding it more difficult to make changes was related to higher intrusion and lower life
satisfaction but unrelated to relationship satisfaction. For partners, making more
lifestyle change and finding it more difficult to make changes was related to lower
relationship satisfaction but unrelated to life satisfaction. For partners, the number of
lifestyle changes was unrelated to intrusion but greater difficulty making changes was
related to higher intrusion.

A possible explanation for these differences may lie in the degree of real choice
about making the lifestyle changes. For patients many of the lifestyle changes may not
be entirely voluntary. Typically, patients diagnosed with heart disease are strongly
advised to modify diet and exercise habits, and patients who smoke are urged to (at the
very least) reduce their tobacco intake, but preferably stop smoking altogether (ACRA,
2008; AIHW, 2008; NHFA, 2004). These changes can be difficult for some people to
come to terms with in spite of their acknowledgement that they are designed to improve
one’s health. The researcher was present when one patient voiced his concerns very
succinctly during a cardiac rehabilitation lecture on health promoting behaviours. After
hearing the dietician talk about reducing the intake of saturated fats in food, he asked
whether he could still regularly eat the vanilla slices with cream and the lamb chops
with all the fat attached which he particularly enjoyed. On hearing the dietician’s
response that he really shouldn’t be consuming so much saturated fat, he said “You
have just taken all the enjoyment out of my life”, to which many of the other patients
voiced their agreement. Changing long established dietary patterns can be very difficult,
particularly when the change is not strictly voluntary. In addition many patients reduced
household tasks, driving, paid employment and spending time with friends and on
hobbies. Once again it is plausible that not all of these changes were made on a strictly
voluntary basis. Under these circumstances it is unsurprising that making a greater number of changes and having more difficulty making the changes was related to higher intrusion and lower life satisfaction. In Baric’s (1969) terms, adjusting to a healthier lifestyle means accepting an “at risk” identity. Feeling limited in what one can or “should” do would act as a constant reminder of the cardiac event and its consequences thus increasing intrusion and potentially affecting overall life satisfaction.

For partners, the health promoting changes would be more voluntary and therefore more psychologically within one’s control. Nevertheless, partners may also feel some compulsion to make changes by way of moral support for the patient (Goldsmith et al., 2006). Some other changes may be less voluntary (e.g., increasing household tasks, driving, and emotional management). The fact that the number and difficulty of lifestyle changes were related to relationship satisfaction rather than life satisfaction may be explained by the supportive role the partner tends to play in helping the patient make the necessary adjustments following the cardiac event. It is possible that if the patient is having difficulty adjusting to lifestyle changes after the cardiac event, this may cause tension in a relationship where a partner may be trying to encourage compliance with prescribed changes (Miller et al., 1990), or where there is some need for reversal of traditional roles within the couple. In addition, the finding that the majority of partners reported increasing dealing with stressful situations for themselves and for their partners as well as decreasing time spent with friends and on personal hobbies, may put an additional burden on relationships and may help explain the negative relationship between number and difficulty of lifestyle changes and relationship satisfaction. Halford (2000) suggests that one of the characteristics of satisfied couples is undertaking a range of positive activities, including sharing positive activities with each other, with family and friends and engaging in independent activities. It is unsurprising then that a reduction in these positive activities is associated with lower relationship satisfaction for spouses.

Another interesting difference in the pattern of results for patients and partners was in regard to the correlations between life satisfaction, relationship satisfaction and perceived support. For patients, the strongest correlate with life satisfaction was family support, with lower (and roughly equal strength) correlations between life satisfaction and relationship satisfaction, partner support and support from friends. For partners the (equal) strongest correlates with life satisfaction were perceived support from partner
and relationship satisfaction, with a somewhat weaker correlation for life satisfaction and perceived support from friends and the weakest significant correlation being between life satisfaction and perceived support from family. This may in part be explained by the fact that the majority of partners were female. According to Gilligan (1982, 1993) women’s gender identity is entwined with connection and care of others. In this context the strong relationships between life satisfaction, relationship satisfaction and support from partner can be more easily understood.

It is also interesting to note the relationships between support from partner and reported distress. For patients, support from their partner was not associated with lower distress levels. By contrast, perceived partner support was related to lower distress (both intrusion and avoidance) for spouses. The perceived support questions related to being able to talk about problems, share joys and sorrows, make decisions together and get practical support. In light of this, spouses who feel emotionally and practically supported by the patients may also feel reassured about the patient’s wellbeing and therefore less distressed. Patients on the other hand may feel emotionally and practically supported by their partners, but this may not have a direct bearing on their own sense of wellbeing or distress levels. There is also some evidence which suggests that patients can feel overprotected by their spouses (Coyne & Fiske, 1992; Stewart et al., 2000), sometimes resulting in higher anxiety and depression for patients (Clarke et al., 1996), suggesting that the relationship between support and wellbeing is a complex one.

Finally, the pattern of correlations for posttraumatic growth was somewhat different for patients and partners. There was a moderate positive within couple correlation which suggested that couples “grew” together to some degree. This is in keeping with Weiss’ (2004) findings. Apart from the within couple correlation, for patients posttraumatic growth was related to greater support from friends, while for partners posttraumatic growth was positively related to greater difficulty making lifestyle changes and higher intrusion. The pattern of results for partners is in keeping with the notion that posttraumatic growth is associated with the struggle to adjust to a traumatic event (Tedeschi & Calhoun, 1996). For patients, the association of posttraumatic growth with greater perceived support from friends is not as easy to interpret. It would appear that partners experience posttraumatic growth along with their spouse and through dealing with the stresses of adjusting to their spouse’s cardiac event, while patients experience posttraumatic growth through the more positive means of support from friends. Similar to the current findings, Weiss (2004) found that partner
support was not related to posttraumatic growth. Support from partner and family may be more expected, perhaps taken for granted, and therefore perhaps not quite as influential in terms of growth as the support of friends whose support is entirely voluntary.

### 7.7.2 Couples’ Lifestyle Changes Since the Cardiac Event

Most respondents made some changes to their lifestyle following the cardiac event. While patients and partners reported making a similar number of changes, partners found it more difficult to make changes than patients did. In addition, patients and partners varied in the type of lifestyle changes they made. Patients were more likely than spouses to report decreases in household tasks and maintenance, while partners were more likely than patients to report increases in dealing with stressful situations, both for themselves and for the patient.

For the most part, patients and partners made similar changes in their lifestyle following the cardiac event. The vast majority had made changes to a more healthy diet and many people had increased their regular exercise, with patients more likely to have done so. Many people had decreased paid employment and/or voluntary work and many had decreased the time they spent with friends or engaged in hobby activities, with partners more likely to have decreased time on hobbies.

The areas where there were differences in the kind of changes made by patients and partners were in the practical household tasks and in dealing with stressful situations. Patients were more likely to report decreases in household tasks (e.g., gardening, driving) and maintenance. This is likely to be related to the fact that many such tasks can be physically demanding, and patients may have been advised to reduce strenuous physical activity following their cardiac event. The finding that partners were more likely to have increased dealing with stressful situations is likely to be related to providing emotional support for the patient and endeavouring to protect the patient from emotional strain. Prior research (Coyne & Smith, 1991; Stewart et al., 2000; Suls et al., 1997) has suggested that spouses often try to shield patients from emotional stress, sometimes hiding their own distress because they do not want to “burden” the patient further. However, providing emotional support to patients has also been cited as one of the most difficult tasks of caregiving (Halm et al., 2007; Stolarik et al., 2000). This would help to explain the findings for partners in this study, of the relatively strong
associations between the difficulty of making lifestyle changes and distress (intrusion and avoidance).

### 7.7.3 Within Couples Comparisons of Self-Reported Health and Psychosocial Variables

The findings reported in Chapter 6 indicated that patients and partners reported similar physical and emotional health. This is in keeping with the general finding of health concordance within couples (Meyler et al., 2007). Within couple comparisons also suggested similarity of health appraisal for self-rated and partner-rated health. Patients and partners rated the patient’s physical and emotional health before and after the cardiac event in the same way. Thus, the patient’s reports of decline in their own physical and emotional health following the cardiac event were matched by their partner’s perceptions of a decline in the patient’s health. With regard to the health of spouses, both patients and spouses rated spouse’s general physical and emotional health in a similar way, and perceived a decline in the spouse’s physical health since the cardiac event. However, only the spouses perceived a decline in their own emotional health since the cardiac event, suggesting a mismatch between patients and partners about perceptions of the spouse’s emotional health since the cardiac event. This mismatch in perceptions may add to the emotional burden felt by spouses (Franks et al., 2002).

As noted above, partners reported greater difficulty of making lifestyle changes than patients did. However, all other psychosocial outcomes were similar for patients and their partners, suggesting similarity within couples in their response to the cardiac event. This may in part be due to the fact that this sample of couples seemed to have adjusted well to the cardiac event, and were generally very satisfied with their life and their relationship.

### 7.7.4 Effects of Perceived Changes in the Patient’s Mood or the Couples’ Relationship on Psychosocial Outcomes

The psychosocial variables were examined separately for patients and partners in light of perceived changes in the patient’s mood or the couple’s relationship since the cardiac event. While roughly one third of both patients and partners reported that the patient’s mood had changed for the worse since the cardiac event, a greater proportion of partners than patients reported the patient’s mood had changed for the better. For
both patients and partners, perceived worsening of the patient’s mood since the cardiac event was associated with higher levels of distress, while perceived improvement in the patient’s mood was associated with higher levels of posttraumatic growth. For partners only, perceived worsening of the patient’s mood since the cardiac event was associated with lower relationship satisfaction and lower perceived support from partner and family.

Respondents were asked about the quality of their relationship and whether they perceived their relationship had changed since the cardiac event. The categorical ratings of relationship quality were useful in providing an overview of how respondents perceived their relationships (with over 50% of patients and 40% of partners rating their relationship in the “extremely happy and thriving” category). In terms of perceived changes, over one third of patients and over half of the partners considered their relationship had changed since the cardiac event. For patients, perceived changes in the relationship since the cardiac event were not associated with differences in reported levels of support, distress, life satisfaction, relationship satisfaction or posttraumatic growth. By contrast, partners who perceived their relationship had changed for the worse since the cardiac event reported the highest level of avoidance and the lowest levels of partner support, life satisfaction, and relationship satisfaction.

Taken together, these results are in keeping with the findings of Study 1 and suggest that perceptions of changes in the patient’s mood and in the couple’s relationship following the cardiac event can have significant associations with other psychosocial outcomes. This seems to be particularly the case for partners where a greater number of such associations were in evidence.

### 7.8 Conclusion

The examination of couples’ experiences indicated some differences in the patterns of results for patients and their partners. Some of these differences related to the pattern of inter-correlations among the psychosocial variables, lifestyle changes and self and partner ratings of health. In addition, perceptions of changes in the patient’s mood and the couple’s relationship also showed some associations with the psychosocial variables. These findings were in keeping with findings from Study 1 and added more depth to the initial analyses of the effects of gender and role on psychosocial outcomes.
While quantitative analyses provide useful information based on statistical comparisons of researcher determined variables, they may miss information that is deemed important to the respondents. Open-ended questions allow the respondents to inform the researcher about issues of personal relevance and importance which can add depth to the information provided by quantitative data. The following chapter provides qualitative analyses of responses to open-ended questions asked of both patients and partners.
Chapter 8: STUDY 2 PART C - QUALITATIVE RESULTS

8.1 CHAPTER OVERVIEW

This chapter reports the qualitative findings from all of the Study 2 respondents. The analytic strategy is presented in Section 8.2 together with the response rates for each of the five open-ended questions. Results are presented in Section 8.3; using a separate sub-section for each of the five questions (Sections 8.3.1 to 8.3.5). Responses of male and female patients and partners are presented separately in each sub-section. Findings are discussed in Section 8.4 with consideration given to the themes which emerged from the qualitative responses. Concluding remarks are given in Section 8.5.

8.2 ANALYTIC STRATEGY

As described in Chapter 5 (Section 5.4.4.3), there were five open-ended questions placed within the survey. These questions were designed to allow respondents to give a personal perspective on the impact that the cardiac event had on their lives.

Qualitative responses from each questionnaire were transcribed into separate documents for each respondent. An initial examination of the responses indicated that the majority of respondents provided qualitative information, although not everyone provided a response for every question. Response rates for individual questions and overall response rates are detailed in Table 8.1. Similar to the rationale provided for the use of tables in Section 3.5.3, tables are used in this chapter as a means of providing summary information (Todd et al., 2004).
Table 8-1

**Percentage of Responses in Each Open-Ended Question**

<table>
<thead>
<tr>
<th>Question</th>
<th>Male Patients (n = 28)</th>
<th>Female Partners (n = 32)</th>
<th>Female Patients (n = 6)</th>
<th>Male Partners (n = 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Experience</td>
<td>78.6</td>
<td>87.5</td>
<td>100</td>
<td>66.7</td>
</tr>
<tr>
<td>Patient’s mood Change *</td>
<td>46.4</td>
<td>68.8</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>Relationship Change *</td>
<td>39.3</td>
<td>62.5</td>
<td>66.7</td>
<td>0</td>
</tr>
<tr>
<td>Looking Back</td>
<td>60.7</td>
<td>53.1</td>
<td>16.7</td>
<td>33.3</td>
</tr>
<tr>
<td>Other Comments</td>
<td>17.9</td>
<td>43.8</td>
<td>16.7</td>
<td>0</td>
</tr>
<tr>
<td>Overall Response Rate</td>
<td>89.3</td>
<td>93.8</td>
<td>100</td>
<td>66.7</td>
</tr>
</tbody>
</table>

*Note: These percentages represent the proportion of respondents who indicated there had been a change since the cardiac event.*

Further examination of responses suggested differing patterns of responses amongst the groups. The male patients tended to give lengthier responses than the female patients. With so few male partners it is difficult to draw any conclusions; however, all the responses from this group were very brief and did not contain many details. Female partners gave the most detailed answers in comparison with the other groups.

Once these initial observations were made, responses of male patients, female patients, male partners and female partners were examined separately for each question. Using the method of constant comparison of fragments of data (as described in Section 3.2), line-by-line coding of responses was done to identify the emerging themes present in the data. Once this was completed for each question, comparisons could be made across the groups (i.e. male patients, female patients, male partners, female partners) to identify which themes were common across groups, and which themes were specific to a particular group.
Where direct quotes are given below, each quote is followed by two numbers in brackets. The first number is the respondent’s ID number, with all patient codes ending in 0 and partner codes ending in 1. The second number is the respondent’s age. For example, (391; 44) would indicate a partner with the ID number 39 and aged 44 years. All emphases within quotes are transcribed from the original text.

8.3 RESULTS
Since the main area of interest in Study 2 was to examine possible gender and role differences in response to a cardiac event, analyses of open-ended questions were initially conducted separately for male and female patients and partners. Following this the themes which emerged from each question were summarized.

8.3.1 Respondents’ Subjective Experiences Following the Patient’s Cardiac Event

8.3.1.1 Male Patients
When asked to describe what life had been like for them since their cardiac event, male patients tended to respond in one of four ways: life was essentially unchanged or fairly quickly returning to normal; things were difficult; life had improved; or they had a different life perspective.

Twenty-five percent of male patients reported that life now was essentially the same as it had been prior to their cardiac event.

I can’t say that life has been changed very much. After 11 months I am almost completely returned let say to the normal life. I regularly have my medicaments and it’s all what is strict obligation for me after the surgery. A few months ago I started play tennis again and so far I don’t notice any problems. (100; 67)

All support was good. Rehab was excellent. Gradually getting back to good physical condition. This made it easy to cope with working a farm (220; 63)

Forty-six percent of male patients reported experiencing ongoing difficulties since their cardiac event. These difficulties were related to the need to travel long distances for medical attention; mood problems (depression, anxiety, irritability, frustration); cognitive problems and general health problems.

Travelling from country areas to city is difficult. Left to my children to do. (30; 78)
Have approached physical activities with caution because of some cold sweats occasionally and have been a bit depressed by this condition on top of my usual health problems (280; 59)

Some level of frustration – not being as active as previously. Unable to carry out strenuous exercise and home maintenance (120; 57)

I am not able to work full time and there are many physical activities that I am not able to undertake. I was a keen scuba diver and an instructor prior to my AMI. Since then I am not allowed to dive or instruct. My previous employment required a lot of flying including off shore by helicopter. I am not able to renew my qualifications or carry out that task. Constant reliance on medication and the restrictions on food that exist because of these medications are a constant source of anger. Having regular blood tests (INR) and constantly juggling Warfrin dosages is also annoying (210; 56)

I am ill tempered most of the time and have very little patience. In short, life has not been much fun. (50; 63)

My concentration is not as good and I find I forget things, more than before. I am less organized / my decision making seems hampered. (40; 53)

I did not recover from the surgery very well. I got pneumonia, an infection in my leg where they took the graft and was in great pain for five months. (50; 63)

Eleven percent of male patients reported that their life had improved since the cardiac event.

Much better energy levels enabling me to get back to daily 30 – 40 minute walks. Able to cope better back at part time employment and better mental attitude to life, family and friends (180; 63)

Finally, 11% of male patients reported that they had a changed perspective on life since the cardiac event. The majority reported a more positive outlook on life, and some considered it a “second chance”. By contrast one man indicated that life was now different, but rather than seeing it as a “second chance” he felt “betrayed” and seemed more fearful of the future.

Since my bypass surgery I realize how quick death can occur. I am thankful for my second chance. I am now heavily involved and a life member of Heartbeat. I think I now appreciate life more and give thanks for each day as it comes. (160; 76)

My outlook is now more focused on how tentative life is and how quickly it can end. I am more conscious of what I eat and when I eat. I am very aware that waiting to do something may not be the best approach. There may not be a tomorrow! I feel betrayed by my body but have no recourse to “get even”. I have to maintain my body in order to live! My plans tend to be
more short term than they used to be. Otherwise I am happy that my condition was diagnosed prior to a heart attack or death! (60; 68)

8.3.1.2 Female Patients

With regard to their personal experiences, responses of female patients were evenly divided between life being essentially unchanged since the cardiac event (33%); experiencing ongoing difficulties (33%) and having a different perspective on life (33%). Unlike the male patients, none of the female patients reported that life had improved since the cardiac event.

I have resumed my life with normal activities (110; 78)

Life has been VERY difficult VERY emotional. I’m scared a lot more to do things and to eat certain things. I feel my life has been taken away from me (310; 27)

You look at life differently. Things you thought were pacific (sic) and necessary now seem trivial. You take each day as it comes and you don’t have to worry about minor things you don’t really need are not a necessity. When everything comes to a time you have only one life and its yours to take care of. (140; 63)

8.3.1.3 Male Partners

Since the group of male partners was so small, and their qualitative responses so brief, it was simplest to make an overall analysis of their responses. Two of the three male partners provided qualitative responses. In both cases, the brief responses to the “personal experience” question indicated that life since the female patient’s cardiac event had been essentially the same as it was prior to the event.

We continue along very much as before. (111; 79)

No changes were noted in the patient’s mood and no change in the couple’s relationship. The only other comment by one of the respondents indicated that at the time of the cardiac event:

Everyone we had contact with was most helpful and considerate. (111; 79)

These responses would suggest that male partners did not feel unduly impacted by their wife’s cardiac event.

8.3.1.4 Female Partners

Female partners had the most diverse responses regarding their personal experiences since their partner’s cardiac event. Similar to male and female patients,
some female partners reported that life had essentially been unchanged (13%), others reported ongoing difficulties (50%) and some reported a changed life perspective (6%). In addition, responses from this group suggested themes of protectiveness, stress, lack of personal time, intimacy problems, concerns about the future, and a total focus on the male patient.

One of the female partners suggested that life since the cardiac event had remained unchanged as her husband had been living with heart problems for some time and the latest event had not resulted in additional changes. The other female partners who reported their life as remaining unchanged seemed to suggest a more conscious decision to have their lives remain as they had been prior to the cardiac event.

Overall there has been little change in our lives. In spite of my obvious concern we are determined to carry on our lives normally. (11; 78)

Female partners who noted ongoing difficulties since the cardiac event often elaborated on specific areas of difficulty. These included difficulties due to lack of information, lack of support, work issues, social issues, impact on the family, and personality changes in the male patients. This last issue was the one most frequently cited as a source of difficulty and often related to the patient’s mood swings.

I feel hospital should have a list, ie better guidelines for recovery once home. We were told partner would be tired for a week!! We learnt more by talking to people who work in a hospital. I work in a private hospital. I took in a copy of angiogram and ECG and a nurse explained everything to me. Once I understood the severity of a massive heart attack, life was easier. (121; 55)

I have little or no support from our extended families and they don’t seem to care I don’t feel like there is anywhere for me to turn, no one that I can talk to about any of this. Because we are so young, we go to the doctor’s office and everyone there is our grandparent’s age. (311; 33)

Difficult – he retired and I still work full time but he doesn’t do much. (61; 60)

Because he has diabetes and is very deaf - also 7 years older I find that he has aged more quickly than before and that means he has lost interest in most social aspects of life. My life has changed to a certain degree because of these 3 medical problems. (251; 74)

We have two active children so they bring an active element to our lives. If our schedule gets too busy or work is stressful for my spouse, I feel that I have to find a way to make things go smoothly and less stressful for my spouse without making my children suffer When my spouse had his first
attack years ago the doctor told us to reduce stress by slowing down our lives. With children, that means pulling them out of any extra activities that they have. (311; 33)

He is hard to deal with most of the time. He has changed from an easy person to one who has no patience and a bad temper. (51; 49)

Has been very difficult...His personality change is no picnic!! (71; 52)

Dealing with his personality change has been the greatest...It has been hell!!! (321; 52)

Female partners who commented on a changed life perspective also tended to relate it to increased closeness with their partner and with others.

We appreciate our time together. Every day is a bonus and we enjoy our time with family and friends. A wonderful thing and I look forward to years together yet. (161; 76)

Sixteen percent of female partners reported being more protective of their husband than they had been prior to the cardiac event. They indicated that they had become more involved in their husband’s general health, watched over them to ensure they did not “overdo things” and sometimes carried supplies of their husband’s medications when they went out together. A further 13% of female partners expressed protectiveness to the point of constant vigilance and worry.

As my partner spends a great deal of time away I find that I am constantly worrying that he is OK. If I don’t have contact with him every day I become concerned. If he doesn’t answer my calls early in the morning I worry that he may have had a further event. (211; 57)

I am not accept (sic) my husband’s heart surgery. I feel deep depression because of that. Sleeping my main problem during the night. I don’t want to sleep I think if I sleep maybe my husband can die. All night I am watching him while he is sleeping I know I have to stay strong to help my husband but I don’t know how?? (231; 54)

A number of female partners commented that the time since the cardiac event had been stressful, partly because they were not sure what to expect during the recovery period and partly because of the demands of coping with their husband’s fluctuating moods and frustration at being unwell. Intimacy problems were mentioned in this context as were concerns about the future.

Another issue that was raised by a number of female partners was that they felt their lives now revolved around their husband’s needs and they felt they needed more personal time.
I suffer from lack of previous lifestyle. I need time for myself but get none as he is always with me. (331; 60)

It feels like every aspect of our lives revolves around how things will affect my spouse. I feel that every aspect of my life revolves around how my spouse is doing. I have had to give up a lot of things in order to take care of more things around my home and in my family’s lives. (311; 33)

As noted above some female partners reported a change in their perspective on life. Apart from this, there were not many reports of perceived benefits in response to the “personal experiences” question, however one female partner reported that she felt she had become “emotionally stronger” (151; 45) since the cardiac event and another reported that the cardiac event had “brought us much closer in every way” (161; 76).

