

**Gender Expectations and Satisfaction: An Evaluation of Cardiac Rehabilitation**

by

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**A Practicum Report**

Submitted to the Faculty of Graduate Studies

In Partial Fulfillment of the Requirements for the Degree of

MASTER OF SOCIAL WORK

Faculty of Social Work

University of Manitoba

Winnipeg, Manitoba

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**A Thesis/Practicum submitted to the Faculty of Graduate Studies of The University**

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**of**

**MASTER OF SOCIAL WORK**

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## **Abstract**

In the last century, individuals have increasingly become overweight and inactive, a lifestyle leading to many medical complications, including cardiovascular disease and high blood pressure. Cardiac disease is currently the number one killer in Canada, affecting thousands of Manitobans annually. This is an overwhelming concern as the cost of health care rises and the population ages.

Cardiac rehabilitation is a comprehensive multidisciplinary approach used to stabilize cardiac disease that is cost-effective. There are two Winnipeg-based facilities, the Kinsmen Reh-Fit Centre and the Wellness Institute at Seven Oaks General Hospital. Even though women are just as likely to develop heart disease as men, women are less likely to join cardiac rehabilitation programs. It is suggested this is because cardiac rehabilitation programs have traditionally been developed based on the needs of male cardiac patients.

An evaluation of the program at the Wellness Institute took place between December 2003 and March 2004, with a focus on gender differences to determine if the program is appropriate for both genders with a focus on expectations of and satisfaction with the cardiac program. This partial evaluation of the cardiac program was designed to assess both program processes and outcomes; however more emphasis was placed on process oriented issues such as expectations and satisfaction. Data collection methods included file reviews, interviews and questionnaires completed by past and current participants, and a focus group with key informants.

Due to the low number of female participants the study was unable to fully answer all of the research questions put forward. However, evaluation results indicate

high levels of participant satisfaction with program content and staff regardless of gender, and several benefits pertaining to participants that appear to be associated with program attendance and use of the information provided in the program. The study also identified some issues that could be addressed to enhance the quality of the program.

## **Acknowledgements**

Without the encouragement and support of many people this practicum report would not have been possible. A special thank you to my advisor, Brad McKenzie for his continual guidance and support. Thank you to my committee members, Dan Bailis and Kelly Seward for their encouragement and expertise, as well as to the Wellness Institute for allowing me to conduct a research study on their cardiac rehabilitation program.

On a personal note, I would like to thank my family and friends for their never ending encouragement and enthusiasm for my research and all my dreams. Thank you to Timothy for offering to help me in any way he could and always listening to the current research developments. I would also like to thank my parents for never questioning if I could accomplish my goals but always making me feel that I could do anything I set my mind to.

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## **Chapter 1**

### **Practicum Overview**

In the last century individuals have increasingly become overweight and inactive, a lifestyle leading to many medical complications, including cardiovascular disease and high blood pressure. This is an overwhelming concern as the cost for health care rises and the population ages. Prevention and cardiac rehabilitation have gained attention as ways to reduce the growth of health care costs associated with cardiac disease. There are two Cardiac Rehabilitation programs in Winnipeg, both of which are funded by the Winnipeg Regional Health Authority. This practicum focused on the cardiac rehabilitation program at the Wellness Institute that is attached to the Seven Oaks General Hospital in Winnipeg.

Even though women are just as likely to develop heart disease as men, women are less likely to join cardiac rehabilitation programs. It is suggested this is because cardiac rehabilitation programs have traditionally been developed based on the needs of male cardiac patients. To treat patients effectively it is important to know if the current program is appropriate for both genders. An evaluation of the Cardiac Rehabilitation program with a focus on gender differences served as my practical intervention. The evaluation goal can be summarized as:

To record, describe and contrast differences in participation, expectations, satisfaction and social supports based on gender by reviewing existing data, and collecting information from participants of the cardiac program who attend the November and December 2003 cardiac rehabilitation classes.

This partial evaluation of the cardiac program used a mixture of process and outcome measures; however the primary focus was process oriented measures. Process evaluations gather continuous feedback from a program and are descriptive in nature.

Outcome evaluations meanwhile, determine if a program is effective and meeting client needs. Data was collected using the following methods:

- Review of case file data
- Face-to-face interviews with current participants
- Phone interviews with past participants
- Dissemination and collection of questionnaires self-completed by participants
- Focus group with key informants

#### Personal Learning Goals

My personal learning goals were to develop an understanding of and gain hands-on experience in designing, planning and implementing a program evaluation. Based on this my personal learning objectives were: (1) to gain theoretical and practical experience in the area of program evaluation; (2) to increase my knowledge in the area of cardiac rehabilitation; (3) to gain insight and understanding of gender differences and the consequence of these in health related programs; (4) to develop skills in using qualitative and quantitative data collection techniques, specifically to develop an interview guide, improve interview skills and construct a questionnaire; (5) to develop data analysis techniques; (6) to gain insight into how a more comprehensive evaluation could have been designed; and (7) to gain experience writing an evaluation report.

These learning goals were met through eight specific components in my practicum: creating an interview guide; creating a questionnaire; interviews with participants; completing a file review; conducting a focus group; dissemination of questionnaires; providing information on how to complete a comprehensive evaluation; and providing a summary of results and implications.

## Practicum Evaluation

The evaluation of this practicum involved determining if the objectives of the evaluation were achieved, assessing my effectiveness as an evaluator; and evaluating the extent to which my learning objectives were achieved. The methods used to evaluate the implementation of the practicum are described below.

### Achievement of evaluation objectives

Meetings were held frequently throughout the practicum, bi-weekly (or as needed) with the advisor and monthly (or as needed) with the cardiac program manager at the Wellness Institute. These meetings provided an opportunity to discuss questions and concerns, debrief, as well as ensure the evaluation stayed on track. A brief report indicating progress since the last meeting was handed in for discussion at each meeting. During the final meeting with the cardiac program manager, feedback was provided to the evaluator on the evaluator's professionalism and the usefulness of the results generated by the evaluation.

### Achievement of personal learning goals

A variety of techniques were used to ensure that the personal learning goals were achieved. The first method used was a journal that described activities completed, observations and personal reflections on my practicum experience. Knowledge gained (both intentional and unintentional) was included, as well as areas that required future improvement. The second was the previously mentioned bi-weekly meetings with the practicum supervisor. Excerpts from the journal were included in the reports given to the advisor at each meeting. The supervisor was also provided with a written progress report.

The third method used was Cournoyer's (1991) *Social Work Skills Interview Rating Form*. The form was used as a self-evaluation of the evaluator's interview skills after all the participant interviews have been completed. While the rating form has 42 questions, only the first 20 were relevant making the possible score range from -60 to +80. The evaluator aimed for a score of +60 to +80 as this would indicate the evaluator has effective interview skills. The rating form is included in Appendix A. Personal learning goals and achievement of evaluation objectives are further discussed in Chapter 5.

### Significance

Cardiovascular disease is the number one killer in Canada (Heart and Stroke Foundation of Canada, 1999), accounting for 38% of all deaths in 1997 and using up a major portion of health care resources (McAllister, 1997). According to the Manitoba Government (2001), cardiac disease affects more than 5,000 Manitobans annually. More than 60% of women and men over the age of 60 are at a moderate to high risk of developing heart disease (Stone, Cyr, Friesen, Kennedy-Symonds, Stene & Smilovitch, 2001). Harvey et al. (1996) state that during 1991-92, almost 10% of all physician visits, 12% of all hospital admissions and 19% of all patient days in hospital were for cardiovascular disease. In 1993, cardiovascular disease cost Canadians \$7.35 billion in direct costs including hospital (\$4.6 billion alone), physician, medication and treatment, pensions and benefits and \$12.37 billion in indirect costs, such as premature mortality, lost work time and productivity (Moore, Mao, Zhang & Clarke as cited in Harvey et al., 1996). This evidence suggests that cardiovascular disease will touch the lives of all Canadians, either directly or indirectly.

It has been established that there are numerous risk factors associated with developing cardiovascular disease (CVD); these can be classified in two categories: non-modifiable and modifiable risk factors. Non-modifiable risk factors cannot be controlled; these are age, gender (higher risk for men over 40 and women over 50), race, genetics (if a close family member has heart disease such as a parent or sibling), and if you have had a previous heart attack. Modifiable risk factors are those that individuals can change or control. These include: high stress levels, smoking, diabetes, high alcohol intake, high blood pressure, high cholesterol, being overweight, unhealthy eating habits and a sedentary lifestyle (Donatelle, Davis, Munroe & Munroe, 1998).

A more recent study done in the United States by Birnbaum, Leong, and Kabra (2003) found that the lifetime medical cost of treating a woman (in 2002 American dollars) with cardiovascular disease (CVD) is \$423,000. For a woman with diabetes (a risk factor for CVD) the lifetime medical cost is \$233,000. They found that the total lifetime costs of treating a woman with CVD is 3.4 times higher than the medical costs of a woman without CVD. Similarly, if a woman has diabetes, her medical costs are on average 2.5 times greater than the costs on a non-diabetic (Birnbaum et al., 2003).

Even though many of the risk factors for heart disease are modifiable, a large percentage of the population does not lead a healthy lifestyle. Nearly 40% of Americans are completely sedentary in their leisure time; 30% say they do "at least some" exercise while the remaining 30% report exercising regularly (Wellness Facts, September 2002). Harvey et al. (1996) found similar trends with 37% of Canadians and 45% of Manitobans leading sedentary lifestyles. According to Donatelle et al. (1998) there has been a slight decrease in physical activity for Canadians since 1985.

Sedentary lifestyles and poor nutritional habits combined with other risk factors such as smoking or high stress levels can be a recipe for disaster as each additional risk factor multiplies the effect of others, thereby compounding the risk for the disease (Harvey et al., 1996). The *Manitoba Heart Health Survey: Technical Report* found that 19% of adults had two or more risk factors for CVD in 1990 (Young, Gelskey, Macdonald, Hook, & Hamilton, 1991). Consequently, health care planners and providers are looking at disease prevention as a cost effective strategy to reduce the growth of health care costs (Swabey, 1997). Thompson (2003) also suggests examining the feasibility, acceptability and effectiveness of cardiac rehabilitation programs.

According to King and Paul (1996) women have traditionally been largely ignored in literature on CVD with many researchers questioning the necessity of conducting research that has already been done on men. Schuster and Waldon (1991) agree that most of the existing research has been on men with little research on the differences in cardiac rehabilitation processes between male and female participants. Yet with increased life expectancy as well as increased smoking, multiple role expectations and holding high stress jobs, the number of women affected by CVD has increased (King & Paul, 1996). This has contributed to cardiovascular disease being the number one cause of death in women (Murray, O'Farrell & Hudson, 2000); indeed, women are more likely to die from CVD than men (Roosevelt, 1993). Women are also twice as likely as men to die within the first few weeks after a myocardial infarction (MI), and are more likely to die within the first year (Vaccarino, Krumholz, Yarzebski, Gore & Goldberg, 2001). It was also found that women are less likely to be referred to cardiac rehabilitation programs (Grace, Abbey, Shnek, Irvine, Franche & Stewart, 2002) and

when referred they are less likely to complete the program (Murray et al, 2000). This suggests that heart disease is no longer a “man’s” disease and it is necessary to evaluate cardiac programs from a feminist perspective.

#### Relevance to Social Work

Understanding gender differences in treating participants in cardiac rehabilitation programs offers insight useful for theorists in the fields of cardiac rehabilitation and gender differences. Similarly, there are benefits for practitioners whose focus is on treating patients in hospital with cardiovascular disease, for practitioners working in cardiac rehabilitation and for those who are working in the area of health promotion and prevention. Policies that are created for the betterment of cardiac treatment may be improved by enhanced awareness of gender differences.

Gender differences may need to be recognized early in cardiac rehabilitation programs so that practitioners can plan intervention programs that better meet the needs of individual participants. Individual characteristics, such as gender, age, and mobility should all be included as it is expected that they may affect how well an individual program will work.

Chapter Two includes a comprehensive literature review on cardiovascular disease and general methodology. A description of the practicum setting, namely the Wellness Institute’s cardiac program, the evaluation design and data collection methods are provided in Chapter Three. The evaluation results are reported in Chapter Four and discussed in Chapter Five. In Chapter Six personal learning goals and objectives, along with conclusions and recommendations are provided.

## **Chapter 2**

### **Literature Review**

This chapter includes information guiding this intervention on cardiovascular disease, theoretical perspectives pertaining to the intervention and general methodology. The first section of this chapter provides an understanding of cardiovascular disease and the risk factors associated with this disease. Cardiac rehabilitation as a method of treatment is discussed, including information on gender differences, enrollment and participant information, and issues for program improvement. Brief descriptions of the two theoretical perspectives (case management and feminist approach) that are used in this evaluation are included. Information on general methodology includes a definition of evaluation as well as the purposes and types of evaluation.

#### Cardiovascular Disease

Cardiovascular diseases affect the heart and blood vessels and common types include the following: atherosclerosis, heart attack, angina pectoris, congestive heart failure, arrhythmia, congenital and rheumatic heart disease and cerebrovascular accidents or strokes. Atherosclerosis is a general term for the thickening and hardening of the arteries (Donatelle et al., 1998). Deposits of fatty substances, cholesterol, cellular waste products, calcium and fibrin result in plaque, which distorts vessels and makes them rigid (Ganong, 1995). Atherosclerosis predisposes individuals to heart attack and stroke (Donatelle et al., 1998; Ganong, 1995; Raven & Johnson, 1992). A heart attack or myocardial infarction is the result of insufficient blood supply to an area of the heart muscle, leading to death of some cells and can be the result of a blocked blood vessel (Raven & Johnson, 1992).

Angina pectoris is chest pain that occurs as the result of reduced oxygen flow to the heart (Donatelle et al., 1998); however, there is no damage to the cells (Raven & Johnson, 1992). Although angina pectoris is not a heart attack, it is a symptomatic manifestation of ischemic heart disease, often described as severe squeezing or pressure (Heart and Stroke Foundation of Canada, 1999).

Congestive heart failure is the inability of the heart to maintain adequate pumping function (Heart and Stroke Foundation of Canada, 1999). This results in poor blood flow out of the heart into the arteries and back into the heart from the veins leading to congestion in the tissues, enlargement of the heart and less blood being circulated. Congestive heart failure can be caused by a damaged heart muscle from previous cardiac disease, Rheumatic fever, cancer treatment, etc. and if untreated it can lead to death (Ganong, 1995).

Arrhythmia is simply an irregular heart beat and in the absence of other symptoms it is not considered serious (Ganong, 1995). Congenital heart failure is heart disease present at birth ranging from slight murmurs to serious complications that can only be corrected by surgery. This type of heart disease can be caused by hereditary factors, maternal diseases or chemicals (Donatelle et al., 1998). Rheumatic heart disease can cause similar problems as congestive heart failure and is the result of untreated streptococcal infection of the throat. It is more common for women to get valve disorders as a result of rheumatic fever than men (King & Paul, 1996).

Stroke or a cerebrovascular accident is a condition resulting from the disruption of blood flow to the brain (Raven & Johnson, 1992). This results in the death of brain cells, which are unable to repair themselves (Donatelle et al., 1998). The effects of a stroke

depend on where and how severe the damage was. The research has shown that cardiac rehabilitation generally excludes individuals who have had a stroke unless they also have another form of cardiovascular disease.

### Risk Factors

Risk factors for cardiovascular diseases are factors that increase an individual's chance of developing one of these diseases. While different studies report some differences in risk factors, there is a consensus about what should minimally be included (Donatelle et al., 1998; Haskell et al., 1994; Heart and Stroke Foundation of Canada, 1999; Kingsley & Gupta, 1992). These are described as either: modifiable or non-modifiable risk factors. Modifiable risk factors are those that individuals can change or control. These include: smoking, high blood pressure, high cholesterol, sedentary lifestyle, diet, diabetes, excessive alcohol intake and high stress levels. Non-modifiable risk factors are those which cannot be controlled; these are age, gender, race, genetics and if you have a personal history of cardiovascular disease.

### Smoking

A report published by the Heart and Stroke Foundation (1999) states that cigarette smoking is the major cause of preventable death in Canada and is actually responsible for more heart disease and stroke related deaths than cancer. It is also reported that smokers are 70 percent more likely to develop cardiovascular disease than nonsmokers, and more likely to die suddenly (Donatelle et al., 1998). Young, Gelskey, Macdonald, Hook and Hamilton (1991) also found that while smoking has declined since the 1960s, it has declined faster for men resulting in the rate for women, which, while still lower than men, is approaching that of Canadian men.