Two female partners gave a very lengthy response to the “personal experiences” question which consisted entirely of descriptions of their husband’s cardiac history and their recovery. This was considered interesting in light of the fact that the question emphasised “what life has been like for you”. It is difficult to determine exactly why they did not say anything about themselves in response to this question, but perhaps their responses reflect a greater general emphasis on their husbands rather than on themselves.

In a somewhat similar vein, two female partners noted that they had also had heart surgery – in both cases more recently than their husbands. Yet for the purpose of this study they considered themselves in the partner role rather than in the patient role. Once again it is impossible to determine why this choice was made, but interesting to note that they responded with more of an emphasis on their husbands rather than on themselves.

8.3.2 Reported Effects of Perceived Changes in Patient’s Mood

Respondents were asked if they thought there had been any changes in the patient’s mood since their cardiac event. If they thought there had been mood changes, they were asked how the change(s) affected them. Male partners indicated that there had not been any changes in the patient’s mood but other respondents indicated some changes and gave details of how the changes affected them. The proportion of respondents who reported changes in the patient’s mood following the cardiac event is presented in Table 8.2
Table 8-2

Percentage of Respondents Who Reported Changes in the Patient’s Mood Following the Cardiac Event.

<table>
<thead>
<tr>
<th>Patient’s Mood Change</th>
<th>Male Patients (n = 28)</th>
<th>Female Patients (n = 6)</th>
<th>Male Partners (n = 3)</th>
<th>Female Partners (n = 32)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Change</td>
<td>53.6</td>
<td>50.0</td>
<td>100</td>
<td>31.2</td>
</tr>
<tr>
<td>Better</td>
<td>14.3</td>
<td>0.0</td>
<td>0.0</td>
<td>21.9</td>
</tr>
<tr>
<td>Worse</td>
<td>32.1</td>
<td>50.0</td>
<td>0.0</td>
<td>46.9</td>
</tr>
</tbody>
</table>

8.3.2.1 Male Patients

Male patients reported on how their own mood changes had affected them. Of the 46.4% of male patients who reported changes in their moods, a greater proportion reported that their mood had changed for the worse than for the better. Men who reported better moods tended to give global life assessments rather than offering specific details.

Happy and full of life. (130; 67)

In two words “appreciate life”. (290; 75)

By contrast, men who reported worse moods tended to give more detail about specific ways that this had affected them. These included mood swings, irritability, frustration, depression and concerns about the future.

I tend to be more impatient. Tend to have more highs and lows. Definitely more moody – swings. (40; 53)

Ill tempered, have very little patience with others. (50; 63)

I am often frustrated by my limitations since the AMI. (210; 56)

A bit quiet and depressed. Went to the doctor about it. Got pills and an appointment to see psychiatrist. (280; 59)

I lost hopes for betterment and good life due to losing good health at middle age and even after bypass surgery not keeping well. This has increased fear in me for future. (320; 47)
8.3.2.2 Female Patients

Female patients also reported on their own mood changes since their cardiac event and how the changes had affected them. Of the women who reported mood changes, all reported that their mood had changed for the worse, resulting in irritability, forgetfulness and occasionally wanting to be left alone.

I get irritated quickly. I have temper tantrums. (310; 27)

I start to say something then completely forget what I’m about to say. Then I say things without thinking of what I said and don’t really mean it. There are days when I want to be alone, avoid people and just potter around on my own. (140; 63)

8.3.2.3 Female Partners

The majority of female partners (68.8%) reported that their husband’s mood had changed since the cardiac event, with over twice as many reporting changes for the worse than changes for the better. This group of women gave quite detailed information about their perceptions of their partner’s mood changes and how they had affected them. Women who reported that their husband’s mood had changed for the better also reported that their husbands were less stressed, more even tempered, less critical and more considerate of others’ feelings.

Not as stressed worrying about having the bypass as he was told in 1995 he would eventually need a bypass. Had a couple of stents inserted over the past few years but felt he was a “time bomb” waiting to explode. (41; 55)

Is not so impatient or quick to let you know if something is not to his liking. Has allowed me to be more relaxed (181; 61)

He is more prepared to sit back and enjoy life. Spends more time with family and friends and had a more devil-may-care attitude. (211; 57)

More considerate of others’ feelings. More interested in family matters in general – giving more time to his children (& mine). (151; 45)

Women who reported that their husband’s mood had changed for the worse often cited a change in their partner’s personality.

He is not as kind and gentle as he was before this. (51; 49)

His personality has changed…. It is improving somewhat, but right after the surgery it was terrible!!! I can’t find anything to read on the subject!!!! He has changed. He is more grouchy and uncaring. Hateful at times. He is not the man I married!! (71; 52)
He is quick to temper rude and very hateful at times. Makes up his mind and there’s no changing it. Won’t let me have my way about hardly anything….I cry a lot more. He hurts my feelings A LOT (321; 52)

Some women also noted that their husbands were frustrated with their rate of recovery.

*He sometimes feels frustrated, impatient with his recovery speed. He wants to be active and have his life back to normal. He puts pressure on himself to appear unscathed to the outside world, for fear it’d be a show of weakness. He especially can’t take me hovering over him….while I kind of instinctively default to protection mode, what he’s said he wants most from me, is to feel desired and wanted. Be a wife not a mother. His sensitive ego is the only fragile thing about him, post surgery. I’m making a concerted effort to curb my instincts and build up his confidence. (81; 47)*

A number of women noted that their husbands experienced mood swings, depression and temper outbursts.

*First couple of months he was depressive and rather often more nervous – Sudden outburst. (sic) (101; 61)*

*Sometimes irrational, quick tempered (251; 74)*

*My spouse has been on an emotional rollercoaster His depression has been so severe where he says that he wished he had died after his heart attack so that I would not have to deal with things now. Because of his shifts in mood I feel like I am having to walk on egg shells around him Depending on his mood or what is going on in our lives I am always on the guard to handle any mood that my spouse is in His mood swings are also affecting our children. I feel like I need to run interference between my husband and the kids at times just so that everyone is OK. (311; 33)*

*He is giving up – no longer fighting. (331; 60)*

One woman also noted her husband’s seeming obsession with researching heart disease and his concerns about the future.

*Obsessive investigation into cardiac studies at times, initially relating them all to himself, but this has improved with time. Certainly very clued up on cardiac disease now. Very unsettled at times. Ongoing concerns re what the future holds and feelings of insecurity re his health, job etc. Overall this has certainly strengthened our relationship, but one is left with a feeling of insecurity. (91; 43)*

**8.3.3 Reported Effects of Perceived Changes in Couple’s Relationship**

Respondents were asked if they thought there had been any changes in their relationship with their partner since the cardiac event. If they thought there had been
relationship changes, they were asked how the change(s) affected them. Male partners indicated that there had not been any changes in their relationship but other respondents indicated some changes and gave details of how the changes affected them. The proportion of respondents who reported changes in their relationship following the cardiac event is presented in Table 8.3.

Table 8-3  

*Percentage of Respondents Who Reported Changes in their Relationship Following the Cardiac Event*

<table>
<thead>
<tr>
<th>Relationship Change</th>
<th>Male Patients ($n = 28$)</th>
<th>Female Patients ($n = 6$)</th>
<th>Male Partners ($n = 3$)</th>
<th>Female Partners ($n = 32$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Change</td>
<td>60.7</td>
<td>33.3</td>
<td>100</td>
<td>37.5</td>
</tr>
<tr>
<td>Better</td>
<td>25.0</td>
<td>50.0</td>
<td>0.0</td>
<td>34.4</td>
</tr>
<tr>
<td>Worse</td>
<td>14.3</td>
<td>16.7</td>
<td>0.0</td>
<td>28.1</td>
</tr>
</tbody>
</table>

8.3.3.1 *Male Patients*

The majority of male patients reported that their relationship had not changed since the cardiac event. Of the men who reported better relationships, essentially all reported greater emotional closeness.

*I love my wife more deeply and she is the rock I depend on.* (160; 76)

*Much more affectionate.* (240; 67)

*We are even more in love after 49 years of marriage.* (290; 75)

The main reasons cited for worse relationships were issues of impatience and sexual problems.

*Worse – not so patient. Don’t listen too well. Forgetful - Lazy thinking* (280; 59)

*My bad attitude spills over on her.* (50; 63)

*Our physical relationship is almost non-existent since the AMI due in part to the effects of medication.* (210; 56)

*Sexual relationship has reduced.* (320; 47)
8.3.3.2 Female Patients

Female patients who reported better relationships following their cardiac event attributed this to their supportive partners. By contrast, one woman reported on her husband’s lack of understanding regarding sexual problems, and another reported a loss of confidence.

_BEFORE MY SURGERY WE HADN’T HAD SEX FOR ABOUT 5 YEARS. I HAD LOST ALL INTEREST IN INTERCOURSE I COULDN’T FORCE MYSELF ANY MORE. IT WASN’T ALWAYS LIKE THIS. I GUESS IT’S PART OF POST MENOPAUSE. HE FINDS THIS HARD TO UNDERSTAND. THE WORST PART IS HE TELLS ALL HIS MATES. I CAN’T DO ANYTHING ABOUT IT._ (340; 61)

_I AM MORE DEPENDENT ON MY PARTNER SINCE MY CARDIAC EVENT – I AM SUFFERING A LOSS OF CONFIDENCE AND HAVE BECOME VERY INDECISIVE._ (110; 78)

8.3.3.3 Female Partners

Similar to other groups, female partners reported relationship changes for better and worse. However, this group also indicated relationships that were in flux, and the women concerned indicated that they tended to defer to their partner’s needs.

_OUT OUR RELATIONSHIP IS STRONG, ALTHOUGH THESE DAYS IN A BIT OF A FLUX, AS WE CONTINUE TO LEARN HOW TO LOVE & SUPPORT ONE ANOTHER, THE WAY THEY WANT, RATHER THAN WHAT WE THINK THEY WANT._ (81; 47)

_I USUALLY NOT CONTRADICT HIM. I AM VERY ATTENTIVE WHEN I ASK HIM TO DO SOMETHING. WHEN I ESTIMATE THE DISCUSSION MIGHT END IN ARGUE I RETREAT. I DO NOT REPROACH HIM FOR NOT DOING SOMETHING ETC._ (101; 61)

_WHEN MY SPOUSE IS HAVING A GOOD DAY, THEN THINGS ARE GOOD BETWEEN US. WHEN HE IS HAVING A BAD DAY, THAT IS ANOTHER STORY._ (311; 33)

Women who reported better relationships since the cardiac event attributed this to spending more time with their partners and appreciating each other.

_I THINK WE VALUE THE FACT THAT WE HAVE EACH OTHER MORE._ (11; 78)

_VERY CLOSE AND WE APPRECIATE AND MAXIMIZE OUR TIME TOGETHER._ (91; 43)

_WE HAVE SPENT MORE TIME TOGETHER. PARTNER USUALLY WORKS 13 HOUR DAYS INCLUDING TRAVEL._ (121; 55)

_WE DO MORE TOGETHER. WHEN HE GOES AWAY I GO WITH HIM (WORK COMMISSIONS PERMITTING)._ (211; 57)

Women who reported that their relationship was worse since the cardiac event attributed this to their partners being less caring since the event, not meeting expectations, and intimacy and/or sexual problems.
He is not as caring as before...speaks his mind when he shouldn’t. Doesn’t care if he hurts someone’s feelings.....the change was devastating at first...but he is different. I want some answers why this has happened and I can’t seem to find any. (71; 52)

Doesn’t seem as caring as he used to be and it hurts. (321; 52)

He expects a lot and does little. (61; 60)

Only slightly worse but mostly because partner does not want to make necessary changes in lifestyle to prolong life. (351; 53)

Sexual changes such as erection difficulties from the time of bypass. We have worked through this to the best of our ability. We are very fortunate to be able to do this. Probably worries my husband more so but we have managed and raised a laugh or two at times. (171; 72)

He is less inclined to be physical, less inclined to touch me. Miss the closeness. (331; 60)

8.3.4 Reflections on Helpfulness at the Time of the Cardiac Event

Respondents were asked “Looking back, what would you have found most helpful at the time of the cardiac event?” The intent of this question was to ascertain any areas which could be improved upon at the time of the event. However, some respondents interpreted the question as asking what / who they had found to be the most helpful at that time. Therefore the responses were considered in these two ways.

8.3.4.1 What Was Helpful at the Time of the Cardiac Event

Only male patients and female partners interpreted this question as referring to what or who they had found helpful in dealing with the cardiac event. The most common answer given by male patients regarding what they found most helpful was their partner’s (wife’s) support. Male patients also reported support from family (most often children), friends and medical staff as being helpful.

Support of my partner and my entire family, especially of my elder daughter who was always with me in the hospital. (100; 67)

I received a lot of help from doctor, family and friends. (250; 81)

Help received from my friends relatives and wife. (320; 47)

Female partners also cited support from family (most often their children) as helpful. Unlike the male patients they did not cite their partners or their friends.
My elder daughter in particular has always been very supportive. (11; 78)

I guess my kids were the most helpful. (71; 52)

No doubt was my older daughter. (sic) (101; 61)

Female partners also reported that information they had received through hospital staff and cardiac rehabilitation courses were very helpful.

We were very happy and appreciative of our local hospital staff, doctors and then cardiac specialist and staff when going through angiograms and angioplasty. Then the follow up cardiac rehab in [...] was far more beneficial than I expected. I have remarked to friends and family “If you knew you could have that sort of after care and support for every illness, you would be far more likely to recover quicker and easier”. (151; 45)

8.3.4.2 What Would Have Been Helpful at the Time of the Cardiac Event

People who considered areas that could be improved had a variety of suggestions. Once again most of the suggestions came from male patients and female partners, although one young female patient noted the need for support for younger patients.

Support groups with people my own age. Literature about people my own age. (310; 27)

The most common suggestion by male patients about what they would have found helpful was more information about what to expect. On male patient also noted that some counselling would have been helpful.

More information about what was happening to me. (50; 63)

More advice on what to expect physically and emotionally. (120; 57)

Probably prior to the operation a better understanding of what was involved in more detail and probably some counselling to assist me to prepare. (40; 53)

Another comment provided by some male patients was that earlier action on their part would have been helpful.

To go to hospital sooner. (20; 70)

Should have made better efforts at [earlier] events. (180; 63)

Finally, one male patient provided a comment that could be categorised as wishful thinking.
To have avoided it completely. (60; 68)

Similar to the male patients, female partners noted that more information would have been helpful, but the female partners gave more details about the kind of information they would have found useful.

*Information when surgery was going on and he was in the hospital – surgery was 8 plus hours and no info.* (61; 60)

*Someone should sit down and explain every detail of a cardiac event with the patient and partner. Also a discharge plan week by week. If this had been done with us, things would have been less stressful.* (121; 55)

One female partner noted the particular difficulty she had regarding getting information because both she and her husband are doctors.

*More support from medical staff: Both my husband and I are doctors and I have often found the medical field struggles when dealing with colleagues and prefers to avoid one rather than treating you simply as another patient. When one is in such a stressful situation, your medical knowledge flies out the window and it is important to be told the basics.* (91; 43)

A number of female partners noted the need for information and support especially geared to their needs.

*The partner feels a certain amount of anxiety not knowing what the outcome will be. It would have been good to have somewhere and someone to talk to eg a waiting area with tea or coffee with a person who had perhaps experienced the same event that could put your mind at ease* (211; 57)

*More support for the spouses of cardiac patients. I feel like it has all happened to them and the spouses/partners are just pushed to the side.* (311; 33)

Finally, similar to one male patient, one female partner provided comments that could be described as wishful thinking.

*It’s irrational ....but I just wanted guarantees. For the surgeon to promise he’d be 100% back home safe. Nothing short of that would help the fear...and even with that, I’d have worried the Dr was wrong. Some people can find peace with it. I could not.* (81; 47)

### 8.3.5 Additional Comments Provided by Respondents

Respondents were asked if they had any other comments that they wished to make. One female patient, and a few of the male patients offered additional information, but the majority of comments in this section were offered by female partners. Some of
the comments here reinforced what had already been reported, while other comments brought some new information to light.

One female patient and one male patient commented on their life perspective since the cardiac event.

*I am happy to be alive. My twin brother died 5 years ago. He had cardiac problems and died after a heart attack.* (190; 81)

*3 days after my bypass surgery when my spirits were at their lowest and a Heartbeat member told me of his experiences before and after surgery, I realized I still had a life ahead of me.* (160; 76)

A number of male patients and female partners commented on the importance of further research into heart disease, while several male patients and female partners commented on their satisfaction with medical staff and cardiac rehabilitation.

*I had a major heart attack in the year 2000 and immediately angioplasty performed on me but it failed after 4 years. So bypass surgery was done on me in 2004. My total 5 veins were grafted but still from first day of operation I am not comfortable. Repeatedly I am complaining about my discomfort but doctors are not believing. So I want to say that all these procedures are not perfect to treat cardiac patient. Very few patients are getting good results. Why? Medical science has to study more to find out 100% cure treatment to this disease.* (320; 47)

*The people at rehab were very helpful. This is a very important area that is a must in my opinion.* (200; 75)

*All the medical practitioners we have met throughout this event have been excellent – without exception.* (151; 45)

*I would only say that it is a big and a very dangerous operation although doctors say it is only routine.* (101; 61)

Female partners offered a number of additional comments which were exclusive to their group. Two women offered a global concluding remark.

*Would not like to go through another bypass – glad it is over.* (41; 55)

*He is doing better than I…. (sic)* (61; 60)

Other women commented on the changes they had noticed in their husbands.

*The most noticeable change has been the effect of the long anaesthetics on my husband. I am sure they have resulted in some memory loss (he is certainly not senile) – but this has caused him frustration – particularly in remembering names.* (11; 78)
I just would like some answers to his personality change. I think it was the heart/lung machine but can’t find anything on the subject. (71; 52)

One woman expressed concerns about the quality of information that had been provided by doctors and also reiterated concerns about the age appropriateness of cardiac rehabilitation and the need for support for partners.

I think that it is possible to treat people better. Realize that at 50 there is a lot of life left and anything that can be done to improve the quality of life is important. To help the patient talk to other victims of the same age. That cardiac rehab is also age related. Partners experience was that all other people were at least 20 years older and could not relate to him. Nor could the nurses who thought he should be happy with being able to potter about slowly for the rest of his life. Being honest about the side effects of the drugs given and the fact that more often than not there will be sexual dysfunction which can not be overcome rather than tell patients that this is something that either does not happen or will right itself in a few months. That a partner is as important as the patient and the preservation of the partnership is a good thing. So some support for partners is important. (331; 60)

Finally, one woman took the opportunity to sum up how she was currently dealing with the situation and trying to make the best of it.

We are doing the best that we can. It has been hard for me but if putting up with some of the things that I have, and dealing with everything that goes on with a cardiac patient, I would rather have my spouse here with me instead of living the life of a widow. My spouse means everything to me. People have asked me how I deal with things. There are days when I take each moment day-by-day. Sometimes it is minute-by-minute and then there are times that I take it second-by-second. I know that the sun will rise again tomorrow and that we don’t know what the day will bring. Because of that, I try to live each day as best I can, love my family and try not to worry about what will happen next. It will come in its own time. (311; 33)

8.4 DISCUSSION

The open-ended questions were included as a means of allowing respondents the opportunity to reflect on the nature of their personal experiences following a cardiac event. They were also included as a means of expanding on the information provided through the quantitative measures. Most respondents provided at least some qualitative information.

When the qualitative responses for each question were analysed for the four respondent groups, male patients; female patients; male partners and female partners, it was found that the male partners and female patients gave the least information. Male
patients provided somewhat more detailed responses, but overall, female partners gave the most detailed responses. There were some differences between the groups in the pattern of responses for any given question, but when the overall qualitative responses for each group are considered together, there was considerable overlap in the kind of information that was provided by the different groups. The emerging themes were considered in light of potential variability of responses based on gender and role.

8.4.1 Experiences Common to All Groups

Since there were very few male partners and since they offered minimal qualitative information, the discussion of “all groups” refers mainly to responses of male and female patients and female partners.

The only theme that was apparent across all the groups was that of life having remained essentially unchanged since the cardiac event. At least some respondents in each group made this assessment. This theme was most evident among the male partners, where it was essentially the only information this group provided.

The theme of experiencing ongoing difficulties was evident for male and female patients and female partners. For male patients, the difficulties centred on the practicalities of having to travel long distances for treatment and experiencing slower than desired recovery. Female patients reported difficulties due to tiredness, and emotional stress. Fear and a sense of loss (of former life) were mentioned in this context. Female partners reported somewhat broader difficulties that included lack of information and support; difficulties associated with perceived changes in their partner’s personality since his cardiac event; work related issues where patients had retired since the cardiac event and the wives were now doing more of the work; social issues where the patient was losing interest in social aspects of life; and difficulties associated with the impact the cardiac event had on the family, particularly in families with young children. In a somewhat similar vein, male and female patients and female partners all commented on the patients’ mood disturbances including mood swings, impatience, irritability, temper outbursts, depression and frustration.

The final theme that was common to male and female patients and female partners was that of a changed life perspective, whereby life was regarded in a more positive light following the cardiac event. Respondents commented on “feeling like [they] had been given a second chance”, “seeing life differently”, “appreciating life” and changing the focus of their lives more towards personal relationships.
8.4.2 Experiences Common to Male Patients and Female Partners

There were a number of themes expressed by male patients and female partners that were not expressed by female patients. Both groups reported on some ongoing sexual difficulties since the cardiac event, with additional comments attributing some of these difficulties to the effects of medication, and the couple’s management of these problems. Interestingly, an examination of responses relating to sexual difficulties indicated that in each case, only one member of the couple mentioned this issue.

Male patients and female partners also expressed some concerns about the future, reporting concerns about the patient’s health and management of business and property. Both groups also reported that they felt they needed more information about the medical procedures, the recovery processes and what to expect, and about the psychological effects of the cardiac event. One male patient reported that counselling would have been beneficial following the cardiac event, and a number of female partners expressed concerns about the lack of information available regarding the psychological impact of the cardiac event. In a similar vein, male patients and female partners commented on the importance of ongoing research in these areas. Finally, and on a more positive note, male patients and female partners reported supportive families, good medical staff and good cardiac rehabilitation programs all helpful in the recovery and adjustment process.

8.4.3 Experiences Common to Female patients and Female Partners

One theme was common to female patients and female partners. In particular, younger women reported the need for more age appropriate information and support particularly geared to their needs. Some of the women commented on their efforts to find such information or support groups, without success.

On a similar note, one of the female partners commented on what she felt was the inappropriate placement of her relatively young husband in a cardiac rehabilitation program where all the other patients were many years older. This is in keeping with Stewart, Davidson, Meade, Hirth and Weld-Viscount (2001) who tested the effect of a 12-week support group intervention with 14 couples following a first-time MI. The groups included both professional and peer facilitators. Stewart et al. reported that all couples were satisfied with the support groups, and reported positive benefits including...
improvement in the spousal relationship, coping, increased confidence and changed outlook on life. Stewart et al. note that an important factor in the success of the support groups is similarity of life circumstances between group members, which facilitates social comparison and social learning. Stewart et al. contend that such groups can provide informational, emotional and affirmational support.

8.4.4 Experiences Reported by Only One of the Respondent Groups

8.4.4.1 Male Patients

There were a few themes that were expressed by only one of the respondent groups. While a number of people across the respondent groups reported changes in their perspective on life and framed these in a positive way, only a few male patients reported that their life was actually better since the cardiac event than it had been before. With regard to life perspective, one male patient reported that his perspective on life had changed in a negative way such that he now focussed on the tentativeness of life and felt betrayed by his body.

Male patients were the only group reporting that they should have taken action earlier at the time of the cardiac event. While none of the men who took part in the study had experienced serious medical complications following their cardiac event, this realisation of the need for prompt action is important in light of the efforts of the medical profession to educate the general public in this regard. Male patients were also the only group that made specific comments about having supportive partners. This comment was not echoed by the women who were more likely to comment on support received from their children and friends.

8.4.4.2 Female Partners

There were also a number of themes unique to the female partners. One of the most common concerns for these women was the perceived changes in the personalities of their partners after their cardiac event. Several women made comments in this regard reporting that their husbands were not as caring as they had previously been, or that they disregarded others’ feelings, with two of the women reporting their husbands were “hateful at times”. Along similar lines, female partners reported intimacy problems. The comments in this regard were distinct from the sexual problems that some male patients and female partners mentioned. These were issues of emotional closeness rather than
sexual dysfunction. By contrast, several women reported that their husbands were more
caring, less stressed, more even tempered, more considerate of others’ feelings and
spending more time with their family than they had been previously. It would seem that
the female partners perceived a variety of changes in their partner’s temperament
following the cardiac event with some reporting positive outcomes while others
reported negative outcomes.

There were varying comments from respondents about the quality of the
couples’ relationships and the nature of any perceived changes. However, only female
partners reported on having relationships that were still “in flux”, and the underlying
adjustments and compromises that this entailed, with one woman intimating that her
way of managing was to “retreat” to avoid conflict. These strategies can be seen as
examples of protective buffering (Coyne & Smith, 1991) where female partners made
adjustments to their own emotional responses in order to accommodate the perceived
needs of their partners. In general though, protective buffering was not a main theme
with this sample of couples. Suls et al. (1997) suggest that “couples who were doing
well together felt less need to protect each other from their worries” (p. 346), and this
may have been the case in the current sample also.

With regard to comments about themselves, female partners reported the need
for more support especially geared to the needs of the partner. Similar to comments
about the need for age appropriate information and support, female partners felt that
their own needs were sometimes unrecognised as most of the focus from support
providers was on the patient’s needs.

Female partners also reported protectiveness and worry about their partner’s
health, sometimes to the point of constant vigilance leading to feelings of stress. Coyne
and Fiske (1992) suggest that overprotectiveness is likely to be a strategy for managing
one’s own anxieties about the patient’s well-being, but it seems that hypervigilance can
lead to stress rather than reducing anxiety. A number of women reported that they felt
the need for more personal time as their lives now seemed to revolve largely around the
needs of their partner. This expressed need for more personal time is particularly
interesting in light of Halford’s (2000) contention that one of the characteristics of
satisfied couples is that they undertake positive independent activities.

Finally, two women chose to put the total focus of their response to the personal
experiences question on detailing the recovery process for their husband – to the
exclusion of providing any information about themselves or their experience of the
cardiac event. In a similar vein, two women noted that they had also had heart surgery (in both cases more recently than their husbands), but had chosen to take part in the current study in the partner role.

It is impossible to determine exactly why these women placed all the emphasis on their husbands. However, the two women who reported exclusively on their husband’s recovery in the personal experiences question were aged 73 and 77 respectively. It is likely that this older generation of women was brought up in an era where gender roles were more clearly defined than they are at present, and perhaps their response to this question was a reflection of a socialization process that placed an expectation on these women generally to put a greater emphasis on their husbands (and families) than on themselves. Coyne and Fiske (1992) argue that “there may be cohort effects such that in couples that are currently late middle-aged and aged, the gender differentiation of roles may be so well established that they are relatively immune to recent societal change” (p.140).

Gilligan (1982, 1993) goes even further and contends that women perceive social reality differently from men, particularly in regard to experiences of attachment and separation. She argues that women define themselves in the context of relationships and judge themselves in terms of their ability to care. In support of this, she reports on interviews conducted over a number of years with both men and women, and argues that women’s identity is “fused” with their sense of intimacy in the context of human relationships. Gilligan presents excerpts from interviews where respondents were asked to describe themselves, and notes that “in all of the women’s descriptions, identity is defined in a context of relationship and judged by a standard of responsibility and care” (p161). Ultimately Gilligan concludes that “women’s sense of integrity appears to be entwined with an ethic of care, so that to see themselves as women is to see themselves in a relationship of connection” (p. 171).

The two women who had also had heart surgery but participated in the current study in the partner role were aged 72 and 59. The first woman, being in the same age group as the two women mentioned above, may have chosen the partner role for similar reasons as already noted. Alternatively, it could be that these women participated as partners rather than as patients due to an underlying perception that heart disease is still more of a “middle-aged man’s disease” (Jacobs & Sherwood, 1996, p. 198).
8.5 CONCLUSION

Overall, there were some areas of overlap in how the different groups of respondents adjusted to life following a cardiac event, but there were also some areas that were exclusive to just one group. In this study, the female partners gave the most detailed responses and reported on the greatest number of issues that were exclusive to their group. It is possible that this may be an artifact of the generally recognized different communication styles between men and women (Tannen, 1990), but male patients provided more detail than female patients which tends to go against this view.

The qualitative responses generally indicate that the respondents in the current study were adjusting reasonably well following the cardiac event. Nonetheless, there was variability in the degree of adjustment and while many respondents commented on the supportiveness and helpfulness of family, friends and medical professionals, there were a number of areas that were identified as needing further improvement.

Respondents who were having more difficulty cited the need for more information about the recovery process, with particular emphasis on the psychological impact of the cardiac event. This point was made by several respondents, and particularly by female partners. The need for age appropriate information and support was cited by younger patients and partners who felt that their needs were not being fully met in the current care system. Female partners also suggested that support specifically geared to their needs was important as they sometimes felt much of their life was now focused on the needs of the patient.

The information provided through the responses to the open-ended questions has expanded on the information available through the quantitative measures. The following chapter discusses the themes in evidence in both the qualitative and the quantitative data and gives an integrated view of the results of the current study and the implications for practical application and further research. Limitations of the current study are also discussed.
Chapter 9: DISCUSSION

9.1 CHAPTER OVERVIEW

This chapter draws together and consolidates the summary discussions presented in earlier chapters, as well as considering practical applications of the findings, and avenues for future research. Section 9.2 provides summaries of the main findings in relation to each of the research questions. Section 9.3 integrates these findings in relation to the overarching aim of the thesis. Section 9.4 considers the implications for practical application of the findings from this thesis. Limitations of the study are discussed in Section 9.5 and suggestions for future research are given in Section 9.6. Overall concluding remarks are given in Section 9.7.

9.2 SUMMARY OF MAIN FINDINGS

This thesis was an examination of the patterns of adjustment for patients and their partners following a cardiac event. Themes which emerged from Study 1 as important issues for partners were explored in more depth with male and female patients and partners in Study 2. Findings relating to each research question have been discussed in some detail in Chapters 3, 6, 7, and 8, but a brief overview of the main findings is given here prior to integrating the findings and considering possible practical applications of these findings.

9.2.1 Spouses’ Experiences Shortly After a Cardiac Event

Study 1 (Chapter 3) presented qualitative data from male and female spouses approximately four months after their partner’s cardiac event. The findings indicated that spouses experienced a broad range of responses to the cardiac event and that these responses could have positive and negative effects not only on the spouses themselves but also on their relationship with their partner. In addition, while there were areas of overlap in the types of experiences reported by male and female spouses, it was apparent that there were also areas where men’s and women’s experiences differed.
9.2.2 Effects of Gender and Role on Health and Psychosocial Outcomes

The main area of interest in this thesis was psychosocial adjustment of patients and partners following a cardiac event. Study 2 considered adjustment in terms of self-reported physical and emotional health and psychosocial outcomes (lifestyle changes, perceived support, distress, life satisfaction, relationship satisfaction and posttraumatic growth) for patients and partners.

The quantitative results in Chapter 6 (Study 2 Part A) suggested that age was the only demographic factor which was related to variability in self-reported health and psychosocial outcomes for patients and partners. Once age was accounted for, there were very few gender or role effects for self-reported health and psychosocial outcomes for this sample of patients and partners. However, the small number of female patients and male partners means that this conclusion is necessarily tentative. Although self-reported health was generally rated in the average to very good range, and there were no gender or role differences in self-reported health, the results indicated that respondents reported a decline in both physical and emotional health following the cardiac event. In addition, there were gender and/or role effects for the difficulty of making lifestyle changes, avoidance and posttraumatic growth. A gender x role interaction indicated that male patients and female partners reported more difficulty making lifestyle changes than female patients and male partners. With regard to avoidance, there were main effects for both gender and role such that women reported greater avoidance than men and patients reported greater avoidance than partners. Finally, there were gender differences for posttraumatic growth such that women reported greater growth than men did.

9.2.3 Couples’ Experiences

Chapter 7 (Study 2 Part B) examined self-reported health and psychosocial outcomes from a couples’ perspective. For this purpose, quantitative data from only the 30 intact couples were analysed. The main findings regarding couples’ experiences related to the differing patterns of inter-correlations among the psychosocial outcome variables for patients and their partners, and the effect of perceived changes in the patient’s mood and the couple’s relationship on the psychosocial outcome variables. Within-couple comparisons also revealed patterns of agreement and disagreement.
within couples regarding self-rated and other-rated health, the type of lifestyle changes made and the difficulty of making lifestyle changes.

Notable differences between patients and their partners in the pattern of intercorrelations among psychosocial variables related to difficulty of making lifestyle changes, relationship satisfaction, life satisfaction and posttraumatic growth and the correlations among these variables. With regard to lifestyle changes, patients and partners had made a similar number of changes following the cardiac event, but there was variability between patients and partners in the type of changes made. In addition, partners reported greater difficulty making changes than patients did. In terms of perceived health, while there was agreement within couples about perceptions of the patient’s health both before and since the cardiac event, there was some disagreement within couples regarding perceptions of the spouse’s health. Only spouses (mostly female) perceived a decline in their own emotional health following the cardiac event. Finally, perceptions of change in the patient’s mood and the couple’s relationship were related to variability in the psychosocial outcomes. These effects were more evident for partners than they were for patients.

The findings from analyses of couples’ data suggest that there are some differences in responses of patients and their partners to a cardiac event and also that couples’ experiences need to be taken into consideration when interpreting the impact of a cardiac event.

9.2.4 Qualitative Findings for Male and Female Patients and Partners

Chapter 8 (Study 2 Part C) examined the qualitative responses from male and female patients and partners. The group of male partners was very small and the responses they provided were very limited. Male and female patients provided more detailed information, but the responses from female partners were the most detailed and the most diverse.

Among the main findings were common reports of ongoing difficulties relating to the practicalities of day-to-day life. Patients’ mood swings and changes in life perspective were also reported by many respondents. Perceived changes in the couple’s relationship were reported by several respondents. Where positive relationship changes were noted these were attributed to greater emotional closeness and spending more time together. Where changes for the worse were noted, male patients tended to attribute
these to sexual problems, while female partners tended to attribute them to lack of intimacy, patients not being as caring as they used to be, or patients being reluctant to make lifestyle changes.

Information needs were commented on by many respondents. In particular, information relating to the potential psychological impact of the cardiac event was mentioned many times. Female partners spoke of patients’ personality changes which they were unprepared for and some patients and partners suggested the offer of counseling or support groups may be appropriate. In a similar vein, respondents felt that age appropriate information and support services were needed for younger patients and partners.

9.3 INTEGRATING THE FINDINGS

9.3.1 The Role of Age

Age was found to be an important factor in adjusting to a cardiac event for both patients and partners, such that younger people experienced greater adjustment difficulties in a number of areas than older people did. This may be a function of younger people perceiving that cardiac events are more common among older people, and therefore experiencing greater difficulties in dealing with a condition that they may feel they are too young for, what Coyne and Smith (1991) refer to as being “off schedule”. Alternatively, it may be an indication that adequate resources are not available for younger people therefore making adjustment more difficult. Finally, it could also be an indication that older people have somewhat better adjustment strategies as a result of life experience and dealing with more of life’s challenges prior to experiencing the cardiac event.

9.3.2 Physical and Emotional Health

The majority of respondents reported average to very good health both before and since the cardiac event. However, respondents perceived that both physical and emotional health declined following the cardiac event. The overall health ratings since the cardiac event were in keeping with Australian population data, including data which shows that 43% of people with cancer or heart and circulatory problems report very good or excellent health (unpublished ABS data 2006a, cited in ABS 2007b). The results indicating perceived decline in health following a cardiac event are in keeping
with Bardage et al.’s (2001) findings for persons who developed cardiovascular disease, and reported a decline in self perceived health. The finding in this thesis that spouses perceived a decline in their own health is an indication that a cardiac event can have health consequences for partners as well as for patients.

Within couple comparisons of perceived health were conducted as a means of examining whether spouse’s perceptions of their partner’s health matched self-reported health perceptions. The findings suggested that patients and partners had similar perceptions regarding the patient’s health. That is the spouse’s perception of the patient’s health generally and since the cardiac event matched the patient’s own reports of their health. Perceptions of spouses’ health were similar for physical and emotional health generally and for physical health since the cardiac event. However, the spouses’ self-rating of decline in emotional health since the cardiac event was not perceived in a similar way by the patients. There is evidence in the qualitative data in both Study 1 and Study 2 that lends support to this quantitative finding, with some female spouses reporting that their husbands did not understand the effect that the cardiac event had on them, and expecting that they, the spouses, would remain unaffected by the event.

Given that the Study 2 sample of couples were generally very satisfied with their relationship, and given the moderate positive correlation between emotional health and relationship satisfaction, the finding that patients did not necessarily recognize the full emotional impact of the cardiac event on their spouse begs the question of whether the difference in perceptions of emotional health of the spouse might be even greater in couples with more troubled relationships. In light of the findings in prior research (e.g., Helgeson, 1993a; Mayou et al., 1978; McGee et al., 1994; Michela, 1987; Rose et al., 1996; Stern & Pascale, 1979) that spouses are sometimes more distressed than patients, the possibility that patients may not fully understand the emotional impact of the cardiac event on their spouse needs to be considered as a potential additional stressor on the spouse, over and above the other stresses associated with adjusting to the varied consequences of a cardiac event. This is an area that warrants further consideration in the education / information offered regarding adjustment following a cardiac event.

**9.3.3 Gender and Role Effects**

Quantitative analyses using analyses of covariance (with age as the covariate) found few gender and role effects. However, within couple comparisons of quantitative
data as well as analyses of qualitative data highlighted several areas where patterns of adjustment were somewhat different based on gender and/or role. Study variables examined separately for patients and partners revealed differences in the interplay among variables which were not apparent through analyses of covariance. In particular the difficulty of making lifestyle changes was differentially associated with reported levels of distress, life satisfaction, relationship satisfaction and posttraumatic growth for patients and partners. This is an important finding given that health promoting lifestyle changes are routinely recommended to patients following a cardiac event, and other changes are often made based on individual circumstances. Rather than assessing change difficulty as simply the sum of difficulty ratings (which would automatically make for a strong positive correlation between the number of changes and the difficulty of making changes), change difficulty was assessed as the average rating of items where changes had been made. There were no significant correlations between the number of lifestyle changes made and the reported change difficulty when these were examined separately for patients and partners, indicating that reported difficulty was not simply a function of the number of changes made. In addition, the relationship between patients’ change difficulty ratings and partners’ change difficulty ratings was non-significant indicating that patient reports and partner reports were independent of each other. The finding that partners reported greater difficulty making lifestyle changes and were relatively more impacted in other areas by making these changes is also noteworthy since some of these changes were most likely made for the benefit of the patients and not for the benefit of the partners themselves.

The somewhat different pattern of inter-correlations, found when patients’ and partners’ data were analysed separately, between relationship satisfaction, life satisfaction, perceived support and distress, were interesting in light of the fact that most partners were female. The differing pattern of results lends support to Gilligan’s (1982, 1993) contention that men and women tend to experience relationships differently, and that women’s identity is entwined with a sense of connectedness.

9.3.4 Patient’s Mood Changes

One of the common observations made in the qualitative responses in both Study 1 and Study 2 related to the mood swings experienced by the patient after their cardiac event, and the sometimes adverse effects these mood swings had on other areas of life for patients and partners. The quantitative findings relating perceptions of
patients’ mood change to variability in scores for distress and posttraumatic growth adds further empirical evidence to the qualitative accounts of higher distress or personal growth associated with changes in the patient’s mood. The findings that partners who perceived the patient’s mood had changed for the worse also reported the lowest level of relationship satisfaction and perceived support from their partner also support the qualitative data.

9.3.5 Relationship Satisfaction

Relationship satisfaction in this sample of couples was generally very high. Where changes in relationship were reported, a higher proportion of both patients and partners reported changes for the better than changes for the worse. For patients, perceived changes in the couple’s relationship were not associated with any differences in reported levels of any of the psychosocial outcomes. However, partners who perceived their relationship had changed for the worse also reported the lowest life satisfaction, relationship satisfaction and perceived support from their partner as well as the highest avoidance. Taken together with the findings regarding perceptions of patient’s changes in mood following the cardiac event, these differences highlight the important role that within couple factors can play in individuals’ reports of distress, life satisfaction and posttraumatic growth.

9.3.6 Posttraumatic Growth

Posttraumatic growth has typically been studied from a patient perspective. However, there are now studies emerging which examine posttraumatic growth for spouses as well as patients (Senol-Durak & Ayvasik, 2010; Weiss, 2004). The findings in this thesis suggest that the correlates of posttraumatic growth are somewhat different for patients and partners. An analysis of covariance found that, once age was taken into account, women reported higher posttraumatic growth than men did. This is in keeping with prior findings by Park et al. (1996) and Tedeschi and Calhoun (1996). Posttraumatic growth scores for patients and partners were significantly positively correlated. This is in keeping with Weiss (2004) and Senol-Durak and Ayvasik’s (2010) findings and suggests that couples grow together to some degree. However, for patients, posttraumatic growth was also related to greater support from friends and perceptions of improved mood since the cardiac event. For partners, posttraumatic growth was associated with greater difficulty making lifestyle changes, higher intrusion and
perceptions of patients’ improved mood since the cardiac event. The correlates of posttraumatic growth for partners (but not for patients) were in keeping with the notion that growth is associated with a struggle to adjust to a traumatic event (Tedeschi & Calhoun, 1995, 1996).

Panagopoulou, Triantafyllou, Mitziari, and Benos (2009) found no concordance between patients and partners in the process of benefit finding in their qualitative study of 11 couples following a myocardial infarction. In particular, spouses had difficulty finding benefits. However, the interviews were conducted one day after patients had been transferred from intensive care into a hospital ward, and this may in part account for the lack of compatibility between patients’ and partners’ perceptions. Such a short time after an MI may not allow for adequate reflection of perceived benefits. Taken together, the findings from different studies suggest that posttraumatic growth can occur for both patients and partners, but the pathways to growth may be somewhat different for patients and partners.

9.3.7 Depth of Information

Qualitative data provided a depth of information which confirmed the quantitative results and often provided additional information that was not available from the quantitative data alone. In particular, the qualitative information was useful in identifying areas of particular concern for the respondents which may be indicators of how current services can be improved, or where future research is needed.

There were several themes which emerged in both Study 1 and Study 2. One of the most common concerns was the psychological impact of the cardiac event on the patient, sometimes described as personality changes where the patients had become self-focused, less caring of others’ feelings, even “hateful at times”. Along similar lines, some female partners commented on intimacy problems, which were more related to emotional closeness than sexual dysfunction. Female partners felt largely unprepared for such changes, and did not think they had been given enough information about the potential psychological impact of the cardiac event on the patient and the family.

Some female partners reported protectiveness and worry about their spouse to the point of constant vigilance, resulting in additional stress for themselves. Coyne and Fiske (1992) suggest that overprotectiveness may reflect family members’ efforts to manage their own anxieties and sense of responsibility, and Joekes, van Elderen and Schreurs (2007) found that male cardiac patients felt more overprotected than female
cardiac patients. However, patients’ perceptions of being overprotected by their spouse have been associated with higher anxiety and depression among people who have experienced a heart attack (Clarke et al., 1996). In this sense overprotectiveness and constant vigilance may be detrimental to both spouses and patients.

In a similar vein, there was evidence in both Study 1 and Study 2 of female partners engaging in protective buffering by shielding patients from stressful situations and hiding their own concerns. Once again while this may be done in the best interests of the patient, there is evidence to suggest that this behaviour is associated with higher distress in the partners (Coyne & Smith, 1991; Suls et al., 1997). Hiding information can also lead to perceptions of communication difficulties as evidenced in Study 1 where two spouses reported that their husband had not told them that they had experienced a prior cardiac event. While this may have been an effort by the patients to shield their wives from worry, the wives interpreted it as a communication problem which they found distressing. In this regard, the lack of communication could be interpreted as a form of stonewalling (Gottman, 1991) rather than as protective.

One of the main differences between the qualitative responses in Study 1 and Study 2 related to the expression of negative emotions. Some female partners in Study 1 voiced quite strong negative emotions towards their husbands, largely as a result of feeling unsupported and feeling that their husbands did not fully understand how the cardiac event had affected them. The respondents in Study 2 did not voice these concerns to the same degree. This may be because there were fewer female partners in Study 2, but could also be related to the fact that the respondents in Study 2 were generally adjusting well after the cardiac event and were very satisfied in their relationships. Under these circumstances it is probably less likely that respondents would feel very strong negative emotions towards their partner.

There were a number of themes that were reported across gender and role in both Study 1 and Study 2. These included reports of ongoing difficulties, or alternatively of life essentially remaining unchanged since the cardiac event (more commonly reported in Study 2). There were also general comments on supportiveness of family and helpful medical staff. Another point that was made by several respondents in both Study 1 and Study 2 was the wish that they had taken earlier action. This is an important point in light of continued public education about the importance of prompt action related to suspected cardiac events.
Another common theme was related to perceived benefits or a more positive perspective on life following the cardiac event (reported in both Study 1 and Study 2). Included here were comments on improved personal relationships, improved health and health practices, and a changed attitude towards life and a focus on “what’s important and what you can and can not change”. While some of these points were similar to items in the Posttraumatic Growth Inventory (PTGI) (Tedeschi & Calhoun, 1996), others provided additional information related to perceived benefits of the cardiac event. Calhoun and Tedeschi (2006) note there is variability in the research literature for both quantitative and qualitative data relating to the types and degrees of growth experienced by individuals, raising some questions as to what constitutes growth and whether “cutoff” scores on quantitative measures can be reasonably used as a criteria for growth. Ultimately Calhoun and Tedeschi conclude that while cutoff scores may be useful for the purpose of statistical analyses, only the individual affected by a crisis can determine whether they have experienced personal growth as a result. This is an interesting comment from the developers of the PTGI, and confirms the usefulness of using both qualitative and quantitative measures within the same research project (Clarke, 2004; Todd et al, 2004). In this thesis, the qualitative data supported and added to information that was obtained through quantitative means, not only in relation to posttraumatic growth, but in several other areas as well.

9.4 IMPLICATIONS FOR PRACTICAL APPLICATION

While it was not an initial goal of this research to evaluate the effectiveness of cardiac rehabilitation programs, some of the findings from the current study have practical applications in the area of cardiac rehabilitation courses and the general information that is provided to patients and partners about the potential consequences of a cardiac event.