### Hypertension

High blood pressure or hypertension is defined as a systolic blood pressure of  $\geq 140$  mmHg or diastolic blood pressure of  $\geq 90$  mmHg (Heart and Stroke Foundation, 1999). *The Manitoba Heart Health Survey* (Young et al., 1991) found that 18 percent of Canadians and 17 percent of adult Manitobans were affected by hypertension. Donatelle et al. (1998) reported similar findings with 16 percent of all Canadians being affected. They also reported that 33 percent of Canadians between the ages of 55 to 64 are affected by hypertension. Both Donatelle et al. (1998) and Young et al. (1991) found higher blood pressure rates in men than women, with the exception of women over the age of 65. While completing a study on cardiac rehabilitation participants, Cannistra, Baladay, O'Malley, Weiner, and Ryan (1992) found that 73% of women and only 39% of men had hypertension.

In 1996/1997 Statistics Canada completed a National Population Health Survey which found that 10 percent of Canadians and 11 percent of Manitobans had high blood pressure. The Heart and Stroke Foundation of Canada (1999) suggests the differences between their results and that of earlier surveys are a result of the success of the Heart Health Program which encouraged individuals to be treated for hypertension. MacMahon et al. (as cited in Heart and Stroke Foundation, 1999) found that hypertension increases the risk of cardiovascular disease by two to three times.

### Dyslipidemia (High cholesterol)

An elevated level of low-density lipoproteins (LDL) and a low level of high-density lipoproteins (HDL) are linked to heart disease (Rolfes & DeBruyne, 1990). It is suggested that HDL levels are a good predictor of heart disease. The risk of

cardiovascular disease is low if levels are over 60 milligrams per 100 milliliters and high if less than 35 milligrams per 100 milliliters (Wardlaw & Insel, 1993). Young et al. (1991) found that 14 percent of Manitobans were at risk ( $>6.2$  micromoles per litre), 29 percent at moderate risk ( $5.2 - 6.2$  mmol/L) and 57 percent were in the optimal range ( $<5.2$  mmol/L). They also found that cholesterol levels increased with age.

### Sedentary lifestyle

The 1996/1997 *National Population Health Survey* defined physical inactivity or sedentary lifestyle as a usual daily leisure-time energy expenditure of less than 1.5 kilocalories per kilogram per day. The survey found that over half (57%) of adult Canadians and 58 percent of Manitobans were physically inactive in 1996/1997. This is higher than the percentage reported by Harvey et al. (1996) who found that 37% of Canadians and 45% of Manitobans led sedentary lifestyles, although the difference could be accounted for by different definitions of inactive lifestyles. The National Survey also found that women are generally less physically active than men. In 1991, the *Manitoba Heart Health Survey* found that when asked the reason for not exercising (more than one response was allowed) the most common reasons were lack of incentives (40%), lack of time (34%) and lack of exercise partners (22%). Lack of exercise partners was seen as a greater barrier for women than men.

### Diet

Donatelle et al. (1998) found that Canadians are consuming more calories than in the past but are not laboring in fields or exercising to burn off those calories. They also found that portion sizes have increased since the 1950's, as have the daily amount of fat, particularly saturated (animal) fat and sugar in the average diet. This is leading to

Canadians becoming increasingly overweight. Excess weight makes it more difficult for the heart to push blood through the many kilometers of capillaries that supply each kilogram of fat (Donatelle et al., 1998).

The Heart and Stroke Foundation of Canada (1999) uses the Body Mass Index (BMI) to determine obesity. This is an individual's weight in kilograms divided by the square of the height in meters. A BMI of 25 to 27 is considered overweight and a BMI of >27 is considered obese. In 1996/1997, Statistics Canada found that 19 percent of Canadians and 20 percent of Manitobans had some excess weight while 29 percent of Canadians and 34 percent of Manitobans were obese. Several studies also suggest that fat distribution and waist to hip circumference ratio is more accurate in assessing risk. Individuals with large truncal or chest fat deposits are considered at higher risk (Kingsley & Gupta, 1992; Smyrski, 1999).

### Diabetes

Diabetes mellitus is an illness associated with a disturbance of blood glucose control (Heart and Stroke Foundation of Canada, 1999). Diabetes also encompasses the risks of hypertension, obesity, elevated total cholesterol levels, and hypertriglyceridemia (Reaven, 1988). Das and Banka (1992) found that next to smoking, diabetes has the next largest negative effect on CVD and women. They also found that diabetic women were at greater risk of cardiovascular disease than men. There is however, little information on the prevalence of diabetes in Canadians as it is suspected that many individuals go undiagnosed (Young et al., 1991).

### Alcohol intake

Both Young et al. (1991) and the Heart and Stroke Foundation of Canada (1999) found that it was difficult to determine the exact relationship between how alcohol affects cardiovascular disease. Individuals who consume one alcoholic beverage a day have been found to have a decreased risk of heart disease when compared with non-drinkers (Heart and Stroke Foundation of Canada, 1999). Young et al. suggest that even though moderate alcohol may have a protective effect, excessive alcohol is associated with numerous other health problems and is considered a risk marker for other unhealthy behavior. Increased alcohol consumption has been associated with hypertension, dyslipidemia, obesity and increased risk of arrhythmias (Kingsley & Gupta, 1992). The *Manitoba Heart Health Survey: Technical Report* found that only 5 percent of Manitobans drank more than seven drinks per week. Excessive alcohol use was found to be more common in men than women, and more common among urban dwellers when compared to those living in rural communities (Young et al., 1991).

### Stress

Although the link between stress and heart disease is still being investigated, preliminary evidence suggests that stress contributes to the development of heart disease and stroke. It has been shown that individuals with prolonged stress have higher blood pressure and cholesterol levels, blood platelets that clot easier, and have higher sugar levels making it harder to control diabetes. Individuals under high stress are less likely to eat healthy and/or exercise as frequently as they should for optimal health; they also tend to smoke more than they would when they are not experiencing stress (Donatelle et al., 1998). Cannistra et al. (1992) found that women reported more stress at home than men.

The impact of stress is mediated by the individual's own ability to cope as well as the availability of his/her resources (Heart and Stroke Foundation of Canada, 1999). Furthermore, according to Kaoukis (1999) having a heart attack or undergoing cardiac surgery is a traumatic event, which often leaves people feeling emotionally distressed for months. Kaoukis also found that most people experience some degree of anxiety and/or depression, especially during the first few weeks after the event, with up to 50% of couples having marital problems at this time. This leads to an additional stressor for individuals.

#### Multiple risk factors

Sedentary lifestyles and poor nutritional habits combined with other risk factors, such as smoking or high stress levels, can be a recipe for disaster as each additional risk factor multiplies the effect of others, thereby compounding the risk for the disease (Harvey et al., 1996). Young et al. (1991) found that when examining the three main risk factors (hypertension, smoking and cholesterol), 19% of adults had two or more risk factors for CVD in 1990. Smyrski (1992) stated that by the time Canadians are over 65, 90% or more of them will have at least one major risk factor, with women being more likely to have two or more risk factors. Consequently, health care planners and providers are looking at disease prevention as a cost effective strategy to reduce the growth of health care costs (Swabey, 1997).

#### Non-modifiable risk factors

The risk associated with all forms of cardiovascular disease increase with age (Donatelle et al., 1998; Heart and Stroke Foundation of Canada, 1999). Men have been found to have a higher risk earlier on in life, with women's risk increasing approximately

ten years later than men (Heart and Stroke Foundation of Canada, 1999). While men are at a greater risk of having a heart attack, Donatelle found that women have less chance of surviving them. Family history is another risk factor, with this risk being even greater if it occurred in a same sex, first level family member. Women who have a history of cardiovascular disease in their mother or sibling before 60 years of age have a higher risk of CVD than do men whose father has the disease (Das & Banka, 1992). Finally, it has been found that black individuals are 45 percent more at risk for cardiovascular disease than Caucasians (Donatelle et al., 1998).

### Cardiac Rehabilitation

In 1964, the World Health Organization defined cardiac rehabilitation as “the sum of activity required to ensure cardiac patients the best possible physical, mental, and social conditions so that they may, by their own efforts, regain as normal as possible a place in the community and lead an active life”. Dafoe and Huston (1997) criticize this definition as being too broad and giving the impression that everyone receives cardiac rehabilitation whether it is through a doctor, on his or her own or through a formal program. In 1988, Greenland and Chu defined cardiac rehabilitation as the process by which patients with cardiac disease are restored to their optimal physical, medical, psychosocial, social, emotional, vocational and economic status, with the objectives being to minimize potential future cardiac risk by encouraging modification of cardiac risk factors. More recently, the Canadian Association of Cardiac Rehabilitation (1999) defined cardiac rehabilitation as:

The enhancement and maintenance of cardiovascular health through individualized programs designed to optimize physical, psychological, social, vocational and emotional status. This process includes the facilitation and delivery of secondary

prevention through heart hazard identification and modification in an effort to prevent disease progression and the recurrence of cardiac events. (p. 5)

For the purpose of this evaluation, cardiac rehabilitation will be defined as a comprehensive multidisciplinary approach to prevention, stabilization and possibly reversal of cardiovascular disease.

Martinez-Rubio (1999) states that cardiac rehabilitation usually combines prescriptive exercise training with cardiovascular disease risk factor modification for individuals who have CVD. At the Wellness Institute this multidisciplinary and multifactorial rehabilitation is a combination of physical activity, education, healthy eating, stress reduction and other techniques used to decrease the prevalence of the risk factors associated with cardiac disease. Maines and Lavie (1997) found that exercise and cardiac rehabilitation improved exercise capacity, lipid levels, blood pressure, depression, anxiety and quality of life. The *Stanford/SCRIP* study (1994) found that when exercise was combined with aggressive risk factor reduction, progression of cardiac disease could be slowed. It has also been found by Hamalainen, Luurila and Knuts (1995) that there was a significant long-term (15 year) reduction in cardiac related mortality for individuals who attended multifactorial interventions as compared with standard care. Similarly, psychologically-based cardiac programs, such as individual or group counseling alone, are not as effective on the rate of complications, return to work and mortality, as when they are part of a cardiac rehabilitation program (Armstrong, Wolfe, & Amery, 1994).

These specialized rehabilitation services are the most effective method of decreasing the risk of future cardiac events (Swabey, 1997) while being both medically and cost efficient. Some of the medical benefits of these programs include a slowing of

atherosclerotic disease (Lafontaine & Roitman, 1990), an improved overall quality of life (Swabey, 1997), and potentially, faster return to work and full-time employment (Kavanagh, 1988). It has been found that the lifetime medical costs of treating one woman with CVD is \$423,000 in 2002 American dollars (Birnbaum, Leong & Kabra, 2003). This suggests the need for an emphasis on prevention of and education about CVD.

Economic evaluations suggest that cardiac rehabilitation is a cost-effective intervention comparable to other accepted treatment modalities such as rehospitalization (Ades, Huang & Weaver, 1992; Dennis, 1991). The California Pulmonary Rehabilitation Collaborative Group (2004) found that individuals who participated in cardiac rehabilitation had significant and consistent reductions in use of healthcare resources. This included a decrease in the number of hospital visits, urgent care visits, physician office visits and telephone calls to physicians over an eighteen month follow-up period. This suggests participation in cardiac rehabilitation programs may lead to decreased medical costs and decreased pressure on the current medical system.

In a Canadian study by Boulay and Prud'homme (in press), they compared health care consumption and recurrent MI's. Post MI patients were divided into three groups: those who received conventional treatment, those who participated in a three month CR program, and those who participated in a year-long CR program. It was found that during the first three months, the mean emergency room visits were similar with no significant difference in mean rehospitalization. There was however a tendency for fewer readmissions in the two groups who participated in cardiac rehabilitation programs. During the 3 to 12 month period post MI discharge, the long term cardiac rehabilitation

group had fewer ER visits ( $p < 0.05$ ) and hospital readmissions ( $p < 0.05$ ). Finally the individuals who received conventional treatment had significantly higher incidents of recurrent MI (13%) and fatal MI (7.4%) over 12 months of follow-up when compared to the short term (0%, 0%) and long term (2.7%, 0%) cardiac rehabilitation programs. This study concluded that the recommendation of and participation in short or long term cardiac rehabilitation will lower the incidence of future MI's. Boulay and Prud'homme also found the long term cardiac rehabilitation program to be the most effective at reducing health care consumption.

Martinez-Rubio (1999) suggests cardiac rehabilitation should evolve from its current form into a risk reduction program by implementing approaches that have been shown to be effective. The aims of the program would include: initial evaluation and risk assessment; identification of goals for each risk factor; formation of an individual treatment plan; and long-term follow-up to enhance compliance (Martinez-Rubio, 1999). Merz (2002) supports the remodeling of cardiac rehabilitation, indicating that while many programs claim to be comprehensive; this is often not the case. It is suggested that smoking cessation, cholesterol reduction, exercise, stress management and both psychological and occupational counseling are included in existing cardiac programs (Merz, 2002).

In 1996, Harvey et al. reported on the preliminary results of Dr. Gelskey, the co-investigator of the *Manitoba/Saskatchewan Heart Project*, who was studying the use of medical services of individuals with and without risk factors for heart disease. In a personal interview, Gelskey reported that he had found that the largest proportion of people using health care services were those with risk factors for CVD. By reducing and

controlling risk factors, it was anticipated that the medical costs related to CVD would decrease. In a similar fashion, Dr. Grover, a clinical epidemiologist at the Montreal General Hospital (as cited in Swabey, 1997), states that for individuals already diagnosed with CVD, or who have had a heart attack or bypass surgery, secondary prevention is most effective, no matter what treatment modality is used.

#### Women and Cardiovascular Disease

In conducting an historical review of gender and cardiovascular disease in the literature, King and Paul (1996) found that articles generally focused on men. When women and cardiovascular disease was discussed the general focus was on valve disorder (which women were more likely to develop as a result of rheumatic fever than men) and the hindrance on the woman's role as child bearer and homemaker. Younger men with cardiovascular disease were the primary focus, which reflected the times and the importance of the growth of the economy. These authors noted that when women were mentioned it was often not intentional but merely a coincidence. Das and Banka (1992) reported that when women were included historically in research related to CVD, they tended to be older and had more unstable angina than men.

While some researchers feel that it is not relevant to repeat research on women that has already been completed on male participants in cardiac rehabilitation, King and Paul (1996) have argued the importance of this. This is supported by the fact that women have risk factors that are unique to women such as the use of oral contraceptives and menopause (Makrides, 1999).

In recent years, research trends have changed and there have been a number of studies on women and cardiovascular disease. Research now indicates that cardiac

disease is the number one killer of women (Murray, O'Farrell & Huston, 2000) and can no longer be ignored. Makrides (1999) reported that CVD is responsible for 41% of all Canadian women's deaths compared to 37% for men. Increased life expectancy as well as increased smoking, multiple role expectations and holding stressful jobs have led to an increase in cardiovascular disease in women in recent years (King & Paul, 1996). It was also found that women tend to be hospitalized longer than men, with the average women's stay being 13.1 days compared to 11.4 days for men. Research has consistently found that women who have cardiovascular disease are more likely to die than men. Roosevelt (1993) found that half of all women, but only 31 percent of men who have heart attacks die within a year. This may suggest that women have poorer health upon onset of the disease than men. It has also been found that women delay seeking treatment, and once they do seek treatment both physicians and patients have a more difficult time determining diagnosis (Murray et al., 2000).

A study completed by Garvin et al. (2003) found that when comparing men and women, women experience acute myocardial infarction (AMI) at an older age, are more anxious at the time and have more severe limitations afterwards. When age and gender were removed it was found that the preference for information and the preference for control were not associated with anxiety. However, it was found that increased control by patients can lead to a decrease in distress. These researchers suggested increasing patient control by providing patients with choices and encouraging participation in care during recovery.

In a Toronto based study by Grace et al. (2002), 906 patients (586 men and 320 women) in the Coronary Intensive Unit were studied. They found a significant difference

in psychological and vegetative depressive symptomatology in baseline scores based on gender, with women scoring higher on both. At six months it was found that men had significantly higher self-efficacy scores than woman. Another difference was that women had experienced significantly more life events/losses in the five years prior to their MI or UA. No significant gender difference in social support from family and friends was found. It was however, reported that men perceived significantly more support from their partner than women did. Grace et al. (2002) also found that only 30% of patients were referred to cardiac rehabilitation programs, with women being less likely to be referred to cardiac rehabilitation by their physicians than men.