9.4.1 Specialised Needs of Younger Patients and Partners

Age was a covariate in many of the findings. Several of the analyses indicated that younger people had greater difficulties in adjusting to life after the cardiac event than older people did. Within the qualitative responses, several respondents reported on what they believed were limitations within the information available to them that was appropriate for their younger age. This included information and treatment within
cardiac rehabilitation programs where younger people called for more awareness of what was appropriate for their age. It is interesting to note that prior research has also found younger age to be related to greater adjustment difficulties (e.g., Coyne & Smith 1991; Lukkarinen, 2005; Moore, 1994) and researchers have consistently made suggestions that younger patients and partners may need specialised interventions, yet the current findings would suggest that these needs have not yet been fully met. On this basis one of the major implications of these findings is in ensuring that cardiac rehabilitation programs offer information that is more age appropriate for younger participants. As noted by Stewart et al. (2001), support groups are most effective when group members have similar life circumstances.

9.4.2 Facilitating Lifestyle Changes

Lifestyle changes towards more health promoting behaviours are routinely recommended to patients. While most people see the benefit of these, it should not be assumed that the changes are easy to make. In addition to health promoting behaviours, other changes (work, household tasks, recreation, emotional management) may be made based on individual circumstances. These may or may not be made on a strictly voluntary basis and once again, it should not be assumed that the changes are easy to make. The findings of this study indicated that, while patients and partners made a similar number of changes, partners found the changes more difficult to make. The findings also indicated that the difficulty of making changes was related to life satisfaction for patients and relationship satisfaction for partners. These issues need to be acknowledged in the information / education that is made available to patients and partners. Within cardiac rehabilitation courses, partners’ roles need to be acknowledged and the potential difficulties they are likely to encounter also need to be addressed.

9.4.3 Raising Awareness of the Psychological Impact of a Cardiac Event

One of the common concerns voiced through the qualitative data was the need for more information about the psychological impact of the cardiac event. This concern was voiced by both patients and partners in the context of not having enough information provided about the potential for mood swings, anger, depression and what a few respondents referred to as personality change. Results from this study indicate that mood changes experienced by the patient after the cardiac event can affect both patients and partners in a variety of ways including distress levels, life satisfaction and
relationship satisfaction. It seems that patients and partners are given ample information regarding the medical aspects of heart disease, but often feel ill prepared for the potential psychological consequences. Stolarik et al. (2000) and Halm et al. (2007) reported that spouses found coping with patients’ mood swings and providing emotional support to patients were the most burdensome tasks of caregiving. Moser and Dracup (2004) advocated the provision of information highlighting the potential psychological responses to a cardiac event for both patients and partners. The results from the current study suggest that there is still room for improvement in this area.

9.4.3.1 Longer-Term Support for Patients and Partners

An extension of providing information about the potential for psychological consequences of a cardiac event is the possibility that some patients and partners may need initial or ongoing counseling or emotional support from sources external to their immediate family and friends. While cardiac rehabilitation courses are excellent in the early recovery stages, there do not appear to be support services available in the longer term. During the recruitment phase of this study, the researcher looked for cardiac support groups through the Victorian Health Services department. While there was a division titled “counselling and support” which offered contact details for a wide range of illnesses, traumatic events and ethnic communities, there was not a single entry related to support services offered to cardiac patients or their partners/families. This was surprising given the prevalence of heart disease in the community. The researcher was recently contacted by a 42-year old man who had undergone bypass surgery at the age of 40. He was trying to find a support group for younger people who had undergone heart surgery, but had not been able to find any such group. In speaking to the man and his wife on separate occasions, it was apparent that he was still suffering considerable distress related to his cardiac event, which was affecting many aspects of his life, yet neither he nor his wife were sure who to turn to for help. He did not want formal counseling, but rather was looking to talk to other people like himself with whom he could discuss his experiences. It seems apparent that support services, beyond what is offered through cardiac rehabilitation programs, are needed for patients and their partners.

9.4.3.2 Helping Patients Understand Their Partner’s Experiences

The findings in this study indicated that patients may not fully understand the emotional impact that their cardiac event had on their spouses. This finding was
supported by reports from spouses in the qualitative data from both Study 1 and Study 2 where a number of spouses made reference to feeling that the patients did not understand how the cardiac event had affected them. This is something that could be addressed as part of cardiac rehabilitation programs in the context of the broader impact that a cardiac event can have beyond the immediate physical effects on the patient. On a related issue, several spouses commented that they would like the opportunity to talk about their experiences without sounding as if they were not coping and without feeling they might be burdening a friend or relative. One of the spouses summed this up very succinctly when she said she wanted to talk to “an interested stranger” – not a counselor, but someone she could just talk to. The desire for an interested stranger was related to being able to “mouth off” without having to “keep up a front” and restrain feelings in front of friends or family members. While there are some support groups available online, there seems to be a need for support groups (perhaps separately for patients and partners) where people can meet in person to share their experiences.

### 9.4.4 A “New Normal”

The qualitative data in both Study 1 and Study 2 indicated that several patients and partners felt a sense of loss of their former life and expressed a desire for things to return to “normal”. Keller (1991) reported on similar findings in her qualitative study of one female and eight male CABG surgery patients. She argued that the major process the patients engaged in was “seeking normalcy” which involved engaging in behaviours that the patients thought would restore them to the pre-surgical state. Keller suggested this process had three stages which included perceptions of: surviving, restoring and being fixed. More recently, Eriksson, Asplund and Svedlund (2009) interviewed 15 couples and found that for both patients and partners, “seeking normalisation” or returning to an ordinary life following an MI was one of the themes that emerged from their data.

While this desire to return to normal may seem reasonable at first, Sotile (2003) argues that it may be counterproductive, since what was normal prior to a diagnosis of heart disease was often unhealthy and sometimes life-threatening. Sotile contends that what is needed is a decision to think differently, about health and life in general. He proposes that rather than thinking in terms of returning to an “old normal”, it is more productive to move forward and create and embrace a “new normal”.
This notion of a new normal is a useful one and should be encouraged for both patients and partners. Perhaps it can be incorporated into the information that is offered at hospital discharge and through cardiac rehabilitation. One of the important things that needs to be communicated is that any treatment for heart disease is not a cure, so it cannot be “fixed” as Keller’s (1991) respondents had hoped. As such, heart disease is a condition that needs to be managed, and encouraging patients and partners to think in terms of a new normal may help them to adjust to the changes and challenges they face while incorporating heart disease as part of their lives.

9.5 Limitations of the Study

There are a number of limitations of this study that need to be acknowledged. One of the main aims of the study was to examine the effects of gender and/or role on adjustment patterns following a cardiac event. In spite of many efforts to obtain relatively equal numbers of male and female patients and partners, the number of female patients and male partners was quite small. While analyses of variance, which are fairly robust to unequal numbers, were used to test for gender and/or role effects, very few effects were found. It is possible that the number of female patients and male partners was not sufficiently high to detect possible subtle gender or role effects. On the other hand, given that gender and role effects were detected for avoidance, posttraumatic growth and lifestyle changes, it is possible that the absence of gender or role effects in other analyses reflects accurate findings for this sample of respondents.

Another limitation of the study may be the relatively well adjusted sample. In view of the fact that this sample (particularly the Study 2 couples) had adjusted relatively well to the cardiac event, it is possible that people who were not adversely impacted by the cardiac event were more likely to take part in the study than people for whom the consequences of the cardiac event had been more extreme. It may not be possible to generalise the findings from the current study to the entire population of cardiac patients and partners. However, the fact that there was reasonable variability in responses among a generally well adjusted sample of respondents is useful in examining the areas where further support services or public awareness campaigns may be needed.

The relatively small sample size also needs to be acknowledged. One of the main concerns with studies which have relatively small sample sizes is whether the findings can be generalised to a broader population. Studies with couples are more
difficult to do (Turk, 2000) and often have smaller numbers of respondents. This seems to be particularly the case where qualitative data is collected. The smaller sample sizes reflect the added challenges of having both members of a couple agree to participate in the study, and the sometimes greater time commitment required by both researchers and respondents in collecting qualitative data. In the absence of large sample sizes within particular studies, findings can be generalised if studies with smaller sample sizes show consistency in results. Henwood (2004) discusses “observational multiplicity”, which allows for the use of different data sources as a means of creating a more multi-faceted account of a topic of interest. Similarity of qualitative responses would seem particularly indicative of the ability to generalise findings since the responses are usually derived from open-ended questions and can therefore reasonably be assumed to reflect the important issues for respondents. Eisner (1997) also addresses the issue of generalisability of qualitative findings. He suggests that researchers tend to use findings from qualitative studies analogically or heuristically, and in doing this, ultimately researchers settle for plausibility (Eisner, 1997). Following this reasoning, where similarity of qualitative responses is found between studies, it is plausible that these are indicative of themes that have robust importance for the given sample population.

In a related issue, the notion of validity also needs to be addressed. Within the quantitative data, all measures used were reported to have adequate validity, either as reported by the developers of the standard measures used (see Section 5.4.4.2) or through specific examination of the validity of the scale developed for this thesis (see Appendix D). Validity of qualitative data is sometimes referred to not only as validity, but also as trustworthiness (Maykut & Morehouse, 1994) and soundness, believability, or legitimacy (Henwood, 2004). Maykut and Morehouse (1994) contend that, for qualitative data, detailed descriptions of the research process and outcomes provide readers with the opportunity of assessing the credibility of the study, through consideration of the sample and the specific procedures of data collection and analysis. Todd et al. (2004) argue that if two different methods are used “which have different strengths ad weaknesses, but which yield similar results, it increases out confidence that those results are a true representation of what’s going on, as opposed to a fluke due to flaws in the method used” (p.9). In relation to the qualitative data presented in this thesis, the inclusion of detailed information about data collection and analysis, together with extensive quotes from respondents provide the reader with the basis of judging the
credibility of interpretations. In addition, the similarity of results in this thesis, derived from quantitative and qualitative methods, add to the credibility of the findings.

Finally, there was no evaluation of whether the cardiac event was deemed to be a crisis (or traumatic). It is possible that not all respondents viewed the event in the same way in terms of it being life threatening. Reynolds and Turner (2008) contend that it is important to ask respondents to evaluate the degree to which an event is a crisis in terms of the extent to which the event challenged the participant’s view of themselves, or made the participant question their ability to handle the event. There were no questions similar to these in the current study and perhaps the addition of these may have made further analyses possible. Although information gained from qualitative responses indicates that some respondents viewed the cardiac event as a crisis, in the absence of specific questions about the degree to which the cardiac event was perceived as a crisis, no systematic comparisons could be done between people who perceived the cardiac event as a crisis and those who did not.

9.6 Suggestions for Further Research

The findings from the quantitative data of the current study did not indicate many gender or role differences in psychosocial outcomes following a cardiac event. However, given the relatively small number of female patients and male partners further research with a larger sample of female-patient couples would allow for more powerful analyses which could test whether the current findings were replicated in a larger and more balanced sample. However, the issue of smaller numbers of female-patient couples in research following cardiac events is an ongoing one, and is often cited within limitations of these studies (e.g., Moser & Dracup, 2004; Stewart 2000; Theobald, 1997; Theobald & McMurray, 2004). The fact that there are fewer female cardiac patients than male cardiac patients (AIHW, 2008) and that female cardiac patients tend to be older and sicker than their male counterparts (Jacobs & Sherwood, 1996) may continue to make direct gender comparisons difficult. Rose et al.’s (1996) study matched male and female survivors of MI on age, disease severity and socioeconomic status in order to make gender comparisons for adjustment of patients and partners. However, matching patients on age resulted in a male patient sample that was older than the national norm for male cardiac patients. Thus trying to tease out gender and role effects for cardiac patients and their partners is a worthwhile research endeavour but has
inherent difficulties due to the differences in typical onset of cardiac problems for men and women.

As noted previously, the Study 2 sample seemed to have adjusted well to the cardiac event. It is possible that there was a sampling bias for better adjusted couples due to the respondents being a self-selected sample. Further research would benefit from a sample that is more diverse in terms of the degree of adjustment following a cardiac event. This is a potential recruitment issue as it is possible that couples who are experiencing greater adjustment problems may be less inclined to take part in a study. While this is difficult to determine beforehand, perhaps more diversity would be found with a different recruitment strategy.

Although Study 2 sought the participation of couples, a small number of patients and partners chose to return questionnaires even though their partner did not. The results in Appendix H would suggest that there were some differences in adjustment patterns following the cardiac event between respondents who took part in Study 2 as a couple and those who took part on their own. While the number of “individual” respondents is too small to draw broad generalizations, nonetheless, there appear to be clear patterns within the results that suggest further investigation of responses from couples as compared with individuals might be fruitful. Sherbourne and Hays (1990) reported that married people generally have better mental health outcomes when living with chronic illness (including heart disease) than unmarried people. However, all of the Study 2 respondents had been in a relationship with their partner at the time of the cardiac event and were still in that relationship when they took part in the study, so the differences in adjustment patterns reported in Appendix H cannot be attributed to whether respondents were married or not.

There is additional evidence from the information provided in Study 1 which suggests that individual respondents may be different from respondents who chose to take part in the study as a couple. Study 1 (spouses) had greater variability in responses with some very adverse responses that were not indicated within the responses provided by the couples in Study 2. It is possible that people who chose to take part in the research as a couple were more well adjusted to their circumstances and perhaps more cohesive as a couple than respondents whose partner did not take part in the study. This would be worth following up with further research aimed at examining whether there are consistent differences between individual and couples respondents. While it must be
acknowledged that there are many cardiac patients without partners (single, divorced, widowed) who may have specific needs and possibly qualitatively different experiences from those of cardiac patients with partners, the results in this thesis suggests that where a couple is adjusting to a cardiac event, it is important to consider couples’ experiences in interpreting information about the experiences of patients and partners. Research with couples is more difficult to conduct than research with individuals, and research conducted with couples often has smaller sample sizes than research that is conducted with individuals. If there is potential that people who participate in research as couples may be happier in their relationships and experiencing fewer difficulties, this has implications for the conclusions that can be drawn and for the generalisability of research findings to the broader population. In addition, as previously noted (see Section 7.5), responses from couples cannot be assumed to be statistically independent. It is therefore essential that research conducted with marital dyads use appropriate methods for any statistical analyses, which will take into account the potential non-independence of partners’ data.

A number of prior researchers (e.g., Davies, 2000a, 2000b; Stewart et al., 2000) have found that patients and/or partners commented on either the lack of sufficient information, or lack of appropriate information. Many respondents in the current study also made similar comments. Given that hospital discharge procedures and cardiac rehabilitation courses purport to provide a broad range of information for patients and spouses, the ongoing reports of inadequate information may need further targeted research. It may be the case that there is a genuine need to increase the scope of information made available in the early recovery phase after a cardiac event, but it may also be possible that in the early recovery phase patients and partners may feel overwhelmed by the event and all the attendant procedures and changes that accompany it. If this is the case, they may not “take in” all the information that is made available to them at that time. Cupples (1991) found that information that was provided to patients at a time when their anxiety levels were lower (5 to 14 days pre-operatively) reported higher preoperative knowledge, more positive mood states and more favourable physiological recoveries than patients who were given information one day prior to surgery when their anxiety levels were elevated. In order to avoid overwhelming patients and partners with information, it may be appropriate to stagger the timing of information that is given to optimise the opportunity for the information to be adequately understood. Alternatively, it may be appropriate to have follow-up contact
made by nurses or social workers to check on how patients and partners are adjusting after hospital discharge, or cessation of rehabilitation courses. Davies (2000a) suggests that carers in particular may feel less satisfied with the information they receive because they have fewer opportunities to see health professionals during the patient’s hospitalisation. Future research may examine whether more targeted contact with health professionals or staggered timing of information increases patients’ and partners’ satisfaction with the amount and type of information that is provided to them.

9.7 CONCLUSION

Quantitative and qualitative data were used to examine the impact that a cardiac event had on patients and partners. As suggested by Crotty, (1998), Clarke (2004) and Todd et al. (2004), the use of a mixed-methods approach proved useful, as it allowed for standard statistical analyses to be performed on quantitative data as well as allowing respondents to highlight issues that were important for them through responses to open-ended questions. This use of both statistical analysis and theme identification methods provided the potential for a greater depth of understanding of the impact that a cardiac event can have.

There appeared to be some variability in the adjustment patterns of respondents in Study 1 (spouses) and Study 2 (couples), with respondents in Study 1 reporting a greater variety of adverse responses. This variability between Study 1 and Study 2 may be due to better adjusted couples being more willing to take part in a study than couples who were experiencing difficulties. On average, the respondents in Study 2 seemed to have adjusted reasonably well to the patient’s cardiac event. In a relatively well adjusted sample, perceived areas of difficulty may be particularly useful in highlighting areas where resources and services can be improved and where further research may be beneficial.

Overall, the results suggested a cardiac event necessitates a number of changes in life-style and can have both detrimental and beneficial effects not only on the patients but also on their partners. Both physical and emotional health for patients and their partners were affected by the demands of adjusting to living with heart disease. Furthermore, couples’ relationships were often affected by the cardiac event, and changes in the quality of the relationship were related to individuals’ levels of distress, perceived support, satisfaction with life and relationship satisfaction. This highlights the
importance of considering couples’ experiences in interpreting information about patients and partners.

Once a person is diagnosed with heart disease life is never quite the same as it was before. Both the patient and their partner have a new companion in their lives. Morrow’s (1998) “killer in black pyjamas” becomes a lifelong companion who often challenges long held assumptions, demands many changes, influences psychological well-being and personal relationships, while always having the potential to strike again at any time. This companion can be appeased and controlled to some degree, but can never be fully ignored.
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APPENDICES

Appendix A: Study 1 Questionnaire

Appendix A provides a copy of the questionnaire used for Study 1, the qualitative study with partners of cardiac patients. It is comprised of a disclosure form and the body of the questionnaire.
EXPERIENCES OF SPOUSES OF CARDIAC PATIENTS

I am a student at Swinburne University of Technology, conducting research for my doctoral thesis. The aim of this study is to examine how a cardiac event (e.g., heart attack, angioplasty, bypass surgery etc.) affects the well-being of the patient’s spouse. The reason for conducting this study is that quite a lot is known about the psychological effects of living with heart disease for the patient, but there is less information about the psychological effects on the patient’s spouse. It is hoped that results from this study will help develop a better understanding of the experiences of spouses living with heart disease, which can lead to improvements in the services available to them.

To participate in this study, you must have a good ability to read and write in English. Your participation in this study includes filling in this questionnaire, which asks about your experiences following your partner’s cardiac event. It will take about 30 – 45 minutes to complete. Filling in the questionnaire is the only thing you will be asked to do for the study.

Your participation in this study is voluntary. If you do not wish to take part, you are under no obligation to do so. If you decide to take part in the study, but later change your mind, you are free to withdraw at any time.

Your decision to take part or not, or to withdraw, will not affect in any way, your participation in the Cardiac Rehabilitation Program, or your spouse’s routine medical treatment or participation in the Cardiac Rehabilitation Program. Return of this questionnaire will constitute your consent to participate.

In the event that research data from this study is published, no individual will be identifiable from the data. Participants’ names or any identifying material will not be published or provided to any other researcher.

If you have any questions or would like more information about this study, please feel free to contact me, Gordana Bruce (ph. 9214 -5783) or my supervisor, Dr. Elizabeth Hardie (ph. 9214-5297)

If you have a query that my supervisor or I have not been able to satisfy, or if you have any complaint about the way you have been treated during the study, please write to: The Chair, Human Research Ethics Committee, Swinburne University of Technology, PO Box 218, Hawthorn, Vic. 3122

If participation in this study highlights any issues that you find distressing or that you wish to discuss with a trained counsellor, please contact the Psychology Centre on (03) 9214-8653 or Relationships Australia on 1300-364-277 (toll-free Australia wide)

Please tear off and keep this sheet for your information.

Thank you for your participation.

Gordana Bruce (ph. 9214-5783)
The following questions are designed to provide some information about you, (spouse of cardiac patient). The details are confidential, and are very important for the analysis of the results.

**Age:** __________ years

**Gender:** Female               Male

**Nationality:**

I consider myself to be: _________________ (please specify nationality/ethnic group)

**Education:**

The highest level of education I have is:

- [ ] Completed primary school
- [ ] Completed secondary school
- [ ] Completed tertiary course
- [ ] Completed post-graduate course

**Employment Status:**

BEFORE my spouse’s most recent cardiac event, my employment status was best described as:

- [ ] Employed full-time
- [ ] Employed part-time
- [ ] Unemployed – looking for work
- [ ] Home duties/child care
- [ ] Retired
- [ ] Other

If ‘other’, please specify ________________

AT THE MOMENT my employment status is best described as:

- [ ] Employed full-time
- [ ] Employed part-time
- [ ] Unemployed – looking for work
- [ ] Home duties/child care
- [ ] Retired
- [ ] Other

If ‘other’, please specify ________________

**Family Structure:**

a) My spouse and I have _________ children (please specify number)


c) Do you care for any other persons in your home? Yes No

If yes, please specify: ____________________________________________________________
Personal Experience

Briefly describe what it has been like for you following your spouse’s most recent cardiac event (please continue overleaf if not enough space here).
Daily Routines/ Life Style

Have you made any changes to your daily routines and/or life style since your spouse’s most recent cardiac event? (eg. work, diet, exercise, smoking, etc)

Yes                 No

If ‘yes’, please specify (continue overleaf if not enough space here)

______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
Received Support

1. In relation to your spouse’s heart condition, what have people said or done that you have found helpful?

________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________

2. In relation to your spouse’s heart condition, what have people said or done that you have found unhelpful?

________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
What would you say are your five most important needs AT THE MOMENT?

1. (most important) _______________________________________________________________________
2. _____________________________________________________________________________________
3. _____________________________________________________________________________________
4. _____________________________________________________________________________________
5. _____________________________________________________________________________________

The following questions are designed to provide some information about your spouse. The details are anonymous and confidential, and are very important for the analysis of the results. Please circle the response corresponding to your answer for each question.

**Patient Age:** __________ years  **Patient Gender:** Female  Male

**Most Recent Cardiac Event**

1. My spouse has had: (tick more than one if applicable)
   - [ ] Angiogram
   - [ ] Angioplasty
   - [ ] Coronary Artery Graft Surgery (Bypass Surgery)
   - [ ] Heart attack (myocardial infarction)
   - [ ] Other

If ‘other’, please specify
____________________________________________________________________________________

2. How long ago? _________________ weeks (please specify)

**Cardiac History**

Has your spouse previously experienced a cardiac event? (please circle)

   No   Yes

If ‘yes’, please specify event(s) ___________________________________________________________

How long ago? __________________________________________________________________________
Mood Change

1. Have you noticed any change in your spouse’s moods or temperament since his/her cardiac event?
   
   Yes                              No

2. If ‘Yes’, please specify
   
   __________________________________________________________
   
   __________________________________________________________
   
   __________________________________________________________

3. How has this change affected you?
   
   __________________________________________________________
   
   __________________________________________________________
   
   __________________________________________________________
   
   __________________________________________________________

Relationship Change

1. Have you noticed any change in your relationship with your spouse since his/her cardiac event?
   
   Yes                              No

2. If ‘Yes’, please specify
   
   __________________________________________________________
   
   __________________________________________________________
   
   __________________________________________________________

3. How has this change affected you?
   
   __________________________________________________________
   
   __________________________________________________________
   
   __________________________________________________________
   
   __________________________________________________________
Looking Back

1. What would you have found most helpful at the time of your spouse’s cardiac event?

_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________

2. What did you find most difficult/stressful at this time?

_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
Do you have any other comments?

_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________ 

Thank you for your participation

Gordana Bruce
Appendix B: Study 2 Advertising Materials

Study 2 was advertised through several sources. Accordingly, a variety of advertising materials were created to maximise the potential of recruiting a community sample of cardiac patients and their partners. This appendix provides brief descriptions of all advertising materials used, followed by copies of all materials described.

B.1 Bookmarks

Bookmarks measuring 21cm x 8cm were created on coloured card. One side of the bookmark had the Swinburne University logos, the project title and the web address for online surveys. The other side of the bookmark had some information about the study, inclusion criteria, the researcher’s contact details and the web address for online surveys.

B.2 Flyers

A4 sized flyers were created on coloured card which included the project title, information about the project, inclusion criteria, the researcher’s and supervisor’s contact details and the web address for online surveys.

B.3 Swinburne Media Release

The Swinburne University media department issued a media release and used the same information for a story in the Swinburne Alumni News.

B.4 Advertisements for First Year Psychology Students

Advertisements were created for the first year psychology students’ Research Experience Program (REP). Details of the REP are provided in the participant recruitment procedures (Appendix G). An online announcement and lecture announcement were created for this purpose.

B.5 Internet Posts

Advertising on the Internet was done with messages posted on a number of web sites designed as online support groups for cardiac patients and partners. The message posted was essentially the same as that on the bookmark, and included information
about the project, inclusion criteria, the researcher’s contact details and the web address for online surveys.

The website created for the recruitment phase of Study 2 was listed as Couples Heart Research and included some background information about the prevalence of heart disease and the nature of heart disease research. It also included information about the current study, an invitation to participate and separate links labeled for patient and partner online surveys.
My name is Gordana Bruce and I am conducting research towards my doctoral degree in Health Psychology. I am under the supervision of Dr Elizabeth Hardie and Dr Bruce Findlay in the Faculty of Life and Social Sciences at Swinburne University of Technology in Victoria. My study examines the experiences (both positive and negative) of patients and their partners after a cardiac event (such as heart attack or bypass surgery). I am looking for both male and female patients, and their partners, to participate in the study. Results from this study will help develop a better understanding of the experiences of couples living with heart disease, which in turn, can lead to improvements in the services available to them. Further information and online surveys are available at: www.couplesheartresearch.com. If paper-based surveys are preferred, please e-mail me at: gbruce@swin.edu.au or call (03) 9214-5783 for full details.
Flyer (1)

Heart Disease Research – Volunteer Couples Needed

Do you know someone who has had a heart attack or bypass surgery?

Health Psychology researchers from Swinburne University of Technology are conducting a study into the impact that a cardiac event (such as a heart attack or bypass surgery) has on couples.

We are calling for patients and their partners to each complete an anonymous and confidential written survey that will take about 30 minutes. The survey asks about the experiences (both positive and negative) of living with heart disease, from patient and partner perspectives.

We invite both male and female patients and their partners to take part in this study if:

- The couple was living together at the time of the cardiac event and are still living together now
- Both people are over 21 years old
- Both people are fluent in English

To receive more details about the study, or for paper-based copies of the patient and partner questionnaires, please call or email Swinburne University of Technology researchers:
Ms Gordana Bruce ((03) 9214-5783; gbruce@swin.edu.au) or
Dr. Elizabeth Hardie (ehardie@swin.edu.au )

More information and online surveys are also available at: www.couples.heart.research.com
Although coronary heart disease (CHD) remains the number one cause of death for both men and women in developed countries such as Australia, America and Britain, the number of deaths from CHD has been steadily decreasing. At the same time however, according to a report by the British Heart Foundation published in June 2004, there are now more Britons than ever living with heart disease as an on-going medical condition. This is partly because of better diagnostic and treatment techniques, and partly because of increased rates of obesity, which is a known risk factor for CHD. This trend is also likely to be true for Australia and America, where people have similar lifestyles.

While the decrease in death rates from CHD is good news for the community, living with heart disease can have a significant impact on the well-being and day-to-day life of both the patient and their partner. There has been a lot of research which has primarily focused on the negative consequences of heart disease for male patients, with somewhat less research devoted to female patients and partners. Currently there is very little research examining the potential for positive outcomes for either patients or partners following a cardiac event.

Health Psychology researchers from Swinburne University of Technology are conducting a study into the impact that a cardiac event (such as a heart attack, angioplasty or bypass surgery) has on couples. Results from this study will help develop a better understanding of the experiences of couples living with heart disease, which in turn, can lead to improvements in the services available to them. We are calling for patients and their partners to each complete an anonymous and confidential written survey that will take about 30 minutes. The survey asks about the experiences (both positive and negative) of living with heart disease, from patient and partner perspectives.

We invite both male and female patients, and their partners, to take part in this study if:
• The cardiac event happened within the past 2 years
• The couple was living together at the time of the cardiac event and are still living together now
• Both people are over 21 years old
• Both people are fluent in English

To receive more details about the study, or for paper-based copies of the patient and partner questionnaires, please call or email Swinburne University of Technology researchers: Ms Gordana Bruce ((03) 9214-5783; gbruce@swin.edu.au) or

More information and online surveys are also available at: www.coupleshearthresearch.com
Swinburne Media release

Heart disease’s silent impact: new study

Over three million Australians have been touched by heart disease and while research on its effects on the patient abound, much less is known about the impact that living with heart disease has on the partners of cardiac patients, or on the couple’s relationship.

These questions will be the focus of a new study exploring the impact of heart disease on couples’ lives, to be led by Swinburne health psychology PhD candidate Gordana Bruce. The study will examine the experiences of both the cardiac patient and their partner, with study results intended to pave the way for more support services not only for patients, but also for their partners, who according to Bruce’s previous research, can feel left behind.

Bruce’s Honours thesis explored issues that partners face in the aftermath of a cardiac event. The most common experiences and emotions partners encountered were shock and disbelief, anxiety and a heightened awareness of health issues.

Partners felt isolated by their experience, and many women surveyed expressed a need for more social support.

“Patients’ partners, especially women, feel the need to soldier on, and many expressed difficulty talking about their experiences with family and friends. The women wanted to be able to talk to an ‘interested stranger’, with whom they could discuss their experiences without the need of keeping up a brave front, unlike with family or friends where many felt they may be adding to their worries”.

A quarter of the women surveyed perceived their relationship with their partner to have changed “for the worse” after a heart disease diagnosis, while none of the male partners surveyed reported this. Bruce said some partners reported that their relationship had improved and that their lives were more balanced after the cardiac event. A few went as far as to say it was the best thing that had happened to them as a couple. Currently there is little research into the positive benefits resulting from a cardiac event, and this is another area of focus in Bruce’s study.

Bruce is now calling for couples in which one partner has experienced a ‘cardiac event’ such as a heart attack, angioplasty or bypass surgery in the past two years, to talk about their experiences and emotions for her PhD research.

Interested patients and their partners can complete an anonymous and confidential survey which explores lifestyle changes since the event, current social support networks, general well-being and relationship satisfaction. The survey will take about 30 minutes and is available online at the web address below, or on paper if preferred.
“I hope this research will help in developing a better understanding of the issues that are important for both patients and their partners. In this way we can develop better support services for couples living with heart disease.”

People interested in participating in Gordana Bruce’s survey should log on to www.couplesheartresearch.com or call (03) 9214 4395 or email gbruce@swin.edu.au

ENDS
First Year Students’ Research Experience program: Online Announcement

Couples living with heart disease: The impact of a cardiac event on patients and their partners.

Investigators: Gordana Bruce and Dr. Elizabeth Hardie

Although coronary heart disease (CHD) remains the number one cause of death for both men and women in developed countries such as Australia, America and Britain, the number of deaths from CHD has been steadily decreasing. At the same time however, according to a report by the British Heart Foundation published in June 2004, there are now more Britons than ever living with heart disease as an on-going medical condition. This is partly because of better diagnostic and treatment techniques, and partly because of increased rates of obesity, which is a known risk factor for CHD. This trend is also likely to be true for Australia and America, where people have similar lifestyles.

While the decrease in death rates from CHD is good news for the community, living with heart disease can have a significant impact on the well-being and day-to-day life of both the patient and their partner. There has been a lot of research which has primarily focused on the negative consequences of heart disease for male patients, with somewhat less research devoted to female patients and partners. Currently there is very little research examining the potential for positive outcomes for either patients or partners following a cardiac event.

My study examines the experiences (both positive and negative) of patients and their partners after a cardiac event (such as heart attack, angioplasty or bypass surgery). I am looking for both male and female patients, and their partners, to participate in the study. Results from this study will help develop a better understanding of the experiences of couples living with heart disease, which in turn, can lead to improvements in the services available to them. Further information and online patient and partner surveys are available at: www.couplesheartresearch.com

You do not need to be directly involved with the cardiac event to receive REP credit – you can direct someone you know who fulfills the criteria (e.g. relatives, friends) to the above website. Thirty minutes REP credit will be given for each questionnaire (i.e. 60 minutes REP if both patient and partner respond). However, you will need to ask the respondent(s) to print the last page of the questionnaire and give it to you to attach to your REP slip.
First Year Students’ Research experience Program: 
Lecture Announcement

REP Project

Living with heart disease: The impact of a cardiac event on patients and their partners

Researcher: Gordana Bruce

Participants Required: 40 couples in which one member has experienced a cardiac event (e.g. heart attack, angioplasty, bypass surgery) in the past two years.

Participation Time: 30 minutes per person, i.e. 60 minutes if both members of the couple return questionnaires

Special Note:
You do not need to be directly involved with the cardiac event – you can pass the questionnaires on to someone you know who fulfills the criteria (e.g. relatives, friends).

30 minutes REP credit will be given for each questionnaire returned. Remember to fill in your Student ID details on both questionnaires in the packet before you pass them on, to ensure REP credit can be recorded for you.

This research examines the experiences (both positive and negative) of male and female cardiac patients, and their partners, following a cardiac event. Interested patients and their partners can complete an anonymous and confidential survey, which explores lifestyle changes since the event, current social support networks, general well-being and relationship satisfaction. The survey will take about 30 minutes per person. Separate reply-paid envelopes are provided for the return of patient and partner questionnaires.

Please take a questionnaire packet if you know someone who is in a relationship, and who has had a cardiac event within the past two years.

Thank You

Gordana Bruce (gbruce@swin.edu.au; Mobile: xxx-xxx-xxx)
Volunteer couples needed for heart disease research

My name is Gordana Bruce. I am conducting research towards my doctoral degree in Psychology, under the supervision of Dr Elizabeth Hardie and Dr Bruce Findlay in the Faculty of Life and Social Sciences at Swinburne University of Technology in Victoria, Australia (www.swin.edu.au). My study examines the experiences (both positive and negative) of patients and their partners after a cardiac event, such as heart attack or bypass surgery. I am also interested in how a cardiac event affects the couple’s relationship.

I am looking for both male-patient and female-patient couples to fill in a survey, which will take about 30 minutes to complete. The survey has been approved by the Research Ethics Committee at Swinburne University of Technology and asks about your experiences of living with heart disease. Both members of a couple are invited to take part in this research if: you or your partner have experienced a cardiac event in the past 2 years; you were living with your partner at the time of the event and are still living with your partner now; you are both fluent in English; and you are both over 21 years old. The results of this research will help in designing programs that can help better meet the needs of couples living with heart disease. Complete the survey on line at www.couplesheartresearch.com or email me for more information at: gbruce@swin.edu.au

Please pass this on to anyone you know who may be interested in taking part in this study. Thank you.

Hello everyone. I am visiting this site to let you know about some research that is being conducted by Swinburne University in Australia (www.swin.edu.au). The study is asking both male-patient and female-patient couples who are living with heart disease about their experiences (both positive and negative) following a cardiac event such as a heart attack, angioplasty or bypass surgery.

I have posted a message here previously, and would like to thank those people who have done the surveys already.

If you have not done the survey already, if either you or your partner have experienced a cardiac event within the past 2 years, and you would like to find out about participating in the study using an online survey, please visit the research website at www.couplesheartresearch.com for full information and links to the relevant surveys. If you have any questions about the study, please feel free to e-mail me directly at gbruce@swin.edu.au

Thank you for taking the time to read this message.

Gordana Bruce, Faculty of Life and Social Sciences
Swinburne University of Technology
Victoria, Australia
Background Information

While coronary heart disease (CHD) remains the number one cause of death for both men and women in developed countries such as Australia, America and Britain, the number of deaths from CHD has been steadily decreasing. At the same time however, according to a report by the British Heart Foundation published in June 2004, there are now more Britons than ever living with heart disease. This is partly due to better diagnostic and treatment techniques, and partly due to increased rates of obesity, a known risk factor for CHD. This trend is also likely to be true for Australia and America, where people have similar lifestyles.

The decrease in death rates from CHD is good news for the community. However, living with heart disease can have a significant impact on the well-being and day-to-day life of both the patient and their partner. There has been a lot of research which has primarily focused on the negative consequences of heart disease for male patients, with somewhat less research devoted to female patients and partners. Currently there is very little research examining the potential for positive outcomes for either patients or partners following a cardiac event.

The Current Study

My name is Gordana Bruce and I am conducting research towards my doctoral degree in Psychology, through the Faculty of Life and Social Sciences at Swinburne University of Technology in Victoria, Australia. My research is being supervised by Dr. Elizabeth Hardie and Dr Bruce Findlay.

My study examines the impact that a cardiac event (such as a heart attack, angioplasty or bypass surgery) has on couples. Results from this study will help develop a better understanding of the experiences of couples living with heart disease, which in turn, can lead to improvements in the services available to them. I am looking for patients and their partners to each complete a survey that will take 30-45 minutes. The survey asks about the experiences (both positive and negative) of living with heart disease, from patient and partner perspectives.
Both male and female patients, and their partners, are invited to take part if: the cardiac event happened within the past 2 years; you were living together at the time of the event and are still living together now; you are over 21 years of age and you are fluent in English.

You can complete the survey online using one of the links below. Some additional information about the study is provided before the initiation of the questionnaire. Your responses will remain anonymous and confidential.

If you would prefer to fill in the questionnaire on paper, please e-mail me at gbruce@swin.edu.au for further details.

Before You Start the Online Survey

Please work out with your partner a “couple identification code”. Your couple identification (ID) code is very important for the research, but will only be known to you. Both members of a couple need to have the same couple ID code.

Your couple ID code should be no more than 8 characters long. Your code can include numbers, letters or a combination of both. Some suggestions are:

- A name that both of you know (maiden name; child’s name; pet’s name)
- A number or date that is important to both of you
- Some combination of the above

For example: My partner and I might decide to use the name of our first pet and the number on our letter box. Our couple ID code would be SPOT456

When you have worked out your couple ID code, please fill in the rest of the survey without discussing your answers with your partner.

If you have any questions or need more information, please e-mail Gordana at gbruce@swin.edu.au

Thank you for your interest in this study.

**Patients** Click Here

[Patient Survey](#)

**Partners** Click Here

[Partner Survey](#)
Appendix C: Study 2 Questionnaire Packets

The questionnaire packets distributed for Study 2 included an introductory letter for couples, and questionnaire booklets for patients and partners. A disclosure sheet was included in each booklet, with the suggestion that respondents remove the page for future reference. This appendix provides a copy of the letter and the patient and partner booklets.
Dear Volunteer Couple,

Thank you for your interest in this study. Please find enclosed in this packet:

- A **green** questionnaire booklet for the person who has had a cardiac event (**Patient**)
- A **gold** questionnaire booklet for the partner of the person who has had a cardiac event (**Partner**)
- Two reply paid envelopes (one for each booklet)

Before you start filling in the questionnaire booklet, please read the information about the study (p. 1) and the instructions for making up your “couple identification code” (p. 2). This couple ID code will only be known to you, but it is very important that both booklets have the same code on them.

Once you have decided on your couple ID code, please fill in the rest of the booklet without discussing your answers with your partner. Please return each booklet separately in the envelopes provided.

Thank you again for your interest. Your participation is greatly appreciated, and will help to develop programs to better meet the needs of couples living with heart disease.

Yours Sincerely

(Ms) Gordana Bruce  
PhD Researcher  
Faculty of Life and Social Sciences  
Swinburne University of Technology  
Ph: (03) 9214-5783  
E-mail: gbruce@swin.edu.au
Couples living with heart disease
The impact of a cardiac event on patients and their partners

Patient Booklet
I am a student at Swinburne University of Technology, conducting research for my doctoral thesis. My study aims to examine how a cardiac event (e.g., heart attack, angioplasty, bypass surgery etc.) affects the well-being of patients and their partners. I am also interested in the effect that a cardiac event has on a couple’s relationship. Finally, I am interested in whether patients and their partners differ in their experiences of living with heart disease. Results from this study will help develop a better understanding of the experiences of couples living with heart disease, which in turn, can lead to improvements in the services available to them.

You are invited to participate in this study if: you have experienced a cardiac event; you were living with your partner at the time of the cardiac event and are still living with your partner now; you are over 21 years of age and you are fluent in English. If you agree to participate you will be asked to complete some questions about your experiences and feelings since the cardiac event and your satisfaction with your relationship. Please keep in mind that there are no right or wrong answers to any questions. Your first response is usually the best one, so do not spend too much time on any one question. While some questions may seem similar, it is important to answer them all. The questionnaire is the only thing you will be asked to do for the study. It will take about 30 minutes to complete.

Your participation in this study is voluntary. If you do not wish to take part, you are under no obligation to do so. If you decide to take part in the study, but later change your mind, you are free to withdraw at any time. Your decision to take part or not, or to withdraw, will not affect in any way any medical treatment being received, or your participation in any Cardiac Rehabilitation Program(s). Return of this questionnaire will constitute your consent to participate.

Participation in the study is completely anonymous and confidential. In the event that research data from this study is published, only group averages will be used, and no individual will be identifiable from the data.

This research conforms to the principles set out in the Swinburne University of Technology Policy on Research Ethics and the NHMRC guidelines as specified in the National statement on Ethical Conduct on Research Involving Humans. If you have any further questions about this study, please contact my supervisor, Dr. Elizabeth Hardie (03) 9214-5297 or me, Gordana Bruce (03) 9214-5783.

If you have any queries or concerns that my supervisor or I have not been able to satisfy, contact: The Chair, SBS Research Ethics Committee, Faculty of Life and Social Sciences, Mail H24, Swinburne University of Technology, PO Box 218, Hawthorn, Vic. 3122, Australia.

If you have any complaint about the way you were treated during the study, please write to: The Chair, Human Research Ethics Committee, Swinburne University of Technology, PO Box 218, Hawthorn, Vic. 3122, Australia.

If participation in this study highlights any issues that you find distressing or that you wish to discuss with a trained counsellor, contact the Psychology Centre on (03) 9214-8653 or Relationships Australia on 1300-364-277 (toll-free Australia wide).

Please tear off and keep this sheet for your information.
Thank you for your participation.
Gordana Bruce (Ph: 03-9214-5783)
Patient Questionnaire

Couple Identification Code

It is very important that we get responses from both partners in a relationship. To do this, both members of a couple need to have the same identification (ID) code. To ensure your privacy, you can make up your own couple ID code that only you and your partner know. In this way, your responses will remain anonymous and confidential.

Your couple ID code should be no more than 8 characters long. Your code can include numbers, letters or a combination of both. Some suggestions are:
- A name that both of you know (maiden name; child’s name; pet’s name)
- A number or date that is important to both of you
- Some combination of the above

For example: My partner and I might decide to use the name of our first pet and the number on our letter box. Our couple ID code would be SPOT456

Please fill in your couple identification code.

Please make sure your partner uses this same couple ID code on their questionnaire

Please fill in the rest of the questionnaire on your own, without discussing your answers with your partner.
The following questions are designed to provide some information about you (cardiac patient). The details are confidential, and are very important for the analysis of the results.

**Age:** ___________ years

**Sex:** (Please circle)  Female       Male

**Nationality:**
I consider myself to be: _______________ (please specify your nationality/ethnic group)

**Source of Information About this Study:**
I found out about this study from:
- My cardiologist or cardiac surgeon
- My local doctor or general practitioner
- Heartbeat Victoria
- Cardiac Rehab
- A student at Swinburne University
- Newspaper advertisement
- Other
If ‘other’, please specify _______________________

**Education:**
The highest level of education I have is:
- Completed primary/elementary school
- Completed secondary/high school
- Completed tertiary course (e.g. trade; university/college)
- Completed post-graduate course
**Employment Status:**

BEFORE my most recent cardiac event, my employment status was best described as:
- [ ] Paid, full-time employment
- [ ] Paid, part-time employment
- [ ] Not in paid employment – looking for work
- [ ] Voluntary, unpaid employment
- [ ] Home duties/child care
- [ ] Retired
- [ ] Other
If ‘other’, please specify _______________

AT THE MOMENT my employment status is best described as:
- [ ] Paid, full-time employment
- [ ] Paid, part-time employment
- [ ] Not in paid employment – looking for work
- [ ] Voluntary, unpaid employment
- [ ] Home duties/child care
- [ ] Retired
- [ ] Other
If ‘other’, please specify _______________

**Family Structure:**

d) My partner and I have been together for ________ (years)

e) My partner and I have ________ children (please specify number)

f) Age of children? ________, ________, ________, ________, ________, ________.

g) Do you regularly care for any other person(s) such as a parent or disabled relative?

   Yes           No

If yes, please specify: ___________________________________________
Your Most Recent Cardiac Event

1. I have had: (tick more than one if applicable)
   - Angiogram
   - Angioplasty
   - Coronary Artery Graft Surgery (Bypass Surgery)
   - Myocardial Infarction (heart attack)
   - Other

   If ‘other’, please specify
   ________________________________

2. How long ago? ___________ months ___________ weeks (please specify)

Your Cardiac History

Have you previously experienced a cardiac event? (please circle)

No                                    Yes

If ‘yes’, please specify event(s) ________________________________

How long ago? ________________________________

Cardiac Rehabilitation

Did you attend any Cardiac Rehabilitation sessions?

- Yes
- No – I was unable to attend Cardiac Rehabilitation sessions
- No – I chose not to attend Cardiac Rehabilitation sessions
- No – Cardiac Rehabilitation sessions were not offered to me

If ‘yes’, how many? ________________

Did your partner attend any Cardiac Rehabilitation sessions with you?