#### Enrollment and Program Participation

While some studies have found that women were less likely than men to join cardiac rehabilitation programs, others have found no significant difference in enrollment based on gender. Although a large age difference between the genders was expected, this was not consistent in all studies or programs. Research by Filip, McGillen and Mosca (1999) found that 54.3% of subjects discharged from the University of Michigan Medical Center between October 1994 and November 1995 with a diagnosis of acute MI, participated in a cardiac rehabilitation program. Of the individuals who attended cardiac programs, there was no significant difference in enrollment based on gender. There was a more significant difference in age, with younger individuals (under 65) being more likely to enroll in cardiac rehabilitation. Women were however more likely to be older than men when they experienced their cardiac event ( $64.9 \pm 13.6$  versus  $60.5 \pm 12.2$  years,  $p=0.045$ ). While registration did not appear to be affected by gender, there was a difference in the type of program in which individuals enrolled. The majority (86.0%) of

individuals enrolled in a hospital-based program. Women were more likely to enroll in a community program such as a local fitness club while men were more likely to enter a home-based program (Filip et al., 1999).

Unlike the previously mentioned study, research by O'Farrell, Murray, Huston, LeGrand and Adamo (2000) at the University of Ottawa Heart Institute, Prevention and Rehabilitation Centre in Ottawa, Ontario found that considerably more cardiac rehabilitation participants were males. In fact, of the 387 participants that the study followed from November 1, 1995 to April 1, 1997, only 18% (70 out of 387) were female. When compared with male participants, women had higher low-density lipoprotein (LDL) and total cholesterol levels with lower exercise tolerance (O'Farrell et al., 2000). It was also found that female participants had lower levels of confidence in their exercise ability at the beginning of cardiac rehabilitation. The average age of participants was 59 ( $\pm 10$ ) for males and 61 ( $\pm 4$ ) for females.

The program at the University of Ottawa consisted of two three-hour education workshops on coronary risk factors, behavior change, coping strategies and heart healthy nutrition. Following an assessment, participants joined a supervised exercise class that took place twice weekly for three months. Patients were also counseled to follow a home program of exercise 2-5 times per week and given the option of attending stress management, smoking cessation and individual counseling depending on their needs and interests. Even though women had poorer exercise capacity, activity levels and quality of life scores, similar results were measured after the completion of the program (O'Farrell et al., 2000).

A study completed over a four-year time period at the Boston University Medical Center found fewer female than male participants in the cardiac rehabilitation program. Cannistra et al. (1992) followed 225 participants through a 12-week cardiac rehabilitation program which included exercise training, nutrition counseling and stress management/behavior modification. It was found that 174 participants (77.3%) were men and 51 (22.7%) were women with the average ages being 54 ( $\pm 10$ ) and 56 ( $\pm 10$ ) years respectively.

Todaro et al. (2004) found that women in general use cardiac rehabilitation services less frequently. When women do participate they are slightly older, have more medical problems and perceive greater psychosocial challenges than men at the time of entrance to cardiac rehabilitation programs. Given this, when compared with men, women may have fewer physical and emotional resources available to them to ensure they attend, adhere to and benefit from cardiac rehabilitation (Todaro et al., 2004).

Both O'Farrel et al. (2000) and Cannistra et al. (1992) found a two year difference between the mean ages based on gender. This is surprising since women become at greater risk of developing cardiovascular disease ten years later than men (Heart and Stroke Foundation, 1999). Both of these studies also had significantly fewer female than male participants. Filip et al. (1999) found no significant difference in enrollment based on gender but did find a large difference in the ages of participants, with females generally being older than male participants.

Between January 1, 2003 and July 1, 2003 the Wellness Institute in Winnipeg, Manitoba had 231 participants join their cardiac rehabilitation program. Of this, 163 participants (70.6%) were male and 68 (29.4%) were female. While this indicates a large

difference between the two genders, female participation in cardiac rehabilitation at the Wellness Institute was higher than in the studies completed at both the University of Ottawa Heart Institute and the Boston University Medical Centre. The mean ages and other information about participants in this study are discussed in Chapter 5.

#### Issues for Program Improvement

Like any program, not all individuals eligible for cardiac rehabilitation participate in this type of program. Researchers have attempted to determine ways in which the likelihood of females participating in cardiac rehabilitation could be increased. Brezinka, Dusseldorp and Maes (1998) found no significant differences in age, risk factors or medication between the genders upon entrance to cardiac rehabilitation. Women however reported lower perceived exercise tolerance, significantly less recreational exercise, significantly more functional complaints and significantly more psychosomatic complaints. There were also no differences in levels of depression or well-being yet women were more anxious and scored higher on the social inhibition and vital exhaustion than men. Brezinka et al. also found women scored higher on social inhibition indicating they felt more uneasy, unhappy and insecure with unfamiliar people/situations. Based on their findings, the authors concluded that individuals who scored high on social inhibition would be more likely to avoid participation in the program. It was also suggested that frustration when psychosomatic and functional complaints did not disappear may increase dissatisfaction with cardiac programs.

Brezinka et al. (1998) made recommendations to increase participation in cardiac programs by women. These included group counseling, social skills training, and having the exercise component done in groups of two or three instead of individually. These

authors also suggested that by encouraging social interaction between female participants, embarrassment and uneasiness may be reduced leading to the reduction of dropout rates for female participants.

Verrill et al. (2001) had participants of a North Carolina cardiac rehabilitation program complete a Quality of Life Measure upon entrance and completion of the program. After comparing results based on gender, they found that men scored higher overall on both pre and post measures, while women showed greater overall improvement. Men had higher overall scores and in the areas on health/function and family interaction while women had greater overall levels of change and on the socio-economic and family interaction sections. These findings suggest that while women may receive lower scores they receive as much or more benefits from the program as men.

In a study by Hurdle (2001), it was found that most health promotion programs rely heavily on education and information-giving strategies with little social support, yet it is believed that these programs are more effective when a social component is included. Programs that use social networks and supports (using the ecological systems model or the person-in-environment perspective) should be a strong consideration (Hurdle, 2001). Hurdle found that there are three main ways in which programs can increase the amount of social support that is received by participants. First, small-group exercises that offer participants the opportunity to develop connections with each other and increase social supports should be used instead of the lecture-style group presentations that are common in health promotion courses. A second way to build social supports into health promotion programs is to use a buddy system to reinforce desired behavior changes. Buddies are chosen for participants from their personal networks, assigned from the

group or a staff member can act as a buddy. The Wellness Institute already allows participants to bring a family member or friend to the educational component of the program. They do not however, allow non-members to participate in the exercise component. The third recommendation is to use peer role models, who are individuals who have received special training in promoting health related behaviors. It is important that the participants can identify with the peer role model based on ethnic and cultural background.

Ades, Waldmann, Polk and Coflesky (1992) found that physicians recommended cardiac rehabilitation more strongly to older men than to older women. They also found that sex-specific obstacles for women included slightly older age, greater likelihood of transportation problems, greater likelihood of having a dependent spouse at home and a higher prevalence of arthritis. The two major obstacles women in this study faced were lack of spousal support and less encouragement from health care professionals than that given to men.

In a Toronto study, both men and women indicated that their physician's recommendations were the primary factor in their entering cardiac rehabilitation. Women also indicated they were more likely to be influenced by adult children than their spouses, whereas men indicated they were more reliant on their spouses' opinion (Lieberman, Meana & Stewart, 1998). This suggests that women have a different support system than men. The researchers felt this could be due to several factors: women often outlive their husbands and therefore they have fewer or non-spouse social supports; women may feel their children are more knowledgeable than their elderly husbands; and men may rely more on their wives to arrange health care throughout their lives. This

indicates that different methods may be needed to encourage females to participate in cardiac rehabilitation programs.

Lieberman et al. (1998) suggest that strengthening and increasing physician support of cardiac rehabilitation programs will increase participation of both genders. It was suggested that for women, permission to speak to adult children about the benefits of the program may be advantageous. Lastly, women were more concerned than men about the co-existence of other illnesses. This can be reduced by discussing the program with individuals who are eligible for the program and assuring them that the program includes individual exercise goals and takes other limitations and/or health concerns into consideration. Lieberman et al. suggested that using these approaches will increase the participation of women in cardiac rehabilitation.

Missik's (2001) findings are in agreement with those reported by Lieberman et al (1998), particularly in relation to the importance of physician recommendations to join cardiac rehabilitation. In fact, Missik found that physician referral was the single strongest predictor of participation of women in cardiac programs. It was also found that physicians were more likely to refer and encourage patients to cardiac rehabilitation programs if they knew the patients had insurance that covered cardiac rehabilitation. The patients' history of coronary artery disease and insurance coverage of cardiac rehabilitation programs were found to predict compliance to referrals. Missik found that women's participation in cardiac rehabilitation is not related to a group of accessibility factors as previous studies reported, but is primarily related to one factor, physician referral. It was therefore recommended that physicians become more aware of cardiac

rehabilitation programs, increase referrals to eligible patients and encourage the participation in cardiac rehabilitation.

Research published in 2001 by Caulin-Glaser, Blum, Schmeizl, Prigerson, Zaret and Mazure is in agreement with results reported by Ades, Waldmann, Polk and Coflesky (1992). In an earlier study, Caulin-Glaser et al. found that when matched for age, procedures and clinical profiles, women were less likely to receive information about cardiac rehabilitation or a referral to a cardiac rehabilitation program. It is discouraging that almost 10 years later physicians are still more likely to refer men to cardiac rehabilitation programs than women considering the importance physician recommendations have in joining cardiac programs (Lieberman, Meana & Stewart, 1998; Missik, 2001).

#### Participant Preferences and Desired Program Elements

Research completed by Filip et al. (1999) found that both men and women rated short-term programs as their top preference over home-based and/or long-term programs. They also found that both genders rated nutritional counseling, long-term staff contact and exercise advice as the most important elements of a cardiac rehabilitation program. Other findings confirm that women prefer monitored exercise, peer group support and staff encouragement. This study also found that younger patients (under 65 years of age) scored stress management, vocational counseling, and smoking cessation components higher than older patients (over 65 years of age)<sup>1</sup>.

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<sup>1</sup> The program at the Wellness Institute does not have either vocational counseling or smoking cessation as a regular part of its cardiac program.

Moore (1996) conducted a focus group with 10 women to examine the perceptions and experiences of women participating in cardiac rehabilitation programs. The women were all over 65 years of age; six women lived alone and seven women had no spouse. All had participated in a twelve-week cardiac rehabilitation program within the last 6 months. The features most liked were being monitored during exercise, benefits of the program (feeling better), nice personnel, being part of a group, diet information, could wear anything, convenience and flexibility of the program, and that if they had health insurance it was covered. Features most disliked by the women were lack of choices when exercising (limited to bike and treadmill), lack of emotional support from staff, not social enough, was a "men's" club, felt rushed and crowded, and were being weighed too frequently (Moore, 1996).

The focus group expanded on support received from professional staff saying that staff members were too busy to provide any emotional support other than basic encouragement in regards to the participant's exercise regimen. The women wanted all aspects of their recovery to be discussed including relationships with family members, coping with lifestyle changes, grieving over recent losses, and managing their households (Moore, 1996). Suggestions for changing cardiac rehabilitation programs included more emotional support from staff, more variety of exercise choices (pool, running, track), bigger rooms and no overlapping sessions, extending the length of the program and including more socialization opportunities (Moore, 1996). Murray et al. (2000) suggested that offering support groups would be helpful for female participants. While some of these issues are also a concern for the program at the Wellness Institute, since

the Wellness Institute has a pool and track in its facility the variety of exercise choices is not expected to be an issue.

### Issues in Predicting Adherence to Cardiac Rehabilitation

According to Bock (2002) improvements will need to be made in three main areas to increase both enrollment in and adherence to cardiac rehabilitation programs by both genders. These include improved physician education to increase referral rates, better participant education to improve compliance with cardiac rehabilitation, and further information for the reasons for patient non-adherence and noncompliance. Issues that have been reported by Makrides (1999) as major barriers for women participating in cardiac programs include lack of social support, transportation problems, family responsibilities (such as the care of another family member) and lack of insurance coverage (cost of the program). Cardiac rehabilitation itself can provide an opportunity for women to socialize and build social networks but first it is necessary to get support from family members and physicians to join the program.

To adapt existing cardiac rehabilitation programs to take into consideration the needs of female participants, Carhart and Ades (1998) suggest taking into account women's lower baseline levels of functional capacity, developing individual goals for exercise and modifying risk factors, and having a flexible exercise schedule. They also suggest that it is important to take an individual's (particularly a woman's) psycho-social status into consideration (Carhart & Ades, 1998).

Numerous studies have noted the importance of social/emotional support for women in cardiac rehabilitation programs (Breginka, et al., 1998; Hurdle, 2001; Moore, 1996; Murray et al., 2000). However, the availability of social support for cardiac

members is often limited in many programs as they do not include such components as stress reduction (Merz, 2002). The cardiac program at the Wellness Institute includes a Body Mind Connection component which deals with goal setting and stress management as part of the curriculum with individual counseling also available. Ensuring that participants have access to this support is a potential area for social work intervention.

### Theoretical Perspectives

The Wellness Institute at the Seven Oaks General Hospital uses a case management model to deliver its cardiac rehabilitation program. It is felt, however that for the purposes of this evaluation the program should also be examined from a feminist perspective to clarify the importance of gender in a participants' experience with the program. Using both models will provide a richer examination than would be possible from either perspective by itself.

### Case Management

The agency describes this model as a collaborative process which assesses plans, implements, coordinates, monitors and evaluates options and services to meet an individuals health needs through communication and available resources to promote quality cost-effective outcomes. Compton and Galaway (1994) define case management as assisting clients to access and utilize the resources of their communities. Social work practice uses case management to help link people to their community, with linking generally being to neighbors, extended family, clubs, religious or recreational groups, as well as formally organized service providers.

Wharf and McKenzie (1998) criticize this approach as it refers to individuals as 'cases' and professionals as 'managers'. It is felt this tends to stigmatize those who

receive services and eliminate their sense of confidence. Putting professionals in that position suggests that they are in 'control of and can control the lives of the individuals they serve' (Wharf & McKenzie, 1998, pg. 20). Case management is often also criticized for not seeing each participant as an individual and lumping people into categories. In addition, this approach does not 'recognize the importance of assisting clients to access, use, develop, and manage informal sources of social support and overemphasizes the connections to formal social service delivery systems' (Compton & Galaway, 1994, p. 14).

The program manager of the cardiac program at the Wellness Institute is aware of these limitations and tries to avoid them by using various methods. All staff members refer to program participants by name or as a member. When each new member enters the program individual recommendations are made based on his or her specific situation. Gathering information on gender differences could assist the program in further identifying other needs of individual participants.

#### Feminist Approach

While the goal of the women's movement is equity and inclusiveness for women, feminist practice also looks at all people as being equal, and strives for equality to be enjoyed by all people (Brinks-Jenkins, 1991). According to Callahan (2003) feminist thinking exposes injustice experienced by women as well as other people in society. A fundamental principle of feminist thinking is the belief that treating everyone the same will not result in equal outcomes. For example, while men and women have equal access to education in Canada, most organizations are controlled by middle-aged men. This has led to educational institutions and policies which are designed by men, and according to

Callahan (2003), leads to the male way of perceiving the world becoming accepted as dominant knowledge. In addition, adult women are more likely to be responsible for child and eldercare than men. Callahan (2003) makes the argument that tradition and the ongoing advantages of this process normalize these advantages so that they may go unnoticed.

Hood and Cassaro (2002) state that feminism seeks to expose male supremacy and the ways in which male domination are embedded in society. Oppression and male supremacy are found in the many interlinking systems in society making it difficult to dismantle any one system without affecting the others (Hood & Cassaro, 2002). Callahan (2003) acknowledges that women are not only victims of oppression but also actors in an oppressive system that can both maintain and disrupt the system. Women can disrupt the system by creating different ways of knowing, and demonstrating other ways of making decisions and taking actions besides those generally accepted as proper and professional.