- Yes
- No – my partner was unable to attend Cardiac Rehabilitation sessions
- No – my partner chose not to attend Cardiac Rehabilitation sessions
- No – Cardiac Rehabilitation sessions were not offered to my partner

If ‘yes’, how many? ________________
**Physical Health**

1. How would you rate your **physical** health generally throughout your life? (please circle)
   - Excellent
   - Very good
   - Average
   - Poor
   - Very poor

2. How would you rate your **physical** health SINCE your most recent cardiac event? (please circle)
   - Excellent
   - Very good
   - Average
   - Poor
   - Very poor

3. Do have any ongoing/chronic illness, disability or injury? (If yes, please list)
   - Yes
   - No

____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________

**Emotional Health**

1. How would you rate your **emotional** health generally throughout your life? (please circle)
   - Excellent
   - Very good
   - Average
   - Poor
   - Very poor

2. How would you rate your **emotional** health SINCE your most recent cardiac event? (please circle)
   - Excellent
   - Very good
   - Average
   - Poor
   - Very poor

3. Do you have any ongoing/chronic condition? (If yes, please list)
   - Yes
   - No

____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
Below is a list of everyday activities. For each activity, please circle whether you have increased, decreased or not changed the activity as a result of your most recent cardiac event. For the activities where you have made changes, using the following scale, please fill in the last column, to indicate how difficult making the change has been for you:

1 = Making the change has been Very Easy
2 = Making the change has been Easy
3 = Making the change has been Hard
4 = Making the change has been Very Hard

<table>
<thead>
<tr>
<th></th>
<th>Activity</th>
<th>Increased</th>
<th>Decreased</th>
<th>No Change</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Following a ‘heart healthy’ diet (eg. low cholesterol; low fat; low salt)</td>
<td>Increased</td>
<td>Decreased</td>
<td>No Change</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>Exercising regularly</td>
<td>Increased</td>
<td>Decreased</td>
<td>No Change</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>Smoking (eg. cigarettes, cigars, pipe)</td>
<td>Increased</td>
<td>Decreased</td>
<td>No Change</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>Drinking alcohol (eg wine, beer, spirits)</td>
<td>Increased</td>
<td>Decreased</td>
<td>No Change</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>Working in paid employment</td>
<td>Increased</td>
<td>Decreased</td>
<td>No Change</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Working in unpaid / voluntary employment</td>
<td>Increased</td>
<td>Decreased</td>
<td>No Change</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>Doing household chores (eg washing clothes, ironing, vacuuming)</td>
<td>Increased</td>
<td>Decreased</td>
<td>No Change</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>Working in the garden (eg weeding, mowing, pruning)</td>
<td>Increased</td>
<td>Decreased</td>
<td>No Change</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>Driving the car</td>
<td>Increased</td>
<td>Decreased</td>
<td>No Change</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>Spending time engaged in personal interests/hobbies</td>
<td>Increased</td>
<td>Decreased</td>
<td>No Change</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11</td>
<td>Spending time with friends</td>
<td>Increased</td>
<td>Decreased</td>
<td>No Change</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12</td>
<td>Spending time alone</td>
<td>Increased</td>
<td>Decreased</td>
<td>No Change</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13</td>
<td>Dealing with stressful situations myself</td>
<td>Increased</td>
<td>Decreased</td>
<td>No Change</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14</td>
<td>Helping my partner deal with stressful situations</td>
<td>Increased</td>
<td>Decreased</td>
<td>No Change</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15</td>
<td>Managing finances (eg household, business)</td>
<td>Increased</td>
<td>Decreased</td>
<td>No Change</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>16</td>
<td>Managing household repairs / maintenance</td>
<td>Increased</td>
<td>Decreased</td>
<td>No Change</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Personal Experience

Briefly describe what life has been like for you following your most recent cardiac event.
Below is a list of comments made by people after stressful life events. Please think about your most recent cardiac event as you read each item, and circle how frequently each comment was true for you DURING THE PAST 7 DAYS INCLUDING TODAY.

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I thought about it when I didn’t mean to.</td>
</tr>
<tr>
<td>2</td>
<td>I avoided letting myself get upset when I thought about it or was reminded of it.</td>
</tr>
<tr>
<td>3</td>
<td>I tried to remove it from memory</td>
</tr>
<tr>
<td>4</td>
<td>I had trouble falling asleep or staying asleep</td>
</tr>
<tr>
<td>5</td>
<td>I had waves of strong feeling about it</td>
</tr>
<tr>
<td>6</td>
<td>I had dreams about it</td>
</tr>
<tr>
<td>7</td>
<td>I stayed away from reminders of it</td>
</tr>
<tr>
<td>8</td>
<td>I felt as if it hadn’t happened or it wasn’t real</td>
</tr>
<tr>
<td>9</td>
<td>I tried not to talk about it</td>
</tr>
<tr>
<td>10</td>
<td>Pictures about it popped into my head</td>
</tr>
<tr>
<td>11</td>
<td>Other things kept making me think about it</td>
</tr>
<tr>
<td>12</td>
<td>I was aware that I still had a lot of feelings about it, but I didn’t deal with them</td>
</tr>
<tr>
<td>13</td>
<td>I tried not to think about it</td>
</tr>
<tr>
<td>14</td>
<td>Any reminder brought back feelings about it</td>
</tr>
<tr>
<td>15</td>
<td>My feelings about it were kind of numb</td>
</tr>
</tbody>
</table>
Please indicate, using the scale below, the extent to which you agree or disagree with the following statements.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>very strongly disagree</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>very strongly agree</strong></td>
<td></td>
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</tbody>
</table>

**In relation to partner:**
- My partner gives me the emotional support I need
- I share my joys and sorrows with my partner
- I can talk about my problems with my partner
- My partner really cares about my feelings
- My partner is willing to help me make decisions
- My partner gives me practical support when I ask for it

**In relation to family:**
- My family gives me the emotional support I need
- I share my joys and sorrows with my family
- I can talk about my problems with my family
- My family is a real source of comfort to me
- My family is willing to help me make decisions
- I can count on my family to help me when things go wrong

**In relation to friends:**
- My friends give me the emotional support I need
- I share my joys and sorrows with my friends
- I can talk about my problems with my friends
- My friends are a real source of comfort to me
- My friends are willing to help me make decisions
- I can count on my friends to help me when things go wrong

Do you have any other source(s) of practical and/or emotional support not mentioned above?
- Yes
- No

If ‘yes’ please specify
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
**SWLS**

Below are five statements with which you may agree or disagree. Using the scale below, indicate your agreement with each item by circling the appropriate number.

1 = STRONGLY DISAGREE  
2 = DISAGREE  
3 = SLIGHTLY DISAGREE  
4 = NEITHER AGREE NOR DISAGREE  
5 = SLIGHTLY AGREE  
6 = AGREE  
7 = STRONGLY AGREE

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4. In most ways my life is close to my ideal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>The conditions of my life are excellent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>I am satisfied with my life</td>
<td></td>
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<tr>
<td>4</td>
<td>So far I have gotten the important things I want in life</td>
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<tr>
<td>5</td>
<td>If I could live my life over, I would change almost nothing</td>
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</tbody>
</table>

Which of the following statements best describes your relationship with your partner BEFORE your most recent cardiac event? (Please tick one).
- [ ] Extremely happy and thriving
- [ ] Successful overall
- [ ] Somewhat troubled but not needing professional help
- [ ] Troubled and needing professional help
- [ ] So troubled I/we got professional help

Which of the following statements best describes your relationship with your partner SINCE your most recent cardiac event? (Please tick one).
- [ ] Extremely happy and thriving
- [ ] Successful overall
- [ ] Somewhat troubled but not needing professional help
- [ ] Troubled and needing professional help
- [ ] So troubled I/we are getting professional help
For each of the following statements please circle the response that best describes the relationship you have with your partner RIGHT NOW.

1 = Very Strongly Disagree  
2 = Strongly Disagree  
3 = Somewhat Disagree  
4 = Neutral  
5 = Somewhat Agree  
6 = Strongly Agree  
7 = Very Strongly Agree

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<thead>
<tr>
<th></th>
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<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>We have a good relationship</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>My relationship with my partner is very stable</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3</td>
<td>Our relationship is strong</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>4</td>
<td>My relationship with my partner makes me happy</td>
<td></td>
<td></td>
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<tr>
<td>5</td>
<td>I really feel like <em>part of a team</em> with my partner</td>
<td></td>
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<tr>
<td>6</td>
<td>My partner meets my needs</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>7</td>
<td>I love my partner</td>
<td></td>
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</tr>
<tr>
<td>8</td>
<td>My relationship meets my expectations</td>
<td></td>
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</tr>
<tr>
<td>9</td>
<td>Everything considered, I am satisfied with my relationship</td>
<td></td>
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</tbody>
</table>
The statements below refer to changes some people experience following a crisis. For each statement, using the following scale, please circle the degree to which this change occurred in your life as a result of your most recent cardiac event:

<table>
<thead>
<tr>
<th>Degree of change experienced</th>
<th>Not at all</th>
<th>Very small degree</th>
<th>Small degree</th>
<th>Moderate degree</th>
<th>Great degree</th>
<th>Very great degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 = I did not experience this change as a result of my cardiac event</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1 = I experienced this change to a very small degree as a result of my cardiac event</td>
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</tr>
<tr>
<td>2 = I experienced this change to a small degree as a result of my cardiac event</td>
<td></td>
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</tr>
<tr>
<td>3 = I experienced this change to a moderate degree as a result of my cardiac event</td>
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</tr>
<tr>
<td>4 = I experienced this change to a great degree as a result of my cardiac event</td>
<td></td>
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</tr>
<tr>
<td>5 = I experienced this change to a very great degree as a result of my cardiac event</td>
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</tr>
</tbody>
</table>

1. My priorities about what is important in life.
2. An appreciation for the value of my own life.
3. I developed new interests.
5. A better understanding of spiritual matters.
6. Knowing that I can count on people in times of trouble.
7. I established a new path for my life.
8. A sense of closeness with others.
9. A willingness to express my emotions.
10. Knowing I can handle difficulties.
11. I’m able to do better things with my life.
12. Being able to accept the way things work out.
13. Appreciating each day.
14. New opportunities are available which wouldn’t have been otherwise.
15. Having compassion for others.
16. Putting effort into my relationships.
17. I’m more likely to try to change things which need changing.
18. I have stronger religious faith.
19. I discovered that I’m stronger than I thought I was.
20. I learned a great deal about how wonderful people are.
21. I accept needing others.
Mood Change

1. Have you noticed any change in your moods or temperament since your cardiac event?
   - No Change
   - Yes – for the Better
   - Yes – for the Worse

2. If ‘Yes’, please specify what kind of change(s) you have noticed, and how the change(s) affected you.

____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
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____________________________________________________________________________

Relationship Change

1. Have you noticed any change in your relationship with your partner since your cardiac event?
   - No Change
   - Yes – for the Better
   - Yes – for the Worse

2. If ‘Yes’, please specify what kind of change(s) you have noticed, and how the change(s) affected you.

____________________________________________________________________________
____________________________________________________________________________
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Looking Back
Can you think of any information and/or support that you would have found helpful at the time of your cardiac event, which you did not receive when you needed it?
____________________________________________________________________________
____________________________________________________________________________
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The following questions are designed to provide some information about your partner. The details are anonymous and confidential, and are very important for the analysis of the results. Please circle the response corresponding to your answer for each question.

Partner’s Age: _______ years  Partner’s Gender: Female  Male

Your Partner’s Physical Health

1. How would you rate your partner’s **physical** health generally throughout his/her life BEFORE your most recent cardiac event? (please circle)
   
   Excellent  Very good  Average  Poor  Very poor

2. How would you rate your partner’s **physical** health SINCE your most recent cardiac event? (please circle)
   
   Excellent  Very good  Average  Poor  Very poor

Your Partner’s Emotional Health

1. How would you rate your partner’s **emotional** health generally throughout his/her life BEFORE your most recent cardiac event? (please circle)
   
   Excellent  Very good  Average  Poor  Very poor

2. How would you rate your partner’s **emotional** health SINCE your most recent cardiac event? (please circle)
   
   Excellent  Very good  Average  Poor  Very poor
Do you have any other comments?

____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________

Thank you for your participation

If you know of another couple who may be interested in taking part in this survey, please pass on the enclosed bookmark with my contact details and information about the study.

Thank you
Gordana Bruce
Couples living with heart disease
The impact of a cardiac event on patients and their partners

Partner Booklet
COUPLES LIVING WITH HEART DISEASE:
THE IMPACT OF A CARDIAC EVENT ON PATIENTS AND PARTNERS

I am a student at Swinburne University of Technology, conducting research for my doctoral thesis. My study aims to examine how a cardiac event (eg. heart attack, angioplasty, bypass surgery etc.) affects the well-being of patients and their partners. I am also interested in the effect that a cardiac event has on a couple’s relationship. Finally, I am interested in whether patients and their partners differ in their experiences of living with heart disease. Results from this study will help develop a better understanding of the experiences of couples living with heart disease, which in turn, can lead to improvements in the services available to them.

You are invited to participate in this study if: your partner has experienced a cardiac event; you were living with your partner at the time of the cardiac event and are still living with your partner now; you are over 21 years of age and you are fluent in English. If you agree to participate you will be asked to complete some questions about your experiences and feelings since the cardiac event and your satisfaction with your relationship. Please keep in mind that there are no right or wrong answers to any questions. Your first response is usually the best one, so do not spend too much time on any one question. While some questions may seem similar, it is important to answer them all. The questionnaire is the only thing you will be asked to do for the study. It will take about 30 minutes to complete.

Your participation in this study is voluntary. If you do not wish to take part, you are under no obligation to do so. If you decide to take part in the study, but later change your mind, you are free to withdraw at any time. Your decision to take part or not, or to withdraw, will not affect in any way any medical treatment being received, or your participation in any Cardiac Rehabilitation Program(s). Return of this questionnaire will constitute your consent to participate.

Participation in the study is completely anonymous and confidential. In the event that research data from this study is published, only group averages will be used, and no individual will be identifiable from the data.

This research conforms to the principles set out in the Swinburne University of Technology Policy on Research Ethics and the NHMRC guidelines as specified in the National statement on Ethical Conduct on Research Involving Humans. If you have any further questions about this study, please contact my supervisor, Dr. Elizabeth Hardie (03) 9214-5297 or me, Gordana Bruce (03) 9214-5783.

If you have any queries or concerns that my supervisor or I have not been able to satisfy, contact: The Chair, SBS Research Ethics Committee, Faculty of Life and Social Sciences, Mail H24, Swinburne University of Technology, PO Box 218, Hawthorn, Vic. 3122, Australia.

If you have any complaint about the way you were treated during the study, please write to: The Chair, Human Research Ethics Committee, Swinburne University of Technology, PO Box 218, Hawthorn, Vic. 3122, Australia

If participation in this study highlights any issues that you find distressing or that you wish to discuss with a trained counsellor, contact the Psychology Centre on (03) 9214-8653 or Relationships Australia on 1300-364-277 (toll-free Australia wide)

Please tear off and keep this sheet for your information.
Thank you for your participation.
Gordana Bruce (Ph: 03-9214-5783)
Partner Questionnaire

Couple Identification Code

It is very important that we get responses from both partners in a relationship. To do this, both members of a couple need to have the same identification (ID) code. To ensure your privacy, you can make up your own couple ID code that only you and your partner know. In this way, your responses will remain anonymous and confidential.

Your couple ID code should be no more than 8 characters long. Your code can include numbers, letters or a combination of both. Some suggestions are:

- A name that both of you know (maiden name; child’s name; pet’s name)
- A number or date that is important to both of you
- Some combination of the above

For example: My partner and I might decide to use the name of our first pet and the number on our letter box. Our couple ID code would be SPOT456

Please fill in your couple identification code.

Please make sure your partner uses this same couple ID code on their questionnaire

Please fill in the rest of the questionnaire on your own, without discussing your answers with your partner.
The following questions are designed to provide some information about you (partner of cardiac patient). The details are confidential, and are very important for the analysis of the results.

**Age:** ____________ years

**Sex:** (Please circle)  Female       Male

**Nationality:**
I consider myself to be: ________________ (please specify your nationality/ethnic group)

**Source of Information About this Study:**
I found out about this study from:
- [ ] My partner’s cardiologist or cardiac surgeon
- [ ] My local doctor or general practitioner
- [ ] Heartbeat Victoria
- [ ] Cardiac rehab
- [ ] A student at Swinburne University
- [ ] Newspaper advertisement
- [ ] Other
  If ‘other’, please specify _______________________

**Education:**
The highest level of education I have is:
- [ ] Completed primary/elementary school
- [ ] Completed secondary/ high school
- [ ] Completed tertiary course (e.g. trade; university/college)
- [ ] Completed post-graduate course
**Employment Status:**

BEFORE my partner’s most recent cardiac event, my employment status was best described as:

- [ ] Paid, full-time employment
- [ ] Paid, part-time employment
- [ ] Not in paid employment – looking for work
- [ ] Voluntary, unpaid employment
- [ ] Home duties/child care
- [ ] Retired
- [ ] Other

If ‘other’, please specify ________________

AT THE MOMENT my employment status is best described as:

- [ ] Paid, full-time employment
- [ ] Paid, part-time employment
- [ ] Not in paid employment – looking for work
- [ ] Voluntary, unpaid employment
- [ ] Home duties/child care
- [ ] Retired
- [ ] Other

If ‘other’, please specify ________________

**Family Structure:**

a) My partner and I have been together for __________ (years)

b) My partner and I have _________ children (please specify number)

c) Ages of children? ________, ________, ________, ________, ________,

d) Do you regularly care for any other person(s) such as a parent or disabled relative?

Yes   No

If yes, please specify:______________________________________
Physical Health

1. How would you rate your physical health generally throughout your life? (please circle)
   - Excellent
   - Very good
   - Average
   - Poor
   - Very poor

2. How would you rate your physical health SINCE your partner’s most recent cardiac event? (please circle)
   - Excellent
   - Very good
   - Average
   - Poor
   - Very poor

3. Do you have any ongoing/chronic illness, disability or injury? (If yes, please list)
   - Yes
   - No

_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________

Emotional Health

1. How would you rate your emotional health generally throughout your life? (please circle)
   - Excellent
   - Very good
   - Average
   - Poor
   - Very poor

2. How would you rate your emotional health SINCE your partner’s most recent cardiac event? (please circle)
   - Excellent
   - Very good
   - Average
   - Poor
   - Very poor

3. Do you have any ongoing/chronic condition? (If yes, please list)
   - Yes
   - No

_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
Below is a list of everyday activities. For each activity, please circle whether you have increased, decreased or not changed the activity as a result of your partner’s most recent cardiac event. For the activities where you have made changes, using the following scale, please fill in the last column, to indicate how difficult making the change has been for you:

1 = Making the change has been Very Easy
2 = Making the change has been Easy
3 = Making the change has been Hard
4 = Making the change has been Very Hard

<table>
<thead>
<tr>
<th></th>
<th>Activity</th>
<th>Increased</th>
<th>Decreased</th>
<th>No Change</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Following a ‘heart healthy’ diet (eg. low cholesterol; low fat; low salt)</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>Exercising regularly</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>Smoking (eg. cigarettes, cigars, pipe)</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>4</td>
<td>Drinking alcohol (eg wine, beer, spirits)</td>
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<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>5</td>
<td>Working in paid employment</td>
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<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>6</td>
<td>Working in unpaid / voluntary employment</td>
<td></td>
<td></td>
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<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<td>7</td>
<td>Doing household chores (eg washing clothes, ironing, vacuuming)</td>
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<td>8</td>
<td>Working in the garden (eg weeding, mowing, pruning)</td>
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<td>9</td>
<td>Driving the car</td>
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<td>2</td>
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<td>4</td>
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<tr>
<td>10</td>
<td>Spending time engaged in personal interests/hobbies</td>
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<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<td>11</td>
<td>Spending time with friends</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
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<td>4</td>
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<tr>
<td>12</td>
<td>Spending time alone</td>
<td></td>
<td></td>
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<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13</td>
<td>Dealing with stressful situations myself</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14</td>
<td>Helping my partner deal with stressful situations</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15</td>
<td>Managing finances (eg household, business)</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>16</td>
<td>Managing household repairs / maintenance</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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**Personal Experience**

Briefly describe what life has been like for you following your partner’s most recent cardiac event.

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Below is a list of comments made by people after stressful life events. **Please think about your partner’s most recent cardiac event as you read each item**, and circle how frequently each comment was true for you **DURING THE PAST 7 DAYS INCLUDING TODAY**.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I thought about it when I didn’t mean to.</td>
<td>Not at all</td>
</tr>
<tr>
<td>2</td>
<td>I avoided letting myself get upset when I thought about it or was reminded of it.</td>
<td>Not at all</td>
</tr>
<tr>
<td>3</td>
<td>I tried to remove it from memory</td>
<td>Not at all</td>
</tr>
<tr>
<td>4</td>
<td>I had trouble falling asleep or staying asleep</td>
<td>Not at all</td>
</tr>
<tr>
<td>5</td>
<td>I had waves of strong feeling about it</td>
<td>Not at all</td>
</tr>
<tr>
<td>6</td>
<td>I had dreams about it</td>
<td>Not at all</td>
</tr>
<tr>
<td>7</td>
<td>I stayed away from reminders of it</td>
<td>Not at all</td>
</tr>
<tr>
<td>8</td>
<td>I felt as if it hadn’t happened or it wasn’t real</td>
<td>Not at all</td>
</tr>
<tr>
<td>9</td>
<td>I tried not to talk about it</td>
<td>Not at all</td>
</tr>
<tr>
<td>10</td>
<td>Pictures about it popped into my head</td>
<td>Not at all</td>
</tr>
<tr>
<td>11</td>
<td>Other things kept making me think about it</td>
<td>Not at all</td>
</tr>
<tr>
<td>12</td>
<td>I was aware that I still had a lot of feelings about it, but I didn’t deal with them</td>
<td>Not at all</td>
</tr>
<tr>
<td>13</td>
<td>I tried not to think about it</td>
<td>Not at all</td>
</tr>
<tr>
<td>14</td>
<td>Any reminder brought back feelings about it</td>
<td>Not at all</td>
</tr>
<tr>
<td>15</td>
<td>My feelings about it were kind of numb</td>
<td>Not at all</td>
</tr>
</tbody>
</table>
Please indicate, using the scale below, the extent to which you agree or disagree with the following statements.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
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<tbody>
<tr>
<td>very strongly disagree</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>very strongly agree</td>
</tr>
</tbody>
</table>

**In relation to partner:**

<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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</tr>
</thead>
<tbody>
<tr>
<td>My partner gives me the emotional support I need</td>
<td></td>
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<tr>
<td>I share my joys and sorrows with my partner</td>
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<tr>
<td>I can talk about my problems with my partner</td>
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<tr>
<td>My partner really cares about my feelings</td>
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<tr>
<td>My partner is willing to help me make decisions</td>
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<tr>
<td>My partner gives me practical support when I ask for it</td>
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</tbody>
</table>

**In relation to family:**

<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>My family gives me the emotional support I need</td>
<td></td>
<td></td>
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<tr>
<td>I share my joys and sorrows with my family</td>
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<tr>
<td>I can talk about my problems with my family</td>
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<tr>
<td>My family is a real source of comfort to me</td>
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<td>My family is willing to help me make decisions</td>
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<tr>
<td>I can count on my family to help me when things go wrong</td>
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</table>

**In relation to friends:**

<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>My friends give me the emotional support I need</td>
<td></td>
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<tr>
<td>I share my joys and sorrows with my friends</td>
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<tr>
<td>I can talk about my problems with my friends</td>
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<tr>
<td>My friends are a real source of comfort to me</td>
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<tr>
<td>My friends are willing to help me make decisions</td>
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<tr>
<td>I can count on my friends to help me when things go wrong</td>
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</tbody>
</table>

Do you have any other source(s) of practical and/or emotional support not mentioned above?

Yes

No

If ‘yes’ please specify

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
SWLS

Below are five statements with which you may agree or disagree. Using the scale below, indicate your agreement with each item by circling the appropriate number.

1 = STRONGLY DISAGREE
2 = DISAGREE
3 = SLIGHTLY DISAGREE
4 = NEITHER AGREE NOR DISAGREE
5 = SLIGHTLY AGREE
6 = AGREE
7 = STRONGLY AGREE

1 In most ways my life is close to my ideal
2 The conditions of my life are excellent
3 I am satisfied with my life
4 So far I have gotten the important things I want in life
5 If I could live my life over, I would change almost nothing

Which of the following statements best describes your relationship with your partner BEFORE his/her most recent cardiac event? (Please tick one).

- Extremely happy and thriving
- Successful overall
- Somewhat troubled but not needing professional help
- Troubled and needing professional help
- So troubled I/we got professional help

Which of the following statements best describes your relationship with your partner SINCE his/her most recent cardiac event? (Please tick one).

- Extremely happy and thriving
- Successful overall
- Somewhat troubled but not needing professional help
- Troubled and needing professional help
- So troubled I/we are getting professional help
RSS

For each of the following statements please circle the response that best describes the relationship you have with your partner RIGHT NOW.

1 = Very Strongly Disagree  
2 = Strongly Disagree  
3 = Somewhat Disagree  
4 = Neutral  
5 = Somewhat Agree  
6 = Strongly Agree  
7 = Very Strongly Agree

<table>
<thead>
<tr>
<th></th>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>We have a good relationship</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>My relationship with my partner is very stable</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Our relationship is strong</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>My relationship with my partner makes me happy</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>I really feel like <em>part of a team</em> with my partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>My partner meets my needs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>I love my partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>My relationship meets my expectations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Everything considered, I am satisfied with my relationship</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>
The statements below refer to changes some people experience following a crisis. For each statement, using the following scale, please circle the degree to which this change occurred in your life as a result of your partner’s most recent cardiac event:

0 = I did not experience this change as a result of my partner’s cardiac event
1 = I experienced this change to a very small degree as a result of my partner’s cardiac event
2 = I experienced this change to a small degree as a result of my partner’s cardiac event
3 = I experienced this change to a moderate degree as a result of my partner’s cardiac event
4 = I experienced this change to a great degree as a result of my partner’s cardiac event
5 = I experienced this change to a very great degree as a result of my partner’s cardiac event

<table>
<thead>
<tr>
<th>Degree of change experienced</th>
<th>Not at all</th>
<th>Very small degree</th>
<th>Small degree</th>
<th>Moderate degree</th>
<th>Great degree</th>
<th>Very great degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 My priorities about what is important in life.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2 An appreciation for the value of my own life.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3 I developed new interests.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4 A feeling of self-reliance.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5 A better understanding of spiritual matters.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6 Knowing that I can count on people in times of trouble.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7 I established a new path for my life.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8 A sense of closeness with others.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9 A willingness to express my emotions.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10 Knowing I can handle difficulties.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11 I’m able to do better things with my life.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12 Being able to accept the way things work out.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13 Appreciating each day.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14 New opportunities are available which wouldn’t have been otherwise.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>15 Having compassion for others.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>16 Putting effort into my relationships.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>17 I’m more likely to try to change things which need changing.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>18 I have stronger religious faith.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>19 I discovered that I’m stronger than I thought I was.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>20 I learned a great deal about how wonderful people are.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>21 I accept needing others.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<td>5</td>
</tr>
</tbody>
</table>
The following questions are designed to provide some information about your partner (the cardiac patient). The details are anonymous and confidential, and are very important for the analysis of the results.

**Cardiac Patient’s Age:** ____ years  **Cardiac Patient’s Gender:** Female   Male

**Your Partner’s Physical Health**

1. How would you rate your partner’s *physical* health generally throughout his/her life BEFORE the most recent cardiac event? (please circle)
   - Excellent
   - Very good
   - Average
   - Poor
   - Very poor

2. How would you rate your partner’s *physical* health SINCE his/her most recent cardiac event? (please circle)
   - Excellent
   - Very good
   - Average
   - Poor
   - Very poor

**Your Partner’s Emotional Health**

1. How would you rate your partner’s *emotional* health generally throughout his/her life BEFORE the most recent cardiac event? (please circle)
   - Excellent
   - Very good
   - Average
   - Poor
   - Very poor

2. How would you rate your partner’s *emotional* health SINCE his/her most recent cardiac event? (please circle)
   - Excellent
   - Very good
   - Average
   - Poor
   - Very poor

**Your Partner’s Most Recent Cardiac Event**

1. My partner has had: (tick more than one if applicable)
   - ☐ Angiogram
   - ☐ Angioplasty
   - ☐ Coronary Artery Graft Surgery (Bypass Surgery)
   - ☐ Myocardial Infarction (heart attack)
   - ☐ Other

   If ‘other’, please specify  ____________________________________________________________

2. How long ago? ___________ months   ___________weeks (please specify)
**Partner’s Cardiac History**

Has your partner previously experienced a cardiac event? (please circle)

- No
- Yes

If ‘yes’, please specify event(s) ___________________________________________

How long ago? ________________________________________________________

**Cardiac Rehabilitation**

Has your partner attended any Cardiac Rehabilitation sessions?

- Yes
- No – my partner was unable to attend Cardiac Rehabilitation sessions
- No – my partner chose not to attend Cardiac Rehabilitation sessions
- No – Cardiac Rehabilitation sessions were not offered to my partner

If ‘yes’, how many? _________________

Have you attended any Cardiac Rehabilitation sessions with your partner?

- Yes
- No – I was unable to attend Cardiac Rehabilitation sessions
- No – I chose not to attend Cardiac Rehabilitation sessions
- No – Cardiac Rehabilitation sessions were not offered to me

If ‘yes’, how many? _________________
Partner’s Mood Change

1. Have you noticed any change in your partner’s moods or temperament since his/her cardiac event?

<table>
<thead>
<tr>
<th>No Change</th>
<th>Yes – for the Better</th>
<th>Yes – for the Worse</th>
</tr>
</thead>
</table>

2. If ‘Yes’, please specify what kind of change(s) you have noticed, and how the change(s) affected you.

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

Relationship Change

1. Have you noticed any change in your relationship with your partner since his/her cardiac event?

<table>
<thead>
<tr>
<th>No Change</th>
<th>Yes – for the Better</th>
<th>Yes – for the Worse</th>
</tr>
</thead>
</table>

2. If ‘Yes’, please specify what kind of change(s) you have noticed, and how the change(s) affected you.

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
Looking Back

Can you think of any information and/or support that you would have found helpful at the time of your partner’s cardiac event, which you did not receive when you needed it?

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

Do you have any other comments?

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

Thank you for your participation

If you know of another couple who may be interested in taking part in this survey, please pass on the enclosed bookmark with my contact details and information about the study.

Thank you
Gordana Bruce
Appendix D: Rationale and Factor and Item Analyses for the Relationship Satisfaction Scale

D.1 Rationale for Scale Development

The Relationship Satisfaction Scale was developed for the current study. The scale is comprised of nine items which are based on five items from the Quality Marriage Index (QMI) (Norton, 1983) and four items from the Relationship Assessment Scale (RAS) (Hendrick, 1988).

The QMI (Norton, 1983) is a six-item self report measure of global marital satisfaction (e.g., “We have a good [relationship]”). Norton provides instructions for scoring the first five items on a 7-point scale ranging from 1 (very strongly disagree) to 7 (very strongly agree). The sixth item “[degree of happiness, everything considered]” is scored from 1 (very unhappy) to 10 (perfectly happy), where “the midpoint, ‘happy’, represents the degree of happiness which most people get from marriage” (p. 146). Norton reported high intercorrelations among the six items, ranging from .68 to .86, but Cronbach’s alpha coefficient was not provided. Because the total score obtained by summing the six items was positively skewed, Norton provided a transformation that made the total score normally distributed. Heyman et al., (1994) were interested in the psychometric properties of the scale before transformation, and therefore used a six-point rating scale for all six items, and used the total score (without transformation) to represent marital satisfaction. Using this method, Heyman et al. reported Cronbach’s alpha of .97.

Although the QMI (Norton, 1983) has been used in several studies in its original 6-item form (Berg, Trost, Schneider, & Allison, 2001; Feeney, 2002; Fincham, Harold, & Gano-Phillips, 2000; Schumm et al., 1986), the wording and scoring of the sixth item [degree of happiness everything considered] seems problematic in a number of ways from a psychometric perspective. Firstly, it is more psychometrically sound to have all items within a measure using the same rating scale, rather than having different rating scales for different items. Thus Heyman et al.’s (1994) choice to change the rating scale for the sixth item in their study was prudent. Secondly, the wording of this item is problematic. It asks about happiness, which is already covered in item 4 (“my relationship with my partner makes me happy”), but it also asks the respondents to compare themselves to “most people”,...
without providing any norm for happy couples. While the first five items require respondents to make judgements about particular characteristics of their relationship (e.g., good, strong, stable), the sixth item requires a comparison with “most people”. This item does not seem to fit well with the remainder of the items because it is essentially asking about a different thing. This point is supported by the fact that item six has among the lowest correlations with the remainder of the items in the scale (Norton, p.147). Finally, while Norton argues that this item meets his criteria of preference and commendation, the original wording of the item does not really meet these criteria because it requires a comparison with “most people”. While it is preferable and commendable that a relationship is happy (covered in item 4), it is questionable whether it is preferable and commendable that a relationship should be happier than that of “most people”. For these reasons, the sixth item from the QMI was not included in the current study. In preference, four items from Hendrick’s (1988) RAS were modified and included in the new measure devised for the current study, because they met Norton’s criteria for preference and commendation and because they tapped into additional characteristics that were deemed as important in a quality relationship.

The RAS (Hendrick, 1988) is a seven-item general measure of relationship satisfaction (e.g. “How well does your partner meet your needs?”). Hendrick provides instructions for scoring the items from 1 (low satisfaction) to 5 (high satisfaction), however this appears to be only a guide as the items require different responses types for each item. For example “how well does your partner meet your needs?” cannot be answered using the low/high satisfaction descriptors, and would require different response descriptors form the item “in general, how satisfied are you with your relationship”. Nonetheless, Hendrick reports good reliability (Cronbach’s alpha = .86) and good validity, with the RAS correlating as expected with other measures of relationship satisfaction and discriminating between couples who stay together and couples who part.

For the current study, the four RAS items relating to “needs”, “love”, “expectations”, and “satisfaction” were reworded so that they could be answered on the 7-point scale ranging from 1 (very strongly disagree) to 7 (very strongly agree) (“my partner meets my needs”; “I love my partner”; “my relationship meets my expectations”; “everything considered, I am satisfied with my relationship”).
D.2 Factor Analysis

Since this scale was designed as a general measure of relationship satisfaction, it was expected that factor analysis would show all nine items loading on a single factor. Using Maximum Likelihood (ML) extraction, the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity indicated that items were sufficiently correlated for a factor analysis (KMO = 0.89; $\chi^2 (36) = 922.72$, $p < .0001$). Only one factor had an Eigenvalue > 1, and this factor accounted for 80.75% of variance. Communalities for the items ranged from .54 to .92 indicating that between 54% and 92% of the variance in the items was accounted for by the factor. Factor loadings and item reliabilities are presented in Table D 1.

Table D -1

**Factor Loading, Corrected Item Total Correlation (CITC) and Alpha if Item Deleted (AIID) for the Relationship Satisfaction Scale Items**

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Item</th>
<th>Corrected Item-Total Correlation</th>
<th>Alpha if Item Deleted</th>
<th>Factor Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>We have a good relationship</td>
<td>.937</td>
<td>.968</td>
<td>.961</td>
</tr>
<tr>
<td>2</td>
<td>My relationship with my partner is very stable</td>
<td>.921</td>
<td>.969</td>
<td>.953</td>
</tr>
<tr>
<td>3</td>
<td>Our relationship is strong</td>
<td>.906</td>
<td>.969</td>
<td>.931</td>
</tr>
<tr>
<td>4</td>
<td>My relationship with my partner makes me happy</td>
<td>.928</td>
<td>.969</td>
<td>.937</td>
</tr>
<tr>
<td>5</td>
<td>I really feel like <em>part of a team</em> with my partner</td>
<td>.876</td>
<td>.971</td>
<td>.873</td>
</tr>
<tr>
<td>6</td>
<td>My partner meets my needs</td>
<td>.864</td>
<td>.972</td>
<td>.872</td>
</tr>
<tr>
<td>7</td>
<td>I love my partner</td>
<td>.726</td>
<td>.976</td>
<td>.738</td>
</tr>
<tr>
<td>8</td>
<td>My relationship meets my expectations</td>
<td>.916</td>
<td>.969</td>
<td>.906</td>
</tr>
<tr>
<td>9</td>
<td>Everything considered, I am satisfied with my relationship</td>
<td>.897</td>
<td>.970</td>
<td>.897</td>
</tr>
</tbody>
</table>

$N = 69$

The Goodness-of-fit Test was significant ($\chi^2 (27) = 144.60$, $p < .0001$) indicating violation of the normality assumption. Fabrigar, Wegener, MacCallum and
Strahan (1999) note that the primary limitation of ML extraction is the assumption of multivariate normality, but nonetheless prefer its use over other extraction methods unless the non-normality is severe (skew > 2; kurtosis > 7 as suggested by West, Finch & Curran, 1995). As discussed in the Study 2 results (Chapter 6), the distribution for RSS was negatively skewed, but it did not fit the criteria for ‘severe’ as suggested by West et al. so ML extraction was retained.

The results in Table D 1 show that all items loaded on to a single factor as expected. The pattern of results suggests that all items contributed meaningfully to the scale since all CITC and factor loadings are high. Alpha if Item Deleted indicates that there would be a very small improvement if item 7 (love) was removed, but this difference is marginal since Cronbach’s alpha for RSS is .974.

**D.3 Inter-item Correlations**

While there were no statistically problematic items, the pattern of results for item 7 suggests that participants responded slightly differently to this item in comparison to the other items. It had the lowest communality (.544), CITC and factor loading as well as marginally increasing alpha if removed. Item means and inter-item correlations for the RSS items were analysed in order to examine the relationships between the items in more detail. Means, standard deviations and correlations for all pairs of RSS items are shown in Table D 2.

As seen in Table D 2, while all items had relatively high means and low standard deviations, item 7 had the highest mean and least variability in responses. Paired sample *t*-tests were performed between item 7 and each of the other items. Mean scores for item 7 were significantly higher than mean scores for all of the other items. The difference was significant at *p* < .001 for items 3 and 8, and at *p* < .0001 for all other items. Among the other item pairs, the mean score for item 9 was significantly higher than mean scores for items 4 and 6 (*p* < .05) and the mean score for item 3 was significantly higher that the mean score for item 6 (*p* < .05). Item 7 was also consistently the item with the lowest relationship to other items, with correlations ranging from .56 (with item 6) to .76 (with item 9). By contrast item 2 yielded among the highest correlations ranging from .66 (with item 7) to .95 (with item 1).
Table D-2

Means, Standard Deviations and Inter-item Correlations for the Relationship Satisfaction Scale

<table>
<thead>
<tr>
<th>Item Number</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Good</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Stable</td>
<td></td>
<td>.95</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Strong</td>
<td></td>
<td>.92</td>
<td>.92</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Happy</td>
<td></td>
<td>.88</td>
<td>.91</td>
<td>.84</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Team</td>
<td></td>
<td>.81</td>
<td>.78</td>
<td>.77</td>
<td>.87</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Needs</td>
<td></td>
<td>.79</td>
<td>.84</td>
<td>.76</td>
<td>.90</td>
<td>.83</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Love</td>
<td></td>
<td>.72</td>
<td>.66</td>
<td>.73</td>
<td>.63</td>
<td>.64</td>
<td>.56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Expectations</td>
<td></td>
<td>.86</td>
<td>.80</td>
<td>.84</td>
<td>.85</td>
<td>.86</td>
<td>.86</td>
<td>.72</td>
<td></td>
</tr>
<tr>
<td>9 Satisfied</td>
<td></td>
<td>.86</td>
<td>.81</td>
<td>.83</td>
<td>.83</td>
<td>.82</td>
<td>.76</td>
<td>.76</td>
<td>.88</td>
</tr>
<tr>
<td>Mean</td>
<td></td>
<td>5.94</td>
<td>5.88</td>
<td>6.00</td>
<td>5.80</td>
<td>5.90</td>
<td>5.71</td>
<td>6.45</td>
<td>5.91</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td></td>
<td>1.50</td>
<td>1.61</td>
<td>1.45</td>
<td>1.71</td>
<td>1.54</td>
<td>1.71</td>
<td>1.27</td>
<td>1.41</td>
</tr>
</tbody>
</table>

Note 1: All correlations are significant at $p < .0001$, $N = 69$

Note 2: Only key words from the items are presented here. Full wording of items is given in Table D 1.

Among the other item pairs, the strongest correlation was between the perception of a relationship being good and being stable. Happiness in the relationship was most strongly correlated with the perception of the relationship being stable and a partner meeting one’s needs. Endorsement of satisfaction (everything considered) was most strongly associated with the relationship meeting one’s expectations.

Since it appeared that people responded somewhat differently to the love item in comparison to other items, partial correlations were computed for the other items while controlling for love to examine whether there were any differences in the pattern of results. These partial correlations are presented in Table D 3.
Table D-3

Partial Correlations for RSS Items Controlling for the Love Item

<table>
<thead>
<tr>
<th>Item Number</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Good</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Stable</td>
<td>.91</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Strong</td>
<td>.82</td>
<td>.85</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Happy</td>
<td>.79</td>
<td>.84</td>
<td>.71</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Team</td>
<td>.66</td>
<td>.62</td>
<td>.59</td>
<td>.78</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Needs</td>
<td>.67</td>
<td>.75</td>
<td>.62</td>
<td>.84</td>
<td>.73</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Expectations</td>
<td>.70</td>
<td>.62</td>
<td>.65</td>
<td>.72</td>
<td>.76</td>
<td>.79</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 Satisfied</td>
<td>.69</td>
<td>.64</td>
<td>.62</td>
<td>.70</td>
<td>.68</td>
<td>.61</td>
<td>.74</td>
<td></td>
</tr>
</tbody>
</table>

Note 1: All correlations are significant at $p < .0001$, $N = 69$

Note 2: Only key words from the items are presented here. Full wording of items is given in Table D 1.

As expected partial correlations among the RSS items were lower when the love item was controlled. However, the overall pattern of correlations among item pairs generally remained the same. The only notable difference was in relation to the correlations for the relationship meeting one’s expectations. The zero-order correlations for this item show more consistency than the partial correlations. In addition the partial correlations indicate that the relationship meeting one’s expectations is most highly correlated with the partner meeting one’s needs.

**D.4 Correlations With Other Measures**

Although the RSS was based on previously validated measures of relationship satisfaction, there were measures available within the current study which could be used to assess validity of the RSS as it was developed for this study.
Participants were asked to rate the overall quality of their relationship both before and since the cardiac event using a 5-point rating scale ranging from “so troubled I/we got (are getting) professional help” to “extremely happy and thriving”. Since a cardiac event can impact a relationship in different ways, evidence of validity of the RSS would be demonstrated by a stronger correlation between RSS and assessment of the relationship since the cardiac event than before the cardiac event.

Participants were also asked to rate the degree of perceived support available to them from their partner, their family and their friends. It could be reasonably assumed that relationship satisfaction would be strongly correlated with support from a partner, but it is unlikely that relationship satisfaction would be correlated with perceived support from friends.

To examine validity of the RSS, bivariate correlations were performed between scores on the RSS, assessment of the relationship before and after the cardiac event and all domains of social support (partner, family, friends). Results are presented in Table D 4.

Table D -4

*Correlations Between RSS, Relationship Assessment and Social Support Measures*

<table>
<thead>
<tr>
<th></th>
<th>RSS</th>
<th>Relationship Before CE</th>
<th>Relationship Since CE</th>
<th>Partner Support</th>
<th>Family Support</th>
<th>Friend Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationship</td>
<td>.51***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before CE</td>
<td>.71***</td>
<td>.60***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationship</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Since CE</td>
<td>.76***</td>
<td>.47***</td>
<td>.68***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partner Support</td>
<td>.51***</td>
<td>.35**</td>
<td>.50***</td>
<td>.68***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Support</td>
<td>.21</td>
<td>.20</td>
<td>.35**</td>
<td>.23</td>
<td>.37**</td>
<td></td>
</tr>
<tr>
<td>Friend Support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>56.35</td>
<td>4.26</td>
<td>4.14</td>
<td>47.41</td>
<td>45.51</td>
<td>40.75</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>12.44</td>
<td>0.83</td>
<td>0.86</td>
<td>15.84</td>
<td>16.68</td>
<td>14.21</td>
</tr>
</tbody>
</table>

*Note:* **p < .01, ***p < .001, N = 69; CE = Cardiac Event
The results indicate that the RSS was moderately to strongly correlated with assessment of the relationship since the cardiac event and with support from one’s partner. It was also moderately correlated with relationship assessment before the cardiac event and with support from family. The correlation between RSS and support from friends was weak and non-significant. These results lend support for the validity of the RSS since the strongest correlations were with measures that are theoretically related to current relationship satisfaction.

**D.5 Discussion**

A Maximum Likelihood factor analysis provided support for the RSS being a single factor with all nine items loading on one factor. Item analyses indicated that all items contributed meaningfully to the scale, but participants’ responses to item 7 (love) were a little different in comparison to the other items, resulting in the lowest inter-item correlations among pairs of items being with this item.

The pattern of correlations for item 7 seems to confirm the generally accepted view that one can love a partner even if that person does not meet all of one’s needs. What seems somewhat more unexpected is that the next lowest correlation was between love and happiness, suggesting that one can love a partner even if the relationship does not necessarily make one happy. Correlations with the items relating to feeling like part of a team and perceiving the relationship as stable, were lower than correlations with items relating to the relationship meeting one’s expectations or of the more general perception of the relationship being good. The highest correlation with the love item was the item assessing relationship satisfaction “everything considered”. It would appear from these results that overall relationship satisfaction is perceived in a more global sense rather than dependant on any specific aspect.

Correlations between the RSS and other related measures lend support for the validity of the RSS. It was most strongly correlated with partner’s support and assessment of the relationship since the cardiac event, thus providing convergent validity. While there were also moderate significant correlations between the RSS and family support and assessment of the relationship before the cardiac event, these are unsurprising in light of the inter-correlations between partner and family support and between assessment of the relationship before and after the cardiac event. The lack of significant correlation between the RSS and support from friends provides evidence of discriminant validity.
While it is important not to over interpret the differences in mean scores for item 7 and the other items, or the strength of the various inter-item correlations (particularly since all correlations were highly significant and there is evidence of multicollinearity), it is nonetheless interesting to speculate on why people responded differently to the love item as compared to the other items.

This difference in response patterns may in part be due to love being a more global emotion while the other items related to more concrete decisions about particular aspects of the relationship. An alternative explanation may be related to the fact that the respondents in the sample were generally very satisfied with their relationship as evidenced by the high mean score for total RSS as well as the low variability of scores for all the items. In such a sample, the concept of loving one’s partner may overshadow any perceived shortfall in one or more specific aspects of relationship satisfaction. This would seem in keeping with the common adage of “love conquers all” and the significantly higher mean scores for the love item compared to all other items lends support to this.

**D.6 Conclusion**

Overall, the results of the item and factor analyses, together with correlations between scores on the RSS and other theoretically relevant measures, provide evidence for the RSS being a reliable and valid measure of current relationship satisfaction. Its brevity and single factor structure may make it a useful instrument for future research.
Appendix E:  Factor Analysis of the Posttraumatic Growth Inventory

The Posttraumatic Growth Inventory (PTGI) (Tedeschi & Calhoun, 1996) is a 21-item scale. The authors suggest that researchers can use either a total PTGI score for an overall measure of posttraumatic growth, or alternatively assess growth using each of the five subscales separately (Relating to Others; New Possibilities; Personal Strength; Appreciation of Life; and Spiritual Change). A factor analysis was conducted on the 21 items to examine the factor structure of the PTGI in the current study.