Attention to women's issues in social work has resulted in many dramatic changes in the language of practice, riveted attention on many previously unattended dimensions of women's experiences, and generally given greater voice to the perspectives and aspirations of the community of women in the profession. Feminism is not about the individual moving upward but changing the norms and practices to create environments that support and empower individuals by maximizing their potential (Bricker-Jenkins, 1991). Feminist thinking aims to connect the experiences of all women with both policy and practice (Callahan, 2003).

How an individual thinks about gender, power and patriarchy impacts research (Pillow, 2002). An individual using a feminist research approach may use multiple

research methods as in the case in other approaches, however, how they are used and for what purpose, may differ. Reinharz (1992) identified several major themes that are unique to the feminist approach in research. These include: attention to gender, examining women from within, considering things from a female perspective, understanding gender in the context of women's daily lives, empowerment on women, attention to research subjectivity, and the researcher's own ideas of gender in the research process.

According to Pillow (2002), the purpose of feminist research is to change conditions for women as much of the existing research on women has been done using male standards as the norm. This is referred to as a woman-as-deficit model. Specific issues of gender, race, social class and sexual orientation are addressed, each of which is embedded in a particular historical, social and political context that changes over time (Hood & Cassaro, 2002). Feminist research seeks to identify, expose, challenge and deconstruct patriarchy while attempting to understand women's experiences, histories and knowledge (Pillow, 2002, p. 18). By changing the way research is conducted, Pillow believes that it will alter what is known and how individuals come to know it.

While the results of the evaluation have been examined from a case management approach to ensure the evaluation produced usable results for the program, it also incorporated a feminist perspective, by focusing more specifically on women's experiences with the program. This has had implications for sampling, data collection methods and data analysis.

During the planning and implementation stages, gender was given considerable attention. Evaluation methods were chosen and questions created and monitored with the

intention of being female friendly so that responses would accurately reflect a female perspective. Gender was also a consideration when seeking cardiac rehabilitation members to participate in this study. While all interested individuals were included, the principal investigator focused on making special efforts to secure adequate female representation. This was more difficult than anticipated due to low female enrollment in the program. Adaptations were therefore made to increase female participation. This included extending the study for an additional month and including past female cardiac members in an additional evaluation component. Whenever possible, data was analyzed to ensure that gender was considered.

#### Evaluation

Evaluation is the “systematic collection of information about the activities, characteristics and outcomes of programs, personnel, and products in order for interested persons to make judgments about specific aspects of what those programs, personnel or products are doing and affecting” (Patton, 1981, p. 18). Attention should be paid to the manner and extent to which the specified activities produce the measured results and not solely on outcomes (Rutman, 1977). Bloom, Fischer and Orme (1999) define evaluation as the special analysis of outcomes, in contrast to the monitoring of interventions.

Newcomer, Hatry and Wholey (1994) define program evaluation as the systematic assessment of the extent to which the program causes its intended results. It provides feedback on program expenditures, program operations or program results. It provides useful information for the following purposes: developing new legislative proposals and in reauthorizing existing programs; developing new programs; deciding among budget alternatives; operating and improving public programs operated by private

nonprofit organizations; and managing, auditing and reporting on the uses of public funds (Newcomer et al., 1984).

According to Lewis, Lewis, Packard and Souflee (2001, p. 245) program evaluations have four objectives. These are: to provide information that will be useful in improving a program while it is in operation (formative or process evaluation); to provide information about the achievement of the program goals and objectives (outcome or effectiveness); to provide information about program outcomes relative to program costs; (efficiency) and to provide descriptive information about the type and quantity of program activities or inputs (effort).

#### Purpose

Babbie (1995) states that evaluation research, also known as program evaluation, is not a specific research method but rather a specific research purpose. That purpose is to evaluate the impact of social interventions where a social intervention is defined as an action taken for the purpose of producing some intended result. Conducting research is usually done for the purpose of collecting needed data on a program's accountability and to use informed decision-making in planning and management. The specifics of these purposes allow the evaluation to be planned to produce the desired information (Rutman, 1977, p. 26).

According to Wholey (1994) evaluation design includes a set of quantitative or qualitative measurements of program performance and a set of analyses that uses those measurements to answer key questions about program performance. This includes ways to describe program resources, program activities, and program outcomes as well as methods for estimating the net impacts of program activities, that is, the difference

between program outcomes and the outcomes that would have occurred without the program.

The purpose of this practicum evaluation is to increase the knowledge base on gender differences in cardiac rehabilitation programs. The results of the evaluation will assist decision-makers and practitioners to improve program performance and the quality of services provided to participants. In this way the evaluation will also ensure that the program meets client needs. The evaluation will also make recommendations as to how the program can use the study's findings.

#### Types of Evaluations

Unrau, Gabor and Grinnell (2001) identify five types of program-level evaluations, each of which is used for a different purpose. They are needs assessment, evaluability assessment, process evaluation, outcome evaluation, and cost-benefit evaluation. For the purposes of this practicum, only process and outcome evaluations will be discussed in detail.

#### Process evaluation

Process or formative evaluations describe the nature (e.g., type, frequency, duration) of actual program operations and client service activities (Unrau et al., 2001). It is "aimed at elucidating and understanding the internal dynamics of program operations" (Patton, 1987, p. 23). This type of evaluation is an effort to generate an accurate and detailed description that may include both quantitative and qualitative methods and generally implies an emphasis on looking at how a product or outcome is produced rather than looking at the product itself (Patton, 1987). This is an analysis of

the process not the results produced. Process evaluations are developmental, descriptive, continuous, flexible and inductive.

According to Rutman (1977), the purpose of this type of evaluation is to develop an evaluable program; research looks for causal relationships with data being equivocal and suggestive instead of definitive with the overall purpose of improving programs (Rutman, 1977). Process evaluation also helps build evidence of cause and effect if processes are implemented in conformity with expectations and produce intended results. Patton (1987, p. 24) identifies three main uses of process evaluations: understanding the dynamics of program operations; understanding how a program operates; and the dissemination and replication of programs under conditions where a program has served as a demonstration project or is considered to be a model worthy of replication at other sites.

There are two types of general activities examined in process evaluations; the first is the service delivery system which is composed of what workers do (interventions, activities) and what clients bring to the program (client characteristics). The second is administrative support systems, which comprise the organizational activities that exist to support the program's client service delivery system (supervision, support staff, emergency petty cash funds, evaluation activities) (Unrau et al., 2001).

Analysis of process evaluation results tells evaluators how many people received services, which services were received by whom and whether they are receiving the proper amount, type and quality of services. Patton (1987) stresses the importance of the evaluator looking at both the formal and informal patterns and consequences of the

program. Evaluators must not only describe and document program developments but also their role as evaluators in that development.

### Outcome Evaluation

Outcome evaluations are also known as summative evaluations or outcome assessments. Summative evaluations are conducted to make basic decisions about whether a program is effective and whether it should be continued (Patton, 1987). This type of evaluation also determines the amount and direction of change experienced by clients during or after a program's services (Unrau et al., 2001). It stems from wanting to know if a program benefits the clients it serves and is therefore always designed for a specific social service program. Outcome data provides meaningful insight and data on how a program or services impact clients. While summative evaluations tell us if a program is working, it does not tell us why. Another limitation is that there is no mention of the cost associated with success (Unrau et al., 2001).

Lewis et al. (2000) list two major types of outcomes: effectiveness and efficiency. Effectiveness is the extent to which objectives resolve a social problem whereas efficiency pertains to the cost-effectiveness or cost-benefit - the amount of resources used to accomplish a particular objective.

### Summary

Even though women are just as likely as men to develop cardiovascular disease, it has been found that women are less likely to be referred to and less likely to complete cardiac rehabilitation than men. Research has also shown that cardiac rehabilitation programs have historically been developed based on the needs of men. It is suggested this may be another reason why fewer women participate in cardiac rehabilitation

programs than men, as is the case at the cardiac rehabilitation program at the Wellness Institute in Winnipeg. Research also suggests that women tend to choose different types of programs and desire more interactive approaches than men.

To treat patients effectively it is important to know if the current program at the Wellness Institute is appropriate for both genders. While the service needs of women have been inferred from research findings, they have not been clearly postulated from a feminist perspective. For this reason, a feminist approach, combined with the case management model used by the program, will be used both to understand the program and to focus the research on gender. The questions, methodology and means of analysis have been developed with this focus in mind. This evaluation will also use a combined process and outcome evaluation approach. It is anticipated this approach will allow the researcher to gain depth and experience from the participants.

### **Chapter 3 Practicum Intervention**

The practicum was completed between November 2003 and April 2004 at the Wellness Institute within the context of their cardiac rehabilitation program. The student developed data collection measures, completed data collection tasks and analyzed results. This chapter will describe the practicum content, namely the Wellness Institute's cardiac program, the evaluation design and data collection methods.

#### **Cardiac Rehabilitation in Winnipeg**

In 1995, the National Institute of Health in the United States, (as cited in Seward, 2002) mandated cardiac rehabilitation as the standard of care for all cardiovascular patients following a three-year analysis of 650 studies which concluded that virtually all CVD patients need to participate in some type of cardiac rehabilitation to maximize their lifespan and optimize their quality of life. The overwhelming supporting evidence in favor of cardiac rehabilitation led the Winnipeg Regional Health Authority (WRHA) to include automatic referral to cardiac rehabilitation as part of its MI (Myocardial Infarction) Care Map. The MI Care Map acts as a technical checklist ensuring consistent treatment based on best practice (Modern cardiac care, 2002). This is unique as it is the only referral system of its kind in North America with 14 – 16% of MI patients in Canada currently participating in cardiac rehabilitation (Seward, 2002). Merz's (2002) recommendation that the American Heart Association and the American College of Cardiology make cardiac rehabilitation a key component in their secondary prevention guidelines supports this move.

As part of the MI Care Map, many health care professionals, including physicians, nurses, a pharmacist, a physiotherapist, a clinical dietitian and a social worker visit cardiovascular patients while they are hospitalized. Patients receive information on medications to take upon release, exercises that should be attempted, a change in diet that is required and other issues (Modern cardiac care, 2002). As of April 2001, the goal is that every heart attack patient released from a Winnipeg hospital will be referred to cardiac rehabilitation either at the Wellness Institute at Seven Oaks General Hospital or the Kinsmen Reh-Fit Centre (Modern cardiac care, 2002). In Winnipeg, these two cardiac rehabilitation programs work in conjunction with each other as well as physicians, the Winnipeg Regional Health Authority, Manitoba Health and Manitoba hospitals.

Individuals that are currently referred to cardiac rehabilitation are those individuals diagnosed with cardiac disease: acute coronary syndrome, congestive heart failure, arrhythmias, valvular disease cardiomyopathy, congenital heart disease, surgical interventions – coronary artery bypass graft, percutaneous transluminal coronary angioplasty, valve replacement, or pacemaker implant. Individuals not eligible for the program include those with stroke, peripheral vascular disease (leg clots without cardiac disease), anyone without a cardiovascular diagnosis, or those who are at high risk for cardiac disease. These individuals are also not included in WRHA funding for the cardiac rehabilitation program.

The MI Care Map focuses on secondary (reducing/delaying disease incidence) and tertiary prevention (controlling disease effects) and is only in effect for individuals who have been to a hospital, either through the emergency room or for surgery. It doesn't

include patients who were diagnosed with cardiac disease before the implementation of the MI Care Map or individuals who are diagnosed in their doctor's office and did not require hospitalization or surgery. These individuals may request a referral from their doctor, but the emphasis is then placed on the patient and physician to be aware of the benefits of the program.

Both cardiac rehabilitation programs are largely sponsored by the Winnipeg Regional Health Authority in the hopes that there will be a decrease in future cardiac related costs if individuals participate in these programs. Currently, the Winnipeg Regional Health Authority covers the majority of the cost of the sixteen-week program (\$840 per person), while the participant pays the remaining amount (\$160). Some medical plans such as Extended Blue Cross or Social Assistance (if the participant is already part of the program) will cover the participant's portion. In special circumstances, where financial reasons are the barrier for participation in the program, the WRHA will provide a partial or full subsidy for the participant fee which minimizes non-involvement in the program due to financial constraints.

#### Cardiac Rehabilitation at the Wellness Institute

The cardiac rehabilitation program at the Wellness Institute is designed to provide individuals who are recovering from a heart condition, an opportunity to improve their life-style, thereby decreasing their risk factors associated with cardiovascular disease. As previously mentioned individuals who are not eligible for the program include individuals who have had a stroke, have pulmonary vascular disease or are at a high risk for cardiovascular disease. The current goals of the cardiac rehabilitation program include promoting exercise in order to strengthen the cardiovascular system within

individual limits, educating participants and their families to promote a better understanding of CVD, and promoting healthy lifestyle choices. The expected outcomes of the cardiac program include reduced mortality and morbidity; decreased symptoms and risk factors; improved exercise tolerance; improved lipid profile; reduction in cigarette smoking; improvement in psychological well-being (motivation, compliance, decrease in depression, anxiety); and improved blood pressure. Expected benefits also include an increased ability on the part of participants to understand the level of exercise in which they can safely participate, reduced cardiac symptoms, decreased risk of subsequent heart attacks and slower progression of cardiac disease.

The 16-week cardiac program seeks to accomplish its goals by using a combination of different technologies. The services provided to participants include education, monitored physical activity, relaxation training, and individual counseling (for individuals identified as 'high risk' based on psychological measures and upon request). The cardiac program also encourages cardiac members to bring family and/or support persons (even if they are not members of the Wellness Institute) to the education and relaxation training sessions.

Individual assessments are completed in the weeks before the formal start of the cardiac program. A case manager (a nurse or physiotherapist) completes the initial interview to obtain information on health history, cardiac risk factors, pertinent test results, emotional health, and family support. An exercise assessment is also completed, including a Stress Test which can be used to determine each participant's exercise tolerance. At this time the case manager, along with a Wellness Consultant (exercise

specialist), also determines if there are any other barriers to exercise, such as knee problems or arthritis.

On the first day of the 16-week program, the program components, confidentiality rules and safety measures are explained to participants. They are also introduced to staff members and other participants and given a tour of the facility. At this point participants complete various standardized psychology tests to establish a baseline for which the psychological component of the program can be compared to throughout and after the program. Any participant identified as at 'high risk' receives an individual assessment with the psychologist and if deemed necessary the participant is offered individual counseling from the cardiac rehabilitation psychologist or social worker as part of the program.

The psychological measures completed include the Readiness to Change Questionnaire (RTCQ), Beck Depression Inventory (BDI2), San Francisco Health Survey (SF-36), Brief Symptom Inventory (BSI), Seattle Angina Questionnaire (SAQ) and the Client Satisfaction Survey (CSE). Since these measures are already being administered and the learning goals did not include administration of standardized measures, the results of these measures were not be analyzed as part of this evaluation.

For the first four weeks of the program, classes are held three times a week. The first hour of each class is dedicated to an educational group, with a second hour dedicated to exercise. Class sizes are small (eight to ten participants) to encourage interaction and ensure the safety of participants. Participants receive an accompanying resource/information guide. The educational component consists of the following topics, with each topic taught taking up one class period:

- Cardiovascular fitness
- Risk factors
- Heart healthy nutrition
- Medications
- Body mind connection (stress management and goals)
- Cardiovascular disease (Electrical exercise)
- Cardiovascular disease (Circulation)
- Cardiovascular disease (Muscle function)

After the first month participants are generally able to exercise at their own convenience without supervision. Participants are encouraged to continue exercising three times a week and receive a follow-up phone call at approximately week eight to discuss any difficulties they are having with their exercise program. In the second month of the program there are also three additional classes: two on the body mind connection and one on label reading. The last educational class is held in month three on healthy cooking; no classes are held in the final month of the program.

An individual exit interview/assessment is conducted with each participant to reassess risk factors and provide formal feedback to staff at the end of the 16-week program. Participants also complete the psychological measures and Stress Test a second time to provide a comparison of before and after results. The importance of maintaining behavior changes is discussed. At this point cardiac rehabilitation members can join the Wellness Institute as regular members or continue their new life-style on their own or at another facility.

The Wellness Institute defines success as any participant who lowers or eliminates one or more risk factors by the end of the program. For example, if someone quit smoking, started exercising regularly, or started eating healthier, these would be identified as successful outcomes. Any one of these would be a successful outcome as the unit of analysis is the individual.

### Methodology

It is clear from the literature that cardiovascular disease is a major concern for Canadians. Studies have demonstrated that cardiac rehabilitation is effective in reducing the risk factors associated with CVD. It has also been found that CVD disease is increasing in women even though this disease was initially thought of as one that primarily effected men. Research suggests that cardiac rehabilitation programs have been designed to meet the needs of men which may be different than those of women. While there is research demonstrating the differences in outcomes based on gender, there has been little research on the expectations and satisfaction of participants in CV programs that include goal setting, relaxation training and individual counseling.

The focus of this practicum was the exploration of the different expectations of and satisfaction with cardiac rehabilitation at the Wellness Institute based on gender. The relationship between social support and the start and continuation of CR was also examined. This focus suggested the following questions:

1. Does gender make it more or less likely for an individual to join CR?
2. Do male and female participants have different expectations and satisfaction levels with cardiac rehabilitation?

3. Is the CR program at the Wellness Institute meeting the needs identified by participants? What do participants identify as their service needs before and during the program?
4. Do male and female participants join the program for different reasons? Do different factors affect why men or women join the program?
5. Do participants have different sources of emotional support based on gender? Is there a relationship between emotional support provided and the continuation of the program? (Emotional support could include friends, family members, co-workers, medical professionals, etc., as well as the cardiac rehabilitation program and its staff members.)
6. Do females and males access different services while in the program?
7. Is there a gender difference in perceived improvement after completion of the program?

### Research Design

This partial evaluation used mostly process oriented measures with some outcome evaluation techniques. According to Unrau, Gabor and Grinnell Jr. (2001), process evaluation often includes outcome measures, however, the main purpose is to fine-tune services that the program delivers to clients. Process evaluation, also known as formative evaluation, gathers feedback and plays a critical role in shaping how a program develops over time. This type of evaluation is descriptive in nature and therefore does not require a comparison group.

The outcome evaluation component sought to determine if clients experienced change, how much and in what direction. This can help to determine if the program is

beneficial for participants while ensuring that the programs' goals are being met. Depending on the design, outcome evaluations may tell us if the program is working but will not identify why (or why not). In addition, as stated in Unrau et al. (2001, p. 75) "the results are specific to one specific group of clients, experiencing the specific conditions of one specific program over a specific time frame at a specific time." Therefore the results cannot be easily generalized to another population.

A descriptive program-level design was used. According to Unrau et al. (2001) this type of design requires the time order of variables to be specified, manipulation of the intervention and the establishment of the relationship between the intervention and the attainment of the program objectives. A descriptive design was used as it does not require either random assignment to a treatment group or control group. This was appropriate for this evaluation as the group that was studied was already in existence and it would have been unethical to deny participants access to the program.

The specific design used was a one group pretest-posttest design with an analysis of differences based on gender. Since all participants received the intervention, it was considered a constant as it is a quality shared by all members of the program (Unrau et al., 2001).

The design is written as follows:

Research Design:  $O^1 X O^2 O^3$

Where:

$O^1$  = First measurement (initial interview)

$X$  = The intervention (the first four weeks of scheduled cardiac rehabilitation activities)

O<sup>2</sup> = Second measurement (Evaluation form at the end of week four)

O<sup>3</sup> = Third measurement (Cardiac Survey and Client Satisfaction Questionnaire (CSQ-8) in week ten, a different instrument than the CSE already used by the WI).

A major limitation of this design identified by Unrau et al. (2001) is that it does not control for extraneous variables. This means that differences between measurements could be a result of other factors instead of the intervention.

#### Proposed Evaluation Methods

The evaluation involved the use of various data collection methods to answer the previously mentioned research questions. Qualitative methods such as interviews and a focus group allowed the evaluator to study specifics about an issue, event or case. Additional depth and detail were possible due to no predetermined categories for analysis, which provides broader information about a smaller set of people (Patton, 1987). Quantitative methods may involve the use of standardized or non-standardized measures with predetermined categories in which various opinions and experiences are placed. Standardized measures are designed to measure something particular and are tested for validity and reliability. The advantage of this is that it allows comparison and statistical aggregation of data since the reactions and experiences of numerous individuals has been tested for a set of questions (Patton, 1987). Other qualitative and quantitative methods including case file reviews, face-to-face interviews with current participants, dissemination of questionnaires to participants, phone interviews with past participants and a focus group with key informants were used as different techniques can

provide different perspectives about the program, thereby increasing knowledge more than one method could (Bouma, 1996, p. 180).

#### File data review

As part of the evaluation, client files and agency records were reviewed. According to Hatry (1994), these are not survey information, interview or observer ratings but data collected from a secondary source. Information on client characteristics (age, gender, marital status, living status, and income level), the number of clients enrolling in and completing the program, the number of clients receiving fee subsidies, services used by participants, as well as other potential information that may be available were collected. The file data review was completed for individuals who started the cardiac program at the Wellness Institute between October 28, 2002 and September 29, 2003. Available information on the number of individuals declining participation in the program and/or the reason for declining was also reviewed. In addition, the files of individuals that were included in the evaluation were reviewed to gather measures on blood pressure, cholesterol levels, waist girth and stress test results at the start of and completion of the program. The file data reviews were designed to answer (fully or partially) two of the research questions: whether women were less likely to join and complete the program and whether gender affected which services participants use. As well, file reviews provided some information on available outcome measures, such as blood pressure, BMI, MET and cholesterol levels. The file review schedule that was used is included in Appendix B.

The cardiac program recognizes the necessity for and benefits of data collection. In 2002, the program Max Gold was developed for the Wellness Institute and Reh-Fit

Centre to track data. Max Gold is still in its initial stages with the program currently recording blood work, anthropometric and various other test results. Risk factors such as previous exercise experience, personal and family psychiatric history, education, employment and social supports are also recorded. Accessing this information from Max Gold would have saved considerable time in developing a broadly based understanding of trends in utilization overtime. Although this information is found on Max Gold, it was not able to be utilized as there were reliability and accessibility problems identified with the computer program that still needed to be worked out by the Wellness Institute. Instead a manual file review was completed.

Data currently collected on individuals who declined participation in the program was also examined. This included information on age, gender, the first three letters of their postal code and the reason given for refusal. This information was used to gain insight on why individuals who were invited to join the program declined. Information on individuals who have declined participation in the program was gathered from the Max Gold program as this part of the program was found to be reliable.

An advantage to using data that is already being collected includes low cost, accessibility of data and minimum staff time required. As with any method there are also limitations and potential problems that can arise. Hatry (1994, p. 376) identifies five potential problems and solutions for using this type of data collection method. These are summarized below: (1) Data may be missing or incomplete which would require the evaluator to interview staff to fill in gaps if possible, determine if all or part of the evaluation should be terminated or modified, or exclude missing data or provide an estimate of the missing values. (2) Data may only be available in an overly aggregated

form. This would require the evaluator to go back to records and reconstruct the data if possible, collect new data, or drop the unavailable disaggregations from the evaluation. (3) Data elements may have unknown, different, or changing definitions. Adjustments could be made to make data more comparable, percentages could be used instead of absolute values, and/or the analysis of these elements could be dropped from the evaluation. (4) Data may be linked across time and clients so that evaluations need to ensure that outcome data applies to the clients covered by the scope of the evaluation. Variations in spelling and/or aliases may also need to be considered. (5) Confidentiality and privacy concerns require the evaluator to secure permission from those who will provide the data. When completing file reviews, the participant's name was not recorded on the File Review form to protect their identity.

#### Face-to-face interviews

Participant interviews were another aspect of this evaluation. Compton and Galaway (1994, p. 310) define an interview as a set of communications with four special characteristics: a specific context or setting; purposeful and directed; limited and parallel construction; and a specialized role relationship. Fowler and Mangione (1990, p. 11) identify two essential components for all interviews: the majority of the conversation consists of questions and answers and the participants' roles do not overlap. The interviewer asks the questions while the respondent answers the questions.

Face-to-face interviews produce the highest response rate with subjects generally providing more thoughtful responses. It also may allow longer, more open-ended responses, and subjects may be more willing to answer sensitive questions. The interviewer can also clarify questions and record nonverbal information. This type of

interview can also reach disabled or illiterate respondents, and fits well with the feminist perspective as it ensures that all voices are heard. Two of the disadvantages are its higher costs, and the greater chance for introducing interviewer bias. For example, respondents may react to the personality of the interviewer rather than the content of the interview. As well, the interviewer may also record a participant's response inaccurately (Unrau et al, 2001, p. 128).

Face-to-face interviews were used to partially answer five of the research questions previously mentioned. This includes identifying differences in gender based on program expectations, reasons for joining the program, sources of emotional support, factors affecting why individuals joined the program and identified service needs.

To allow adequate time to conduct participant interviews, they were scheduled for the first two weeks following the commencement of the December 2003 cardiac program classes. The interviews were used to collect demographic information for current participants (gender, marital status, living status, age, and income level). Information was also collected on the participant's expectations of the program, social support systems, reasons for joining the program, how they heard about the program, what services they expect they will use while they are members of the program, and difficulties that had to be overcome to join the program (transportation, financial, child/elder care, other health concerns, etc).

While the initial intention was to complete face-to-face interviews with all of the current cardiac members participating in this study, this did not happen. The researcher found individuals were resistant to participate in the study because of the interview. The main reason given was scheduling problems and the time necessary to complete an

interview. The face-to-face interview was therefore only used with the December group. For the January and February groups, the interview guide was re-organized as a written questionnaire, and participants were given the option of completing an interview instead. This increased the number of participants willing to be part of the study, with participants from the January and February groups all opting to complete the written questionnaire. This initial questionnaire was completed in a group format with the practicum student present to explain the questionnaire and provide any necessary clarification.

Potential sources of error in interviews that can affect a participant's response include: question wording, respondent characteristics unrelated to what is being measured, the interview setting, the position of a question in the interview schedule, and the presence of an interviewer (Fowler & Mangione, 1990, p. 24). Compton and Galaway (1994) discuss different barriers to effective communication which can be applied to an interview situation and which may also apply to an evaluation or research interview. These include anticipating what the respondent (or interviewer) is going to say, making an assumption about the meaning of an ambiguous message, failure to make the purpose of the interview explicit, prematurely engaging in change activities with the participant, and interviewer inattentiveness. Applicant resistance may also be an issue due to normal discomfort of a strange person and situation, social or cultural norms about service agencies, and some clients may be getting a degree of gratification from their problem (Compton & Galaway, 1994).

Patton (1987) describes three main types of qualitative interviewing with the difference between them being the extent to which questions are developed before the interview. They are an informal conversational interview, a general interview guide and

a standardized open-ended interview. A standardized interview guide with limited open-ended questions was used; this involved a list of questions that were answered throughout the course of each interview. The guide served as a checklist that ensured that the same information was collected from all individuals who were interviewed. A copy of the interview guide is located in Appendix C with the adapted written questionnaire version in Appendix D.

Standardized interview techniques were used to minimize potential sources of error and communication problems during interviews. Fowler and Mangione (1990, p. 33) identify these as: reading the question exactly as worded; when the respondent's answer is incomplete non-direct probing should be used to seek clarification and/or elaboration so that the respondents answers are not influenced; answers should be recorded without interviewer interpretation or discretion, and should reflect what the participant said; and the interviewer should be nonjudgmental and neutral towards the interview questions and the participant's responses. The interview guide was pre-tested by one male and one female who were past participants in the cardiac rehabilitation program at the Wellness Institute to ensure that the questions measure what is intended.

#### Telephone Interviews

To gain information about why people don't come to the program after a referral, it was intended that two techniques would be used: analyzing the data that has already been collected (which has been discussed previously) and telephone interviews. For the telephone interviews, the cardiac rehabilitation secretary asked individuals who declined program enrollment if they were interested in being in a research study before their

telephone number and name could be released to the researcher. This was asked in the following manner:

A person not associated with the cardiac rehabilitation program or the Wellness Institute is conducting an evaluation that is interested in circumstances that cause people to attend or not attend the program. The researcher has a few questions to ask people who decline coming to the program. Is it okay if she calls you to conduct a brief phone interview which will take approximately 5-10 minutes?

Unfortunately none of the individuals contacted were interested in participating in this part of the study. These telephone interviews had the potential to provide exploratory data (beyond what was already being collected) on why people (particularly women) decline the invitation to participate in the program. The intent was to determine why people didn't enroll and whether any of these reasons reflect factors that are within the control of the program. To answer these questions, previously recorded data collected from January 1<sup>st</sup> to December 31<sup>st</sup>, 2003 was analyzed and a focus group with key informants (Wellness Institute staff) was added. A copy of the telephone interview guide is found in Appendix E.

### Questionnaires

Questionnaires were used for evaluation purposes due to the lower cost, lower chance of introducing experimenter bias and providing participants with the greatest sense of confidentiality (Unrau et al., 2001). However, while questionnaires have lower response rates than interviews; different methods were used to increase the rate of completion. The evaluation questionnaire already used by the Wellness Institute was completed in a group format with staff present to explain the questionnaire and provide clarification if necessary. As well, individuals who required assistance due to vision, language or other barriers were assisted by staff or a family member. It is expected this

reduced the frustration experienced by some participants when completing the questionnaires. Participants in the study were mailed their final questionnaire in week ten of their program. Three attempts were made to contact any given participant. Constraints for implementing follow-up evaluations for individuals who did not return the completed survey included two participants who were deceased, one participant had moved while others were hospitalized resulting in a slower response rate.

Participants who were part of the December 2003, January 2004 or February 2004 classes completed questionnaires at two points throughout the program. The first was at the end of the fourth week of the program, which is the point where the program is currently being evaluated. A portion of the current Cardiac Rehabilitation Program Evaluation Form (see Appendix F) was used (questions 3, 5, 6, 7, 8, 9, 10, 11 and 12). A second questionnaire was developed by the principal investigator and was completed at approximately week ten of the program, which is included in Appendix G. Week ten was chosen to disseminate this questionnaire as it corresponds with the completion of the educational classes. Each question has been included because it has an intended bearing on one of the variables being studied. As Bouma (1996), notes, a question should not be included just for curiosity's sake: if the information can not be used or is not relevant, a question should not be included otherwise it is wasting both the researcher's and participants' time. Data was analyzed descriptively and for significant differences between groups. The cardiac rehabilitation questionnaire was pre-tested using one male and one female who had previously participated in the cardiac program at the Wellness Institute to ensure that the questionnaire measured what it was intended to measure. The

pretest determined that the questionnaire was generally appropriate and only a few changes were necessary.

As already mentioned, participants also completed a standardized Client Satisfaction Questionnaire (CSQ-8) (Appendix H) consisting of eight questions at approximately week ten of the program with the previously mentioned evaluation. Corcoran and Fischer (2000) indicate that while this questionnaire provides the client's perceptions of the value of services received it does not necessarily measure the clients' perceptions of gains from treatment or outcome. The CSQ-8 was scored by adding up the sum of the individual items, with the higher number indicating higher satisfaction. The lowest possible score is eight and the highest is 32. The scale has excellent internal consistency, with alphas that range from .86 to .94. In addition, the CSQ-8 has very good concurrent validity. Scores have also been found to correlate with drop-out rates (less satisfied clients are more likely to drop-out) and the scale has been correlated with some outcome variables, suggesting that a modest correlation between satisfaction and treatment gain (Corcoran & Fischer, 2000).

Combined, these questionnaires attempt to answer the following research questions: a) Is the Wellness Institute meeting the identified needs of participants? b) Are women less likely than men to complete the program? c) Is there a relationship between emotional support and continuation of the program? d) Is there a gender difference in perceived improvement? The questionnaires also provided information about participant satisfaction with various aspects of the program.

Due to limited female participation in this partial evaluation, past Wellness Institute cardiac rehabilitation members were asked to participate in the study.

Individuals who started the program before December 2003 were eligible to participate. Participants who were eligible to participate were contacted by Kelly Seward in person or through a form letter (Appendix I) making them aware of the study. Interested eligible members contacted Kelly Seward or the principal investigator directly.

While women were the main focus of this recruitment anyone who was interested in participating was accepted. Mail out questionnaires (Appendix J) were used to collect the following information from past participants: demographics (age, gender, marital status, and living status), reasons for joining the cardiac rehabilitation program, participant's sources of emotional support, how they heard about the program, what participants identify as their service needs, difficulties they had to overcome to join the program and if they have continued their healthy lifestyle after the completion of the program. A letter was included with the mail out questionnaire to provide participants with clarification on what was expected and provide them with a contact number for the principal investigator if they had any questions (Appendix K).