E.1 Factor Analysis

Using Maximum Likelihood (ML) extraction, the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity indicated that items were sufficiently correlated for a factor analysis (KMO = 0.90; $\chi^2$ (210) = 1135.46, $p < .001$). Three factors had Eigenvalues > 1, which accounted for 63.31% of variance. Communalities for the items ranged from .40 to .79 indicating that between 40% and 79% of the variance in the items was accounted for by the three factors. Factor loadings and item reliabilities (corrected item total correlation; alpha if item deleted) are presented in Table E.1. Items in the table are presented as they clustered within factors, and factor loadings for each factor are presented descending from highest to lowest.
Table E-1

*Factor Loading, Corrected Item Total Correlation (CITC) and Alpha if Item Deleted (AIID) for the Posttraumatic Growth Inventory Items*

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Items</th>
<th>Factor Loadings</th>
<th>CITC</th>
<th>AIID</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>I</td>
<td>II</td>
<td>III</td>
</tr>
<tr>
<td>6</td>
<td>Knowing that I can count on people in times of trouble</td>
<td>1.04</td>
<td>.706</td>
<td>.954</td>
</tr>
<tr>
<td>20</td>
<td>I learned a great deal about how wonderful people are</td>
<td>.89</td>
<td>.771</td>
<td>.953</td>
</tr>
<tr>
<td>2</td>
<td>An appreciation for the value of my own life</td>
<td>.82</td>
<td>.748</td>
<td>.954</td>
</tr>
<tr>
<td>21</td>
<td>I accept needing others</td>
<td>.69</td>
<td>.783</td>
<td>.953</td>
</tr>
<tr>
<td>15</td>
<td>Having compassion for others.</td>
<td>.66</td>
<td>.729</td>
<td>.954</td>
</tr>
<tr>
<td>10</td>
<td>Knowing I can handle difficulties</td>
<td>.63</td>
<td>.819</td>
<td>.953</td>
</tr>
<tr>
<td>16</td>
<td>Putting effort into my relationships</td>
<td>.62</td>
<td>.769</td>
<td>.953</td>
</tr>
<tr>
<td>1</td>
<td>My priorities about what is important in life</td>
<td>.61</td>
<td>.681</td>
<td>.955</td>
</tr>
<tr>
<td>12</td>
<td>Being able to accept the way things work out</td>
<td>.57</td>
<td>.810</td>
<td>.953</td>
</tr>
<tr>
<td>13</td>
<td>Appreciating each day</td>
<td>.56</td>
<td>.673</td>
<td>.955</td>
</tr>
<tr>
<td>9</td>
<td>A willingness to express my emotions</td>
<td>.56</td>
<td>.835</td>
<td>.953</td>
</tr>
<tr>
<td>19</td>
<td>I discovered that I’m stronger than I thought I was</td>
<td>.55</td>
<td>.739</td>
<td>.954</td>
</tr>
<tr>
<td>8</td>
<td>A sense of closeness with others</td>
<td>.53</td>
<td>.775</td>
<td>.953</td>
</tr>
<tr>
<td>4</td>
<td>A feeling of self-reliance</td>
<td>.49</td>
<td>.615</td>
<td>.955</td>
</tr>
<tr>
<td>14</td>
<td>New opportunities are available which wouldn’t have been otherwise</td>
<td>.75</td>
<td>.655</td>
<td>.955</td>
</tr>
<tr>
<td>7</td>
<td>I established a new path for my life</td>
<td>.75</td>
<td>.549</td>
<td>.956</td>
</tr>
<tr>
<td>3</td>
<td>I developed new interests</td>
<td>.70</td>
<td>.503</td>
<td>.957</td>
</tr>
<tr>
<td>11</td>
<td>I’m able to do better things with my life</td>
<td>.65</td>
<td>.769</td>
<td>.953</td>
</tr>
<tr>
<td>17</td>
<td>I’m more likely to change things which need changing</td>
<td>.41</td>
<td>.663</td>
<td>.955</td>
</tr>
<tr>
<td>18</td>
<td>I have a stronger religious faith</td>
<td>.91</td>
<td>.514</td>
<td>.957</td>
</tr>
<tr>
<td>5</td>
<td>A better understanding of spiritual matters</td>
<td>.74</td>
<td>.560</td>
<td>.956</td>
</tr>
</tbody>
</table>

*N = 69*
The Goodness-of-fit Test was significant ($\chi^2 (150) = 225.54, p < .001$) indicating violation of the normality assumption. However, since the PTGI scores in Study 2 were reasonably normally distributed (skewness = -.059; kurtosis = -.986), ML extraction was preferable to other extraction methods (Fabrigar et al., 1999).

The pattern of results suggested a three-factor solution in which all items contributed meaningfully to the scale. All Corrected Item Total Correlations were moderate to high, and Alpha if Item Deleted indicated that there would be a very small improvement if items 3 (new interests) and 18 (stronger religious faith) were removed, but this difference would be marginal since Cronbach’s alpha for PTGI was .956.

**E.2 Discussion**

A Maximum Likelihood factor analysis suggested that all items of the PTGI (Tedeschi & Calhoun, 1996) contributed meaningfully to the scale. However, contrary to Tedeschi and Calhoun’s suggestion of a five-factor structure, a three-factor solution was a better fit for the data. Factor II in Table E 1 corresponds to Tedeschi and Calhoun’s “new possibilities” factor and Factor III in Table E 1 corresponds to Tedeschi and Calhoun’s “spiritual change” factor. However, Factor I in Table E 1 incorporates the remainder of the items rather than having these items grouped in three separate factors as suggested by Tedeschi and Calhoun.

While all factor loadings were greater than .40, which would usually be considered as meeting an acceptable level for practical significance (Hair et al., 1998), factor loadings of at least .65 are considered significant for sample sizes of 70 respondents (Hair et al., 1998). On this basis, the results of the factor analysis can not be interpreted as displaying a simple structure as several items had factor loadings below Hair et al.’s recommended level of .65.

Since the factor analysis did not support the five-factor structure proposed by Tedeschi and Calhoun (1996), only the total score for the PTGI was used for all analyses within the thesis.
Appendix F: Swinburne University of Technology

Ethics Approval

Approval for the research project and for recruitment of participants through a number of different sources was gained from the Swinburne University of Technology Research Ethics Committee. A copy of the notification of ethics approval is provided overleaf.

The project was conducted within the specifications of the ethics approval. Progress review reports were submitted annually in accordance with the requirements of Swinburne Research. Oral progress review presentations were done three times over the course of candidature in accordance with the requirements of the Faculty of Life and Social Sciences.
Copy of Swinburne University of Technology Research Ethics Committee
letter of approval
Appendix G: Study 2 Recruitment of Participants

G.1 Procedure

Participants were recruited through several different sources, including Cardiac Rehabilitation programs, cardiac support groups, Internet, radio, community notice boards, Swinburne University student organisations and personal contacts. Listed below are the procedures and response rates for each recruitment strategy. An estimation of the overall response rate is provided in Chapter 5 of the thesis (Section 5.5.2).

G.2 Recruitment Strategies

G.2.1 Cardiac Rehabilitation

The researcher contacted several Cardiac Rehabilitation Coordinators in metropolitan and regional Victoria to request permission to introduce the study to their program participants. Where required, additional ethics approval was obtained from the relevant hospital Ethics Committees.

Two metropolitan and two regional cardiac rehabilitation program coordinators agreed to allow the study to be introduced to their participants, and offered to distribute questionnaire packets to them. A total of 81 questionnaire packets were distributed (30 metropolitan; 51 regional). Twenty six of the total 162 questionnaires distributed (16%) were returned.

G.2.2 Heartbeat

Heartbeat is a Victorian organisation for cardiac patients and their partners with several metropolitan and regional chapters. While Heartbeat does offer some support for people awaiting or recovering from heart surgery, it is more of a social and fund raising group. People typically become members of Heartbeat several years following heart surgery.

The researcher was granted permission to attended a Heartbeat quarterly meeting and introduce the study to the chapter presidents who attended the meeting. Permission was granted to send questionnaire packets to each chapter president via the quarterly newsletter mail out. Forty-four questionnaire packets and some
advertising flyers were distributed in this way. An additional 15 questionnaire packets were sent to one of the regional Heartbeat chapters at the request of the chapter president. Ten of the 118 questionnaires sent to Heartbeat members were returned (8.5%).

**G.2.3 Swinburne University**

The Swinburne Media department issued a media release (see Appendix B) and also advertised the study with a story in the Swinburne Alumni News. In addition the study was introduced to 180 first year psychology students through their Research Experience Program (REP). Each first year psychology student is required to participate in four hours research experience as part of their course requirement. Students who could pass on the questionnaire packets to potential participants were awarded 30 minutes towards their required research experience time requirement. The researcher attended all first year psychology lectures in a specified week to advertise the study (see Appendix B). In addition, an announcement was posted on the first year psychology subject online site (see Appendix B).

Nine questionnaire packets were distributed through the psychology students REP, and one questionnaire packet was requested following the Swinburne Alumni News article. Of the 20 questionnaires distributed through Swinburne, two were returned by alumni (10%) and two were returned through the REP (10%). It does not appear that any respondents were recruited as a result of the media release.

**G.2.4 Personal Contacts**

Using a snowball sampling technique, the researcher personally contacted friends to see if they could pass on questionnaire packets to their own contacts who might be eligible to take part in the study. Contact was made in person, by telephone and e-mail with 45 people, and nine questionnaire packets were distributed. Seven of the eighteen questionnaires distributed in this way were returned (39%).

**G.2.5 Community Centres**

Permission was sought to leave advertising material in a number of local community centres. Permission was obtained from two general practice medical
centres, a community library, a yoga school, a hairdressing salon (for both men and women), a local council office, and one hospital (waiting room). At each location A4 sized posters were placed on available notice boards and 30 book marks were left in a marked envelope under the poster. It does not appear that any respondents were recruited by these means.

G.2.6 Esperanto

Esperanto is an international language with many Esperanto groups worldwide. The researcher’s father is an active member of the Esperanto community and presents a weekly Esperanto radio program on a community radio station in Melbourne. This radio program is also broadcast in many countries outside Australia. An announcement was made (in Esperanto) on the radio program advertising the research project, and the same announcement was placed in an online Esperanto newsletter. It does not appear that any respondents were recruited by these means.

G.2.7 Internet

An Internet search was conducted to identify existing online support groups for cardiac patients and partners. Eight such groups were found and permission was sought from the administrator(s) of each group to post a message advertising the study and inviting members to participate.

The administrator of Health Boards denied permission, but all other administrators granted permission for the post. Messages were posted on four Yahoo health forums (Bypass Surgery; Heart Attack; CABG Heart Bypass Support; Hearts Alive), two Heart Centre Online forums (Heart Attack; Women and Heart Disease), and the HeartMates website. Five respondents identified Yahoo as their source of information about the study, five identified Heart Centre Online and six identified HeartMates. A further four Internet surveys were received where the source of information about the study was identified as “my partner”.

The researcher also contacted the Australian Heart Foundation, the British Heart Foundation, the American Heart Association, and the Alaska Heart Institute (following the suggestion of the Providence Alaska Medical Centre). In each case permission was sought to post a message on the website (under their support groups
with a link to the online surveys. No response was received from any of these organizations (with the exception of Providence Alaska Medical Centre with their suggestion to contact the Alaska Heart Institute).

G.2.8 Other Sources

One questionnaire was returned from a respondent who found out about the study from a friend, and five questionnaires were returned from respondents who found out about the study from their partner. Examination of these questionnaires showed that one of the “partner source” responses was coupled with the “friend source” response. It is impossible to determine the original source of information about the study for this couple. The original source of information about the study could be determined for the remaining four “partner source” responses. Two had come through Internet support groups, one from cardiac rehabilitation and one from a personal contact.
Appendix H: An Examination of Self-reported Health and Psychosocial Outcomes Based on Whether Both Members of the Couple Participated in Study 2

H.1 Introduction

Study 2 was originally intended for cardiac patients and their partners to participate as a couple. However responses were received from four patients whose partner did not respond and five spouses whose partner did not respond. Since the number of participants in these categories was very small it was not considered appropriate to analyse the data separately for the main study. However preliminary analyses (described in Chapter 6) using independent samples $t$-tests, indicated significant differences ($p < .05$) between people who participated in Study 2 as a couple ($n = 60$) and those people who took part in the study alone ($n = 9$) for a number of variables (self-reported physical and emotional health since the cardiac event, number and difficulty of making lifestyle changes, scores on intrusion, avoidance, satisfaction with life and relationship satisfaction).

The main analyses (Chapter 6) also indicated that age was an important factor for many of the health and psychosocial variables. Independent samples $t$-tests indicated that, on average, people who took part in Study 2 on their own were significantly younger ($M = 47.56$ years, $SD = 12.25$ years, $n = 9$) than people who took part in Study 2 as a couple ($M = 65.60$ years, $SD = 10.65$ years, $n = 60$), ($t(67) = -4.65$, $p < .0001$). In order to examine whether the significant findings in the preliminary analyses were related to age of the respondents, data were reanalysed using analyses of covariance with age as a covariate. Results are presented in separate sections for self-reported health, lifestyle changes and psychosocial outcomes.

H.2 Participants’ Self-Reported Health Since the Cardiac Event

Analyses of covariance (using age as a covariate) were conducted for self-reported physical and emotional health since the cardiac event. The results indicated that age did not make a significant adjustment to mean scores for self-reported physical health since the cardiac event ($F(1,66) = 3.94$, $p > .05$, partial $\eta^2 = .056$) and
the main effect for respondent group was non-significant \((F(1,66) = 2.13, p > .05, \text{partial } \eta^2 = .031)\). By contrast, age made a significant adjustment to mean scores for self-reported emotional health since the cardiac event \((F(1,66) = 4.47, p < .05, \text{partial } \eta^2 = .088)\). After adjusting for age, the main effect for respondent group was significant \((F(1,66) = 3.88, p < .05, \text{partial } \eta^2 = .078)\). Table H1 presents mean scores for self-reported emotional health for respondents who took part in the study as a couple (couple respondents) compared with respondents who took part in the study alone (individual respondents).

Table H -1

*Adjusted and Unadjusted Means for Self-Reported Emotional Health Since the Cardiac Event For Respondents who Took Part in Study 2 as a Couple and Respondents who Took Part in Study 2 Alone*

<table>
<thead>
<tr>
<th></th>
<th>Adjusted Means</th>
<th>Unadjusted Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(M)</td>
<td>(SE)</td>
</tr>
<tr>
<td>Couple Respondents</td>
<td>3.29</td>
<td>0.11</td>
</tr>
<tr>
<td>Individual Respondents</td>
<td>2.48</td>
<td>0.34</td>
</tr>
</tbody>
</table>

\(N = 69\)

The results suggest that respondents reported similar physical health ratings since the cardiac event regardless of whether they took part in the study as a couple or on their own. However, respondents who took part in the study alone reported poorer emotional health since the cardiac event than did respondents who took part in the study as a couple.

**H.3 Life-Style Changes Since the Cardiac Event**

Analyses of covariance (using age as a covariate) were done for the number of lifestyle changes made and the reported difficulty of making these changes. Table H 2 presents mean scores for the number of lifestyle changes made by respondents who took part in the study as a couple (couple respondents) compared with respondents who took part in the study alone (individual respondents).
Table H - 2

Adjusted and Unadjusted Means for Number of Lifestyle Changes Made by Respondents Who Took Part in Study 2 as a Couple and Respondents Who Took Part in Study 2 Alone

<table>
<thead>
<tr>
<th></th>
<th>Adjusted Means</th>
<th>Unadjusted Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SE</td>
</tr>
<tr>
<td>Couple Respondents</td>
<td>5.46</td>
<td>0.47</td>
</tr>
<tr>
<td>Individual Respondents</td>
<td>8.59</td>
<td>1.26</td>
</tr>
</tbody>
</table>

N = 69

The results in Table H 2 indicated that age made a significant adjustment to mean scores for the number of lifestyle changes made (F(1,60) = 5.59, p < .05, partial η² = .085). After adjusting for age, the main effect for respondent group was significant (F(1,60) = 5.12, p < .05, partial η² = .079). By contrast, age did not make a significant adjustment to the mean reported difficulty of making lifestyle changes (F(1,55) = 1.94, p > .05, partial η² = .034) and the main effect for respondent group was non-significant (F(1,55) = 1.77, p > .05, partial η² = .031). Thus the results suggest that, once age was taken into account, respondents who took part in the study on their own made a greater number of lifestyle changes than respondents who took part in the study as a couple. However, the reported difficulty of making lifestyle changes was similar regardless of whether respondents took part in the study as a couple or on their own.

H.4 Psychosocial Outcomes

Analyses of covariance (using age as a covariate) were performed for psychological distress (intrusion and avoidance), satisfaction with life and relationship satisfaction. Table H 3 presents mean scores for respondents who took part in the study as a couple (couple respondents) compared with respondents who took part in the study alone (individual respondents).
Table H - 3

*Adjusted and Unadjusted Means for Intrusion, Avoidance and Satisfaction with Life for Respondents Who Took Part in Study 2 as a Couple and Respondents Who Took Part in Study 2 Alone*

<table>
<thead>
<tr>
<th>Psychosocial Outcome</th>
<th>Adjusted Means</th>
<th>Unadjusted Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SE</td>
</tr>
<tr>
<td>Intrusion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Couple Respondents</td>
<td>11.31</td>
<td>1.10</td>
</tr>
<tr>
<td>Individual Respondents</td>
<td>17.36</td>
<td>3.15</td>
</tr>
<tr>
<td>Avoidance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Couple Respondents</td>
<td>9.12</td>
<td>1.09</td>
</tr>
<tr>
<td>Individual Respondents</td>
<td>14.28</td>
<td>3.13</td>
</tr>
<tr>
<td>Satisfaction With Life</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Couple Respondents</td>
<td>24.70</td>
<td>1.02</td>
</tr>
<tr>
<td>Individual Respondents</td>
<td>18.21</td>
<td>2.93</td>
</tr>
</tbody>
</table>

*N = 69*

With regard to psychological distress, age made a significant adjustment to mean scores for intrusion ($F(1,66) = 14.02, p < .0001, \text{partial } \eta^2 = .175$). After adjusting for age, the main effect for respondent group was non-significant ($F(1,66) = 3.10, p = .08, \text{partial } \eta^2 = .045$). However, if a less restrictive alpha level of .10 was accepted due to the small sample (particularly of ‘individual’ respondents) (Hair et al, 1998), the results would suggest that respondents who took part in the study alone reported higher intrusion than respondents who took part in the study as a couple.

Age also made a significant adjustment to mean scores for avoidance ($F(1,66) = 7.22, p < .01, \text{partial } \eta^2 = .099$). After adjusting for age, the main effect for respondent group was non-significant ($F(1,66) = 2.29, p > .05, \text{partial } \eta^2 = .034$). Thus
the results indicate that once age was taken into account, reported levels of avoidance did not differ between respondents who took part in the study as a couple and those who took part in the study on their own. Taken together, the results suggest that the two aspects of psychological distress were somewhat different based on whether people who took part in Study 2 as a couple or on their own. Reported avoidance was similar for both groups of respondents, but it could be argued that respondents who took part in the study on their own reported higher intrusion than respondents who took part in the study as a couple.

Age made a significant adjustment to mean scores for satisfaction with life \( (F(1,66) = 4.09, p < .05, \text{partial } \eta^2 = .058) \). After adjusting for age, the main effect for respondent group was significant \( (F(1,66) = 4.14, p < .05, \text{partial } \eta^2 = .059) \). Thus the results suggest that, after adjusting for age, respondents who took part in the study as a couple reported greater satisfaction with life than respondents who took part in the study alone.

Finally, age did not make a significant adjustment to mean scores for relationship satisfaction \( (F(1,66) = 0.42, p > .05, \text{partial } \eta^2 = .006) \) and the main effect for respondent group was non-significant \( (F(1,66) = 3.10, p = .08, \text{partial } \eta^2 = .045) \). However, similar to the results for intrusion, if a less restrictive alpha level of .10 was accepted due to the small sample (Hair et al, 1998), the results would suggest that respondents who took part in the study alone reported lower relationship satisfaction than respondents who took part in the study as a couple.

**H.5 Discussion**

Following on from preliminary analyses which found significant differences for some of the health and psychosocial outcomes based on whether respondents had taken part in Study 2 as a couple or alone (described in Chapter 6), significant findings were reanalyzed using age as a covariate. This reanalysis of results showed evidence for some significant differences in mean scores for self-reported health, lifestyle changes, and psychosocial outcomes based on respondent type.

Once age was taken into account, the initial findings of significant differences were refuted for self-reported physical health since the cardiac event, reported difficulty of making lifestyle changes, and degree of avoidance, indicating that the observed differences in the preliminary analyses were more likely to be due to the age of the respondents rather than whether respondents had taken part in Study 2 as a couple or on their own. The results from the analyses of covariance indicated that
respondents reported similar physical health since the cardiac event, similar degree of difficulty making lifestyle changes and similar level of avoidance, regardless of whether they had taken part in Study 2 as a couple or on their own.

By contrast, once age was taken into account, respondents who took part in Study 2 as a couple reported making fewer lifestyle changes following the cardiac event than participants who took part in the study alone. In addition, self-reported emotional health since the cardiac event was significantly higher for people who took part in Study 2 as a couple than for participants who took part in the study alone. Furthermore, respondents who took part in Study 2 as a couple reported higher satisfaction with life than respondents who took part in the study alone. Finally, if a less restrictive alpha level of .10 is accepted to account for the small sample (Hair, 1998), it could also be argued that respondents who took part in Study 2 as a couple reported lower intrusion and greater relationship satisfaction than participants who took part in the study alone. Thus the results of the analyses of covariance supported the significant findings in the preliminary analyses, and suggest that the differences in self-reported emotional health since the cardiac event, the reported number of lifestyle changes and the degree of life satisfaction, intrusion and relationship satisfaction, can be accounted for by whether respondents took part in Study 2 as a couple or on their own, rather than being a function of the age of the respondents.

Taken together, the results indicate that respondents who took part in Study 2 as a couple reported somewhat better health and psychosocial outcomes than respondents who took part in the study on their own. Prior research has shown that married people generally have better mental health outcomes when living with chronic illness (including heart disease) than unmarried people (Sherbourne & Hays, 1990). The results in Study 2 suggest that the story is more complex than that since all respondents in the study had been in a relationship with their partner at the time of the cardiac event and were still in that relationship when they took part in the study. While it is impossible to determine why people chose not to take part in the study when their partner did, one could speculate that people who responded as a couple were in more cohesive relationships than the people who responded alone. The results from the analysis of covariance lend some support to this.

It could also be speculated that people who were having more difficulties in adjusting to the cardiac event felt motivated to express their views in spite of their partner deciding not to take part in the study as well. In this sense, taking part in the
study may have been an avenue of expressing views that may have otherwise been unexpressed. The qualitative responses from these ‘individual’ respondents lend some support to this as several people provided lengthy responses to the open-ended questions, and many indicated that they were finding the adjustment process difficult.

Since the number of patients and partners whose spouse did not take part in Study 2 was small, these findings must be interpreted with caution. However, these ‘individual’ respondents constituted 13% of the overall sample, so the differences in their responses can not be completely ignored and may indicate some differences in the type of people likely to take part in research with couples compared to research with individuals. This has potential implications for recruitment of participants for research with couples, and may warrant further investigation in future research.

H.6 Conclusion

The number of respondents whose partner did not take part in Study 2 was small, so it is not possible to draw broad generalizations from the results for this group of people. Nonetheless, given the evidence for some significant differences in responses to the cardiac event between people who took part in Study 2 as a couple compared with people who took part in the study on their own, further research examining these differences may prove fruitful in further teasing out some of the reasons why some people fare better than others following a cardiac event. Further research may be designed to allow for detailed comparisons in self-reported health, life-style variables and psychosocial outcomes based on whether both members of a couple respond to research questions or whether just one member of the couple responds.