There were several advantages to the inclusion of past participants. First, it increased the number of female participants; thus providing women with a better opportunity to voice their opinions. It also provided information about the program for a longer period of time. One problem with including past participants is that one often gets a lower response rate. Of the 105 past participants contacted to participate, 24.8% agreed, which included 17 females and 9 males. Another potential limitation is individuals recruited from the Wellness Institute may be more satisfied with the program as they were still attending the facility. The majority of requests for participation in this

portion were therefore chosen from a mailing list of previous cardiac rehabilitation members to try to avoid the above limitation.

### Focus Group

A focus group with key informants (Wellness Institute staff) was added to collect exploratory data on why people, particularly women, decline the invitation to participate in cardiac rehabilitation. The intent was to determine why people didn't enroll and whether any of these reasons reflect factors that are within the control of the program.

The questions provided for the focus group to discuss were:

- Why do you think that so few women are participating in cardiac rehabilitation?
- Have you noticed any special concerns that women have that are different from men?
- Are these concerns being addressed? If not, how could they be?
- Do you know of people who are eligible to participate in, but have chosen not come to the program? What were their reasons?
- Do women dropout at a different rate than men?
- What do you think could be done to recruit and retain women participants?

According to Unrau et al. (2001), a focus group can provide a setting in which an interactive discussion on a predefined topic takes place in an accepting and non-threatening way. The principal researcher acted as the facilitator to ensure that the group stayed on topic and participants are respectful of each other. This type of evaluation method fits with the feminist perspective as it encourages the voice of all participants

to be heard. An advantage to using a focus group is that group dynamics often bring out aspects of a topic that may not have emerged in interviews or questionnaire responses. Focus group results also have high validity, are flexible and low in cost. Disadvantages of using only one focus group are that the findings may be too atypical to be generalized and that data is often difficult to analyze (Babbie, 1995).

### Sampling Methods

Since members of the cardiac rehabilitation program were already asked to provide information and complete questionnaires, this information was utilized as much as possible. It was however, still necessary to collect data directly from cardiac rehabilitation members. Initially individuals who started cardiac rehabilitation at the Wellness Institute in the months of December 2003 and January 2004 were asked to volunteer as potential participants in the study. Low numbers of women enrolling in the cardiac rehabilitation program resulted in study recruitment difficulties. This part of the evaluation was extended an additional month (February 2004) to ensure that women's voices were heard. Study participants were recruited by Wellness Institute staff along with the principal investigator approaching cardiac members during their first scheduled week of classes in the program.

Due to the larger percentage of male compared to female participants, the intention was to over sample women to ensure that the voices of women are adequately represented in the findings while a systematic randomized approach being used with the men. This would have resulted in every female and fifty percent of males being asked to participate in the evaluation (interview and survey). Due to the low number of study participants all individuals interested in participating in the study were included. Self-

selection of participants who agreed to participate in the evaluation will need to be considered. For example, individuals who agreed to participate in the questionnaires and interviews may have different characteristics than those who decline. For this reason, demographic information about the population was determined using the file review results. Any members of the cardiac rehabilitation program, who were already participating in a study on cardiac rehabilitation for any organization other than what is required of all members as part of the program, were excluded from this evaluation.

In the file review phase, files for individuals who joined the cardiac rehabilitation program at the Wellness Institute between October 28, 2002 and September 29, 2003 were examined. If an individual was put on medical hold (i.e. unable to attend for medical reasons for a period of time) while in the program, they were still included in the file review. Individuals who were part of the exercise program but not the educational component were excluded. There were a total of 376 files that fit these criteria and were included in the study.

Due to limited female participation in this study, past Wellness Institute cardiac rehabilitation members were asked to participate in the study. Individuals who started the program before December 2003 were eligible to participate. Participants who were eligible to participate were contacted by Kelly Seward in person or through a form letter making them aware of the study and that they could participate on a volunteer basis. The goal was to have a minimum of 20 female participants for this part of the study, but any men who were interested in participating were also accepted. In total 26 past participants completed the questionnaire (8 males and 18 females).

### Data Analysis and Presentation of Results

Data obtained from the interviews, evaluation forms and the questionnaires were analyzed using both descriptive and inferential statistics and are presented in tables. There are four levels of data measurement, all of which were used in this study. They are nominal, ordinal, interval and ratio. Nominal measurement of the following variables occurred: sex, marital status, living status and a number of yes/no questions. Frequency distributions were used to analyze some of the data collected in the questionnaire. A chi square statistic was used to determine whether any observed differences between groups were due to chance or represented a systematic difference caused by other factors.

Ordinal measures are items that are logically rank-ordered attributes along a progression from more to less (Babbie, 1995). Several rank-ordered questions were included in the interview guide. Interval measures where the attributes are rank ordered and separated by a uniform distance between them were also included. This includes rating-scales and medical measures such as blood pressure, stress test results, and waist girth. Ratio measures are similar to interval measures however, they are also based on a true zero point (Babbie, 1995). This includes age, number of times participants attended the Wellness Institute, waist girth, etc. Rates were calculated by dividing the number of occurrences of the incident by the period of time. This information was plotted on a chart for comparison purposes, when deemed appropriate. T-test procedures were used to test for differences in the mean scores between time periods.

Responses for file reviews, interviews, evaluation forms, and questionnaires were aggregated in tables that include percentages, means and medians. For comparison purposes, some results were presented in the same tables. For any interview or

questionnaire item that required an open ended response, results were grouped by themes using a content analysis approach. Where appropriate the results are provided immediately after the corresponding frequency distribution tables.

For qualitative data, the principal investigator identified themes which linked or explained data. The data was coded using key words as a way of identifying commonalities and variations. Once the key concepts were identified the frequency of themes and ideas was identified (Bouma, 1996). The information is organized according to the format used for the interview guide and questionnaire.

Since this was only a partial evaluation of the program, this report includes a discussion on how a more comprehensive evaluation could be designed if time was not a factor. Suggested alternative evaluation methods are included in this discussion.

#### Limitations

There are several limitations concerning this evaluation that are identified and that were taken into account during development. Participants of the program were referred to, participated in and completed the cardiac program due to their own choice. It is unknown if individuals who chose to participate may be more likely to be satisfied with the program than individuals who choose not to participate. Therefore the study can not generalize results from participants to representatives of the general population. The interventions are also offered simultaneously which may make it hard for individuals to determine which components of the program lead to satisfaction or dissatisfaction. For the purpose of this evaluation cross-effects of different interventions were not examined; instead the cardiac program as a whole was evaluated.

This practicum involved a nonrandomized study of relatively short duration. For an evaluation of this type it is extremely difficult to randomize participants from different programs, as there is no control over those who enter and those who do not enter cardiac programs in different cities and towns (Verrill et al., 2001). It would also be unethical to refuse participation in the program for the purpose of this evaluation. The information collected pertains to a particular time frame and needs to be considered accordingly (Unrau et al., 2001). For example more or less female or male participants could have joined at this time than is typical.

Methodological errors may also be present that could skew the results of this evaluation. Experimenter bias, possible maturation of participants, the accuracy of the instruments and mortality reflect potential threats to validity. In addition, the way in which data is interpreted may be a limitation as there isn't necessarily only one correct way to interpret data (Caplan & Caplan, 1994). There were also a number of qualitative limitations noted earlier.

#### Ethical Considerations

According to Unrau et al. (2001) ethical guidelines and principles can be organized as four major themes. They are having a clear purpose for the evaluation; confidentiality, anonymity, and informed consent; designing an ethical evaluation; and informing others about an evaluations findings. These themes were taken into consideration when developing this evaluation proposal.

The purpose of the evaluation was clearly identified for participants as well as those directly affected by the evaluation's findings. Confidentiality was adhered to by keeping information private and restructuring its use to the purposes identified to

participants. Anonymity was achieved by assigning participants and file review cases a code. The evaluator agreed not to provide information about participants to anyone not directly involved in the study and attempted to present results in a way that makes identifying participants impossible. During the evaluation information was protected with the code list and all identifiable material no longer required after the completion of the final report will be shredded. Informed consent was obtained from all participants. Copies of the Participant Consent Form, Telephone Consent Form and Past Participant Consent Form are provided in Appendix L, M and N. The last area of relevance for this evaluation is informing others about an evaluation's findings. It is important to give equal weight to both positive and negative findings and to share the evaluation's limitations.

#### Practicum and Evaluation Schedule and Time Allotment

The practicum and evaluation took place over approximately a period of six months, from mid November 2003 to mid May 2004. The evaluator spent approximately 550 hours on evaluation and practicum activities. Appendix O contains a breakdown of how this time was spent.

## **Chapter 4**

### **Evaluation Results and Discussion**

This chapter includes both the evaluation results and a discussion of these results. The first section of this chapter provides a description of the findings of the various components of the study. A brief discussion of how the different results compare to each other is also included. For the purpose of this study the terms 'participant' and 'member' both refer to an individual who is in or has completed the cardiac rehabilitation program. A respondent refers to an individual who responded to one of the surveys.

Nominal data was analyzed using chi-square with  $p < .05$  set as the criterion for determining statistical significance. For comparing males and females using ordinal, interval or ratio data, an independent t-test was used. A paired t-test was only used when pre-post results for the same sample were being compared. The significance level used to determine both t-tests is  $p < .05$  (2-tailed). Where small sample sizes exist (less than 20 respondents per gender) statistical tests were not used; instead descriptive observations were recorded.

#### Referral to the Cardiac Rehabilitation Program at the Wellness Institute

Information on individuals who declined referral to or participation in a cardiac rehabilitation program was obtained from the Max Gold program. For the one year period between January 1, 2003 to December 31, 2003 160 patients in Winnipeg, Manitoba refused referral to a cardiac rehabilitation program. Of this 59.4% were male and 40.6% were female. The largest age groups of individuals were in their 70's and 80's. Over the same time period, 349 patients who were referred to cardiac rehabilitation

declined participation in the program. Of this 68.8% were male and 31.2% were female.

The largest age groups of individuals were in their 70's and 60's (see Table 1).

**Table 1: Percentage Refusing at Hospital and Wellness Institute by Age**

Age	Percent Refusing at hospital (n = 160)	Percent Declining at WI (n = 349)
<40	0.6	0.9
40's	5.6	7.2
50's	18.1	17.5
60's	13.1	22.6
70's	30.6	33.0
80's	26.9	9.2
90+	2.5	1.1
Missing	2.5	8.6

The most common reasons for declining referral to cardiac rehabilitation were additional health issues, other reasons (reasons were not listed), not interested, and transportation problems. For individuals declining participation to the cardiac rehabilitation directly to the Wellness Institute, the most common reasons were living outside Winnipeg, not interested, other reasons, and additional health concerns. A complete listing of reasons for declining referral to or participation in cardiac rehabilitation is found in Table 2.

Information on the percentage of men and women eligible to be referred to cardiac rehabilitation was not available. Since women are more likely to die of a cardiac attack than men, fewer women may be eligible for cardiac programs. Further investigation is required to determine whether or not eligible women are being referred to cardiac rehabilitation programs.

**Table 2: Reasons for Refusing Cardiac Rehabilitation**

Reason	Percent Refusing at Hospital (n = 160)	Percent Declining at WI (n = 336)
Additional health issues	30.0	14.6
Other	20.0	14.9
Not interested	15.0	22.0
Transportation problems	13.1	8.9
Live outside of Winnipeg	6.3	25.0
Language barrier	5.6	3.0
Personal scheduling	5.0	8.3
Financial	3.8	3.0
Missing value	1.3	0.3

#### File Review Results

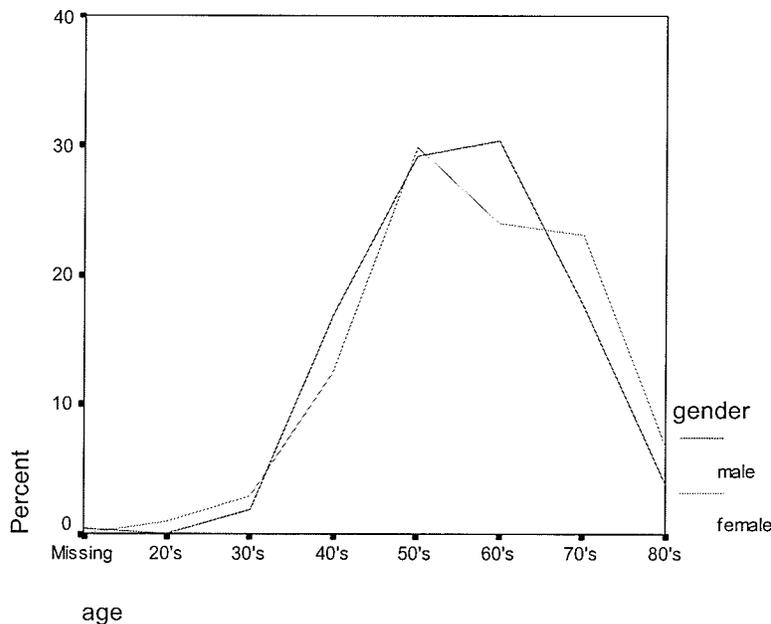
A comprehensive file review was completed for individuals who started the cardiac rehabilitation program at the Wellness Institute between October 28, 2002 and September 29, 2003. Information on client characteristics, the number of clients enrolled in the program, the number of clients who received fee waivers and the services used by participants was obtained. In addition, outcome measures such as blood pressure, cholesterol, waist girth and stress test results at the start and at the end of the program were also obtained.

Of the 376 individual file reviews eligible to be part of this study, 365 of the files were accessible. Of these files, 71.5% (n = 261) were male and 28.5% (n = 104) were female. Age was identified by an age category rather than the actual date. The age range for males was between their 30's and 80's, with the largest percentage of males being in their 60's. Females had a slightly wider age range with the youngest participant being in her 20's and the eldest in her 80's. The largest age group of females was in their 50's.

There was little difference in the distribution of age in participants as is shown in Graph 1.

It was also found that 88.0% of men and 66.7% of women were living with their spouse or significant other. Twelve percent of men and 31.3% of women were living alone with available support. An additional 2.0% (n = 2) of women were living alone without available support. In terms of employment, 49.2% of men and 40.6% of women were employed; 7.1% of men and 9.4% of women were unemployed; and 43.7% of men and 50% of women were retired. The majority of members paid the program fees (87.3% of males and 80.4% of females). One male and two females had third party funding, and 12.3% of males and 17.5% of females were subsidized by the WRHA. These results indicated that women were significantly more likely to live alone, were less likely to be employed and more likely to receive a subsidy from WRHA ( $p < .001$  in each case).

**Graph 1: File Review: Age Distribution by Gender**



### Exercise Experience

As shown in Table 3, the majority of males and females (51.6% and 60.2% respectively) had no exercise experience prior to joining the cardiac rehabilitation program. A significant difference was found between genders with  $\chi^2(3, N = 464) p = .002$ . The most significant difference was the number of males that exercised three or more times per week, which was double that of females. During the program more men than women participants (58.7% of males and 46.7% of females) attended the Wellness Institute forty or more times. Women were more likely than men to attend the program 10-19 times (9.5% of men and 13.3% of women) and 20-29 times (10.4% of men and 16.0% of women). There was a small percentage of members who attended less than 10 times ( $n = 7$  or 3.5 % of males and  $n = 3$  or 4.0% of females).

**Table 3: File Review: Exercise Experience**

Number of Times Weekly	Percent Females (n = 103)	Percent Males (n = 258)
None	60.2	51.6
Less than 2x / week	7.8	9.7
2-3x / week	18.4	12.0
More than 3x / week	13.6	26.7

After completion of the cardiac rehabilitation program, the majority of males and females were considered by their case manager to have low risk stratification. However, for males 30.5% were considered to have high risk stratifications, and a further 13.3% were considered to have moderate risk stratifications. In comparison, females were more likely to have a higher risk stratification with 35.0% considered high risk and an additional 19.0% considered moderate risk. To test statistical significance, scores were

converted to means with 1 = low, 2 = moderate and 3 = high risk. This was found to be not significant when examined for mean difference using the independent t-test.

### Medical History

The majority of participants within the time period of the file review had a family history of CVD. Female participants were more likely to have a family history of CVD with 71.2% of females compared to 65.9% of males having this risk factor. There was a small percentage of individuals who were adopted or unaware if there was a family history ( $n = 1$ , 0.4% of males and  $n = 1$ , 1.0% of females). The mean score difference between genders was not statistically significant.

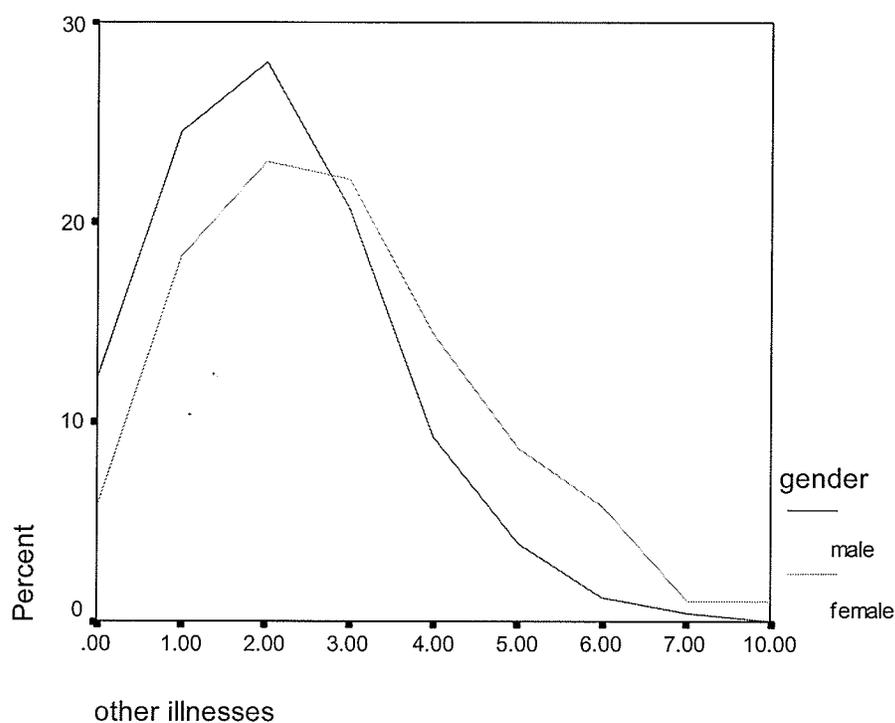
In addition, females had a higher number of other health concerns. The average number of other health concerns in addition to CVD was 2.8 illnesses ( $n = 104$ , s.d. = 1.77) for females while male participants had an average of 2.1 additional illnesses ( $n = 261$ , s.d. = 1.39). The majority of both male and female participants had 2 other illnesses (see Graph 2). The mean score difference between genders was statistically significant at  $p \leq 0.001$ .

Three medical illnesses/concerns were looked at in closer detail as they are also risk factors for CVD. These were diabetes, hypertension, and dyslipidemia. Each of these questions was treated as a yes/no answer, and each one was examined separately for gender differences using the chi-square tests. It was found that men were more likely to be hypertensive while women were more likely to have diabetes and/or dyslipidemia (see Table 4). The difference between the genders was found to be statistically significant for diabetes ( $p = .047$ ) but not for hypertension and dyslipidemia.

**Table 4: File Review: Percentage with Diabetes, Hypertension, and/or Dyslipidemia by Gender**

Diagnosis	Percent Females (n = 104)	Percent Males (n = 261)
Diabetes	33.7	25.3
Hypertension	36.5	41.0
Dyslipidemia	32.7	30.3

**Graph 2: File Review: Additional Illnesses by Gender**



Psychological conditions were examined separately from physical illnesses. It was found that the majority of participants suffered from no diagnosed psychological conditions (82.6% of males and 65.3% of females). However, women were significantly more likely to have been diagnosed with a psychological condition than men at  $\chi^2(1, N = 435) p < .001$ . The most noticeable difference was for depression (see Table 5). The majority of members did not report a family history of any psychological conditions

(83.6% of males and 75.3% of females). Once again however, women were more likely to report a family history of psychological conditions than men (see Table 6) and the difference between genders was statistically significant at  $\chi^2(1, N=435) p = .031$ .

**Table 5: File Review: Psychological History of Participants by Gender**

Psychological conditions	Percent Females (n = 95)	Percent Males (n = 245)
None	65.3	82.6
Depression	23.2	6.9
Anxiety	17.9	11.4
Other	3.2	0.4
Substance abuse	1.1	4.5
Psychosis	0.0	0.4

**Table 6: File Review: Family History of Psychological Conditions by Gender**

Psychological conditions	Percent Females (n = 93)	Percent Males (n = 250)
None	75.3	83.6
Depression	14.0	8.0
Substance abuse	11.8	8.8
Anxiety	8.6	4.0
Psychosis	1.1	0.0

The majority of cardiac members identified themselves as non-smokers, with 69.0% of male and 72.5% of female participants fitting within this category. A significant number of individuals (23.8% of males and 19.2% of females) had quit smoking within one-year following their cardiac event. In addition, there were a small percentage of individuals (7.2% of males and 7.6% of females) who were still smoking. As indicated the smoking patterns were similar across genders.

#### Medical Outcome Measures

Numerous medical test results were obtained from the file review. These included weight, BMI, blood pressure, heart rate, cholesterol, glucose, and MET levels.

Measures were generally taken twice, once at the beginning of the program and again at the end of the sixteen-week program. Second assessment results were not available for 36.4% of the files. Of this total, 64.7% were male and 35.3% were female. Reasons for non-attendance at the second assessment were sometimes listed, which included tests performed by the member's physician and members being on medical hold (non-attendance at the program due to medical reasons). It is unknown if the samples at time 2 are representative of time 1, but it was observed that no real change in weight, BMI and waist girth was found. This is shown in Table 7.

**Table 7: File Review: Weight, BMI and Waist Measurements by Gender**

Gender	Weight Time 1	Weight Time 2	BMI Time 1	BMI Time 2	Waist girth Time 1	Waist girth Time 2
Female:						
N	104	52	104	49	104	44
Mean	84.0	82.8	32.0	31.7	99.3	94.4
S.D.	22.51	21.23	8.51	7.47	16.95	15.14
Male:						
N	259	163	258	162	254	149
Mean	92.4	90.8	30.3	30.2	105.9	103.3
S.D.	21.19	20.47	60.43	7.347	13.96	13.64
Total:						
N	363	215	362	211	358	193
Mean	90.0	88.9	30.8	30.5	104.0	101.3
S.D.	21.88	20.88	6.87	7.38	15.16	14.45

The Wellness Institute follows the recommendations set out by the Canadian Diabetes Association (2003) for hypertension. These recommendations take into account a person's health problems and some aspects of their lifestyle, such as smoking. If someone has high blood pressure and no other health concerns, the desirable level is <140/90 mmHg. If an individual has other health concerns such as smoking, and high cholesterol, a blood pressure level of <130/85 mmHg is a reasonable standard. The file

review found that blood pressure tended to not improve for either gender throughout the course of the program. This is illustrated in Table 8. While the samples from Time 2 are not necessarily representative of Time 1, it was observed that the average resting heart rate improved slightly (decreased) between Time 1 and Time 2 for both male and female participants. In addition, the average maximum heart rate also improved (increased) for participants between the two time periods (see Table 9).

**Table 8: File Review: Blood Pressure**

Blood Pressure	Females		Males	
	N	Mean	N	Mean
Time 1	103	128.7/72.9	260	127.3/75.1
Time 2	51	135.5/75.5	166	132.7/79.0
<hr/>				
Max Blood Pressure				
Time 1	62	154.4/79.4	220	151.5/79.8
Time 2	46	158.9/81.7	160	158.4/82.6

**Table 9: File Review: Heart Rate**

Heart Rate	N	Females		N	Males	
		Mean	S.D		Mean	S.D.
<hr/>						
Resting						
Time 1	104	69.2	10.75	260	68.3	13.52
Time 2	50	67.8	15.20	163	66.9	11.49
<hr/>						
Maximum						
Time 1	68	114.3	20.82	226	119.8	20.14
Time 2	50	121.3	20.46	163	126.4	21.72

Guidelines for cholesterol levels are very specific. While a low risk person can have slightly higher cholesterol levels, there are different recommendations for people with cardiac disease (or other high risk individuals). The Wellness Institute uses: <2.5

mmol/L for low-density lipoprotein (LDL); >1.0 mmol/L for high-density lipoprotein (HDL); <1.7 mmol/L for triglycerides; and <4.0 for the total cholesterol/HDL ratio. With respect to cholesterol, the results were similar for both genders. Once again, samples of Time 2 are not necessarily representative of Time 1, but it was observed that total cholesterol, LDL, triglycerides and TC/HDL ratio all decreased throughout the course of the program (see Table 10). On average the HDL levels remained the same.

**Table 10: File Review: Cholesterol Levels**

Cholesterol	N	Females		N	Males	
		Mean	S.D.		Mean	S.D.
<b>Total Cholesterol</b>						
Time 1	90	5.1	1.32	235	4.9	1.39
Time 2	46	4.4	0.97	129	4.2	1.00
<b>LDL</b>						
Time 1	86	3.0	1.12	220	2.8	1.06
Time 2	45	2.4	0.84	127	2.3	0.75
<b>HDL</b>						
Time 1	89	1.2	0.30	235	1.1	0.34
Time 2	45	1.3	0.33	129	1.1	0.32
<b>Triglycerides</b>						
Time 1	89	1.9	1.08	233	2.2	1.74
Time 2	46	1.6	0.75	130	1.7	1.05
<b>TC/HDL Ratio</b>						
Time 1	89	4.3	1.36	230	5.3	4.68
Time 2	44	3.6	1.10	127	4.2	3.05

At the beginning of the program (Time 1), 30.6% of cardiac members had the recommended LDL levels (n = 33 or 19.2% of women and n = 87 or 54.5% of men). For those members who had their levels taken at the end of the program (Time 2) at the Wellness Institute, 53.0% had desirable level, (n = 30 or 33.3% of women and n = 85 or

66.9% of men). This suggests that a larger percentage of members had LDL levels within the desirable range after the program when compared to the start of the program. In addition, a larger percentage of women than men met their LDL target level. Out of the members with LDL levels recorded at both times, 24 out of 37 women (64.5%) and 67 out of 112 men (59.8%) improved their scores.

For individuals who have cardiac disease, a high-density lipoprotein (HDL) of  $>1.0$  mmol/L is recommended. During the initial assessment (Time 1), 55.6% of cardiac members had an HDL level of  $>1.0$  mmol/L ( $n = 66$  or 74.2% of women and  $n = 114$  or 48.5% of men). For those members who had their levels taken by the Wellness Institute at the end of the program (Time 2), 63.8% had desirable HDL levels ( $n = 37$  or 82.2% of women and  $n = 74$  or 57.4% of men). This illustrates an increased frequency of recommended HDL levels in participants by the end of the program. A larger percentage of women had the recommended HDL levels at both Time 1 and Time 2. Out of the members with HDL levels recorded for both time periods, 24 out of 38 women (63.2%) and 68 out of 142 men (47.9%) had improved scores.

With respect to triglycerides, the recommendation is  $<1.7$  mmol/L for individuals with cardiac disease. At the beginning of the program, 50.3% of cardiac members had the desirable level of triglycerides ( $n = 47$  or 52.8% of women and  $n = 115$  or 49.4% of men). For those members who had their levels taken during the second assessment, 68.2% had the desirable level of triglycerides ( $n = 35$  or 76.1% of women and  $n = 85$  or 65.4% of men). There was an improvement in triglyceride levels for both males and females by the end of the program. Out of the members who had their triglyceride levels

taken by the Wellness Institute at both times, 22 women (n = 42) and 82 men (n = 121) had improved levels.

In terms of the total cholesterol/ HDL ratio, <4.0 is the current recommendation. During the initial assessment, 32.6% met this recommendation (n = 43 or 48.3% of women and n = 61 or 26.5% of men). For those members who had their ratio calculated during the second assessment, 36.8% fell within the desired range (n = 32 or 72.7% of women and n = 72 or 56.7% of men). Out of the members who had their ratio calculated at both times by the Wellness Institute, 31 women (n = 38) and 86 men (n = 117) had improved their ratio. There was a tendency for more women than men to fall within the recommended levels.

According to the Canadian Diabetes Association (2003) a blood glucose level of 7.0 is considered to be diabetic, and a level of 6.0 or higher is reason for engaging in preventative measures such as exercise and watching one's diet. Between Time 1 and Time 2, the average blood glucose levels for males remained the same while it decreased for female participants (see Table 11). Out of those members who had their glucose levels taken by the Wellness Institute at both times, 13 out of 28 women (46.4%) and 26 out of 59 men (44.1%) had improved levels.

**Table 11: File Review: Blood Glucose**

Blood Glucose	N	Females		N	Males	
		Mean	S.D		Mean	S.D.
Time 1	55	7.1	3.30	138	6.3	1.88
Time 2	39	6.2	2.11	109	6.2	1.26

Cardiac members completed two stress tests during the course of the program. These stress tests are used to measure endurance and cardiovascular strength. It is a description of how much work a person (70 kg) can do according to the amount of oxygen they use. For example, sitting down resting is 1 MET while running is 13. The Wellness Institute uses a level less than 5 to indicate decreased functional capacity. MET levels should improve with physical conditioning. The average MET levels for male participants were higher than female participants both before and after the program. However, the average levels for both genders improved from the first to second measurement (see Table 12). Out of the members with MET levels recorded for both times, 33 of 43 women (76.7%) and 124 of 156 men (79.5%) had improved scores.

**Table 12: File Review: MET Levels**

MET levels	N	Females		N	Males	
		Mean	S.D		Mean	S.D.
Time 1	68	5.0	2.04	226	7.0	2.44
Time 2	50	6.5	2.92	163	8.9	2.87

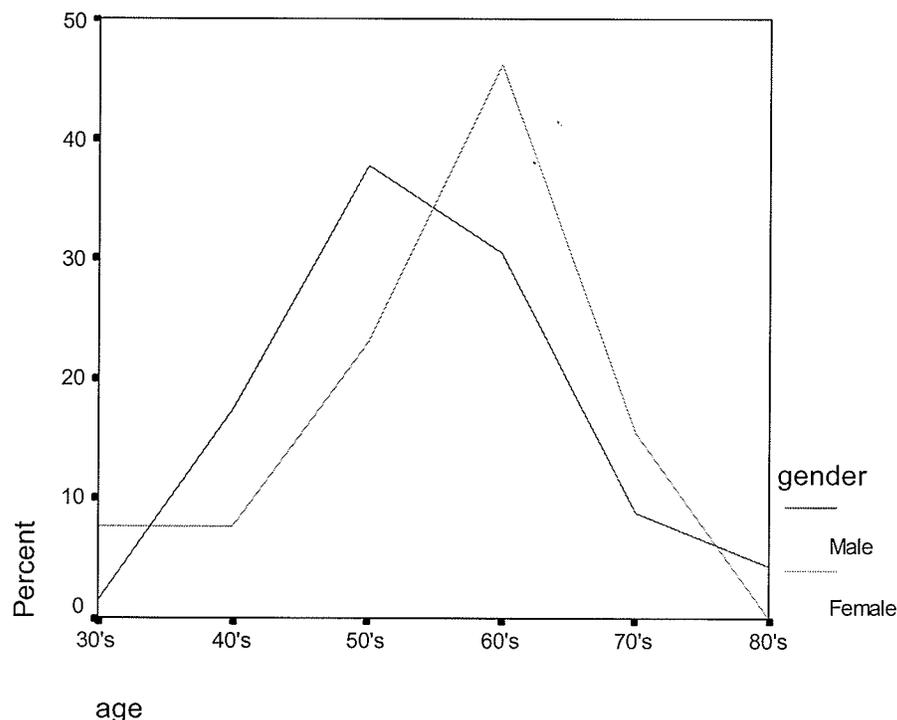
#### Initial Interviews/Questionnaires for Current Respondents

Of the 120 members (99 men and 21 females) that enrolled between December 2003 and February 2004, 82 individuals (68.3%) agreed to participate in this study. Of these respondents 69 (84.1%) were male and 13 (15.9%) were female. This proportion is similar to the general distribution of men and women in the program for those months (82.5% were men and 17.5% were women). Of the 38 individuals who were not interested in participating, five gave reasons for their non-participation. One man cited scheduling difficulties due to numerous medical appointments, while another male

member had memory loss that would make participation difficult. There were also three females who declined participation: one due to literacy and two due to a language barrier.

The age range for male respondents in this part of the study was between their 30's and 80's. The average age for male respondents was 58.5 years, with the highest percentage of males being in their 50's. Meanwhile, the age range for female respondents was between their 30's and 70's; the average age for female respondents in this part of the study was 60.6 years with the largest percentage of females being in their 60's. The age distribution for those who participated in this study is shown in Graph 3. The mean score difference between genders was not statistically significant.

**Graph 3: Current Respondents: Age Distribution by Gender**



It was also found that 76.5% of men and 61.5% of women were married or living with their significant other. Roughly the same percentage of men and women were

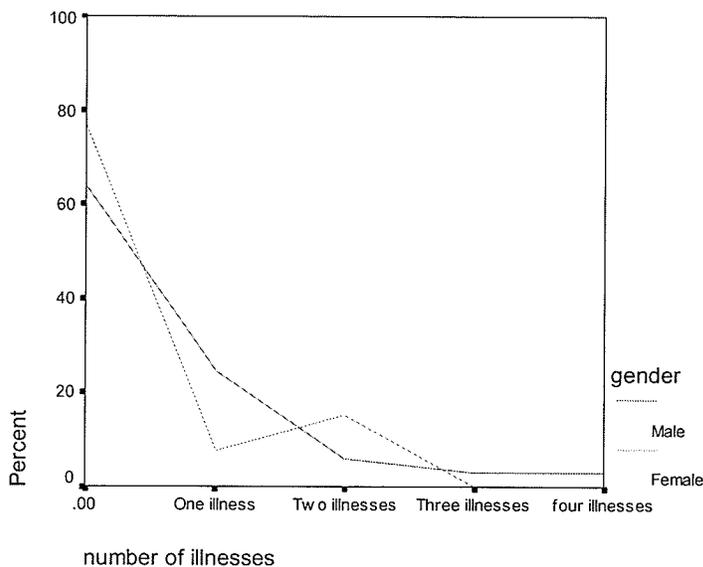
divorced (7.4 % and 7.7% respectively). Of the remaining men, 5.9% were single and 7.4% were widowed. There were no single females, but 30.8% were widowed. Using a chi-square test this was found to be statistically significant at  $\chi^2(2, N = 462) p < .001$  with the most significant difference being fewer women than men were married or living with their significant other. The majority of both men (76.5%) and women (61.5%) lived with their spouses. A small percentage (8.8%) of men lived alone, with an additional 11.8% living in another situation, such as with an extended family member. All of the remaining women lived alone (38.5%), with no females living in another type of living situation.

The majority of women and almost half of men indicated that they did not have health insurance that covered any of the program costs (49.3% of males and 61.5% of females). There were also a few male participants (2.9%) who were unsure if the program would be covered by their supplemental health insurance. Of those with health insurance, 24.2% of males but no females received full reimbursement for the program costs. The remaining 63.6% of men and all of the women were covered for a portion of the program costs. An additional 11.9% of men and 15.4% of women were subsidized by the WRHA. One male respondent was unsure if he would receive a WRHA subsidy.

Respondents were asked to list any illnesses or medical problems (besides CVD) that they had. The majority of both male and female respondents cited no additional illnesses. Female respondents, however, had a slightly lower average rate of illnesses in addition to CVD than men (0.38 for women and 0.57 for men). This mean difference was not statistically significant using an independent t-test. Graph 4 illustrates the range of additional illnesses by gender.

When asked to list three categories of individuals whom they would turn to for emotional and/or social support in an open-ended format, males indicated that their spouse or significant other and children were tied for the most frequent choice; that is 74.2% of male respondents selected each of these categories as one of their three choices. Friends were third in order of frequency at 48.5%, and siblings were fourth with 27.3%. Women cited their children most frequently as their support person(s) (i.e., 91.7% identified children as one of their choices). Friends were the second most commonly cited category at 75.0%, with their spouse or significant other and other family members tied at 41.7% (see Table 13).

**Graph 4: Current Respondents: Additional Illnesses by Gender**



Respondents were asked to identify who initially told them about the cardiac rehabilitation program at the Wellness Institute. The choices included: family doctor, social worker, heart specialist, hospital staff, friend, advertisement or family member. Male respondents indicated that they were most frequently told about the cardiac

rehabilitation program at the Wellness Institute by hospital staff (n = 38 or 55.1%), their family doctor (n = 13 or 18.8%) and their heart specialist (n = 6 or 8.7%). Women were most commonly told about the program by their family doctor (n = 4 or 30.8%), their heart specialist (n = 3 or 23.1%), hospital staff (n = 2 or 15.4%) and family (n = 2 or 15.4%). A chi-square test was not performed due to the number of cells with less than 5 responses. The largest observed differences were found between hospital staff (a higher proportion of men cited this) and heart specialists (a higher proportion of women cited this) recommending the program. Women were also more likely to have heard about the program through their family doctor than men.

**Table 13: Current Respondents: Support Persons for Individuals with CVD by Gender**

Support Person	Females		Males	
	N	Percent	N	Percent
Children, step-children	11	91.7	49	74.2
Friend(s), co-workers	9	75.0	32	48.5
Spouse, significant other	5	41.7	49	74.2
Other family, god parents	5	41.7	16	24.2
Parents, foster parents	3	25.0	9	13.6
Sibling(s)	2	15.4	18	27.3
Religious members	0	0.0	3	4.5
Doctor	0	0.0	3	4.5
Self	0	0.0	1	1.5
None	0	0.0	1	1.5

Note: N refers to number of responses and each respondent could reflect up to three choices. Twelve women and 66 men answered this question.

When asked to identify who encouraged them the most to join the program, the choices given were similar to the previous question. The choices included: family doctor, social worker, heart specialist, hospital staff, a friend, self or family member. Male respondents were encouraged to join the cardiac program most frequently by their family

(n = 19, 27.5%), their family doctor (n = 16, 23.2%) and hospital staff (n = 13, 18.8%). Female respondents were encouraged most frequently to join by their family doctor (n = 5, 38.5%), and their family (n = 4, 30.8%). The difference between genders was not statistically significant. Women were much more likely than men to identify their family doctor as providing them with the most encouragement to join cardiac rehabilitation.

Of the 82 participants, 11 agreed to participate in an initial interview instead of a questionnaire. Only two of these respondents were female. The interview provided more information than the questionnaire on the reasons why respondents joined the cardiac rehabilitation program at the Wellness Institute. The reasons are provided below with the number of responses for each in brackets.

- Recommended by professionals such as physicians, heart specialists (3 men)
- To learn how to exercise safely and to have access to the exercise facilities (2 men, 1 women)
- Needed support as was still unsure of the extent of the problem and had been previously unaware that they were at risk for heart disease (respondent was unaware of any warnings) (3 men)
- Heard about the program through an advertisement/was contacted by the program, staff personnel then helped to explain the benefits while providing support to potential participants (2 men)
- Look after self better (2 men)
- Want to get back to normal (1 woman)
- Group setting makes accomplishing goals and leading a healthy lifestyle easier (1 man)

- To strengthen self mentally (1 woman)
- To be around in the future for family (1 woman)

#### The Cardiac Rehabilitation Program

One of the questions about the Cardiac Rehabilitation Program asked respondents to identify which parts of the program they thought would be helpful for them. The choices were exercise, relaxation techniques, education, social support, nutrition, body mind connection, medications or other, as specified. The exercise portion of the program was identified as having the expectation of being the most helpful (98.6% of men and 13 out of 13 women identified this as one of the three parts likely to be most helpful). Nutrition was identified as one of their choices by 62.3% (n = 43) of men and 38.5% (n = 5) of women, while 52.2% (n = 36) of men and 30.8% (n = 4) of women identified the educational component as one of their choices. There was a gender difference for education and nutrition, with men listing these items as one of their three choices more often than women. It was also of interest that social support received such a low score as it was expected this would be more important (see Table 14).

**Table 14: Current Respondents: Anticipated Importance of Program Components by Gender**

Importance of Program Components	Females		Males	
	N	Percent	N	Percent
Exercise	13	100.0	68	98.6
Nutrition	5	38.5	43	62.3
Medications	5	38.5	18	26.1
Education	4	30.8	36	52.2
Body mind connection	3	23.1	11	15.9
Social support	2	15.4	5	7.2

Note: N refers to number of responses and each respondent could select up to three choices. Thirteen women and 69 men answered this question. The percent is based on the number of respondents.

Study participants were also asked to identify whether or not they would potentially access each of five additional services (listed in Table 15) that are offered at the Wellness Institute. Male respondents ranked physiotherapy, private sessions with the dietitian and specialized exercise classes such as yoga, tai chi, etc., as most important. For female respondents, physiotherapy and specialized exercise classes were tied for the service expected to be used most frequently. Private sessions with the dietitian and individualized counseling were also seen as important. Due to the number of cells with less than 5 responses, the chi-square test was not used. As indicated in Table 15, women were more likely to use specialized exercise classes, with men being more likely to use physiotherapy, private dietitian sessions, and massage therapy. There was no large difference between genders for individualized counseling.

**Table 15: Current Respondents: Expectation of Accessing Services by Gender**

Expectations of accessing services	Females		Males	
	N	Percent	N	Percent
Physiotherapy	6	50.0	40	58.8
Specialized exercise classes	6	50.0	26	38.2
Dietitian – private session	4	33.3	37	54.4
Individualized counseling	4	33.3	24	35.3
Massage therapy	1	8.3	14	20.6

Note: N refers to number of responses and each respondent could select up to three choices. Thirteen women and 69 men answered this question. The percent is based on the number of respondents.

In a general question, respondents were asked to self-report on their physical ability and what they were able to do at the time they joined the cardiac rehabilitation program. They were asked to rank their ability on a scale of '1' to '10' with '1' indicating they were unable to do any of their desired physical activities and with '10' indicating they were able to do all of the physical activities they wanted. The mean score

for men was 5.66 and it was 5.75 for women. The mean difference in these scores was not statistically significant.

### Personal Goals of Respondents

To further identify expectations about the program, respondents were asked if they had general goals and/or specific objectives for the program and what they were. This question was in an open-ended format, thus respondents had an opportunity to provide multiple responses. Both male and female participants identified the same three general goals as most important, however they were ranked in a different order. The most frequently mentioned goals tended to revolve around their physical abilities while there was less of a focus on the educational and emotional aspects. All identified goals and the frequency of responses are provided in Table 16.

**Table 16: Current Respondents: General Goals of Participants by Gender**

General Goals	Females		Males	
	N	Percent	N	Percent
Improve physical strength and ability	8	61.5	19	28.8
Lead a healthier lifestyle	5	38.5	26	39.4
Resume normal life tasks	3	23.1	18	27.3
Prevent relapse, life longer	1	7.7	14	21.2
Lose weight	1	7.7	5	7.6
Improve nutrition	1	7.7	4	6.1
Reduce stress, healthy mind	1	7.7	3	4.5
Gain knowledge on CVD	0	0.0	5	7.6
Learn to understand CVD & its limitations	0	0.0	2	3.0
Complete cardiac program	0	0.0	1	1.5
Control diabetes	0	0.0	1	1.5

Note: N refers to number of responses and each respondent could select up to three goals. Thirteen women and 66 men answered this question. The percent is based on the number of respondents.

Table 17 lists the specific objectives identified by respondents in order to reach their general goals. Once again the question was open-ended and respondents could indicate multiple objectives. Both genders identified exercise (exercising safely, regularly, and learning what exercises to do) most often as their top specific objective, which corresponded with their most common general goal (i.e., to improve physical strength and abilities). Gaining nutritional information was listed as the second most frequently identified category. Men identified self-care (decreasing stress and improving mental well-being) as their third most frequently identified category, while women identified weight loss as theirs.

**Table 17: Current Respondents: Respondent Objectives by Gender**

Objectives	Females		Males	
	N	Percent	N	Percent
Exercise	11	91.7	45	72.6
Nutritional knowledge	6	50.0	29	46.8
Weight loss	3	25.0	7	11.3
Self-care	2	16.7	10	16.1
Social support	2	16.7	2	3.2
Attend the program	1	8.3	5	8.1
Increase spirituality	1	8.3	0	0.0
Stop smoking	0	0.0	5	8.1
CVD knowledge	0	0.0	5	8.1
Individualized program	0	0.0	4	6.5
Positive attitude	0	0.0	2	3.2
Consume less alcohol	0	0.0	1	1.6
Improve health	0	0.0	1	1.6
Cure CVD	0	0.0	1	1.6

**Note:** N refers to number of responses and each respondent could select up to three objectives. Twelve women and 62 men answered this question. The percent is based on the number of respondents.

Respondents were specifically asked if each of six different items (transportation, finances, other health issues, work related issues, lack of social support, and child/elder care) were a problem that they had to consider when joining the cardiac rehabilitation

program. Financial concerns were the primary problem for men (18.2% identified this as an issue), with work related issues and other health concerns following at 13.6% and 10.6% respectively. The primary concerns for women were transportation (30.8%), finances (23.1%), other health issues (18.2%) and work related issues (18.2%). Neither gender had difficulties with child and/or elder care as a problem while the largest difference between groups was found with transportation (see Table 18).

**Table 18: Current Respondents: Problems that had to be considered prior to enrollment in the program by gender**

Problems to be considered	Females		Males	
	N	Percent	N	Percent
Transportation	4	30.8	6	9.1
Finances	3	23.1	12	18.2
Other health issues	2	18.2	7	10.6
Work related issues	2	18.2	9	13.6
Lack of social support	0	0.0	3	4.5
Child/elder care	0	0.0	0	0.0

Note: N refers to number of responses and each respondent could select up to three choices. Thirteen women and 66 men answered this question. The percent is based on the number of respondents.

In an open-ended format, respondents were also given an opportunity to describe the difficulties that they had to overcome in order to participate in the program. The majority of men (78.0%) and half of the women (50.0%) felt that there were no difficulties to overcome. Of the individuals who did have difficulties, 6 men (46.2%) identified the number one problem encountered as physical limitations, such as an illness and/or recovering from surgery. Weather, financial concerns, stress, and unhealthy lifestyle were also a concern for 2 people each (15.4%). Women had an equal amount of difficulty with physical limitations, scheduling and lack of energy, with four people

listing each of these difficulties. Additional difficulties that had to be overcome by respondents are listed in Table 19.

Of those individuals who identified difficulties prior to attending the program, 13 respondents described how they were able to overcome them. Personal motivation was the most common response (indicated by 4 men and 5 women). This included receiving social support and encouragement from family and/or friends, and recognizing the benefits of the cardiac rehabilitation program at the Wellness Institute. Other ways in which men overcame issues was by illness intervention such as changing medications and controlling diabetes (1 male), adjusting work schedule (1 male) and receiving government funding (1 male). In addition, five men and two women said that they were still having difficulties with whatever problem had to be considered when they joined the program.

**Table 19: Current Respondents: Difficulties that had to be overcome before Joining Cardiac Rehabilitation**

Difficulties to overcome	Females		Males	
	N	Percent	N	Percent
Physical limitations	4	40.0	6	46.2
Scheduling	4	40.0	1	7.7
Lack of energy	4	40.0	1	7.7
Weather	2	20.0	0	0.0
Financial concerns	2	20.0	0	0.0
Stress, scared	0	0.0	2	15.4
Smoking	0	0.0	1	7.7
Unhealthy lifestyle	0	0.0	2	15.4
Procrastination	0	0.0	1	7.7
English as a 2 <sup>nd</sup> language	0	0.0	1	7.7

Note: N refers to number of responses and as this was an open-ended question each respondent could specify as many difficulties as they wished. Ten women and 13 men answered this question. The percent is based on the number of respondents.

### First Month Cardiac Rehabilitation Evaluation

As part of the cardiac rehabilitation program, participants completed an evaluation at the end of the fourth week of the program. A portion of the current cardiac program evaluation form was used as part of this evaluation. A total of 79 evaluations were completed by participants from the December 2003 to February 2004 classes. This represented a 65.8% response rate. Not all of these individuals were respondents in this study. Gender was identified for 77 of 79 respondents (57 males and 20 females) who filled out the evaluation. Of this, 42 males and 10 females were also respondents in this study. In addition there were 2 individuals who completed the evaluation but whose gender was not available.

The evaluation contained questions asking participants to rank the level of satisfaction with various program components and the amount of information that was received on each. Responses between '1' and '4' could be selected where '1' indicated the highest level of satisfaction and '4' indicated the lowest level of satisfaction. The majority of responses was '1' or '2' for both genders, with a mean satisfaction level for all components between 1.14 and 1.63. This is illustrated in Table 20 and reflects a relatively high level of satisfaction. On a scale of one to four, with '1' indicating that the cardiac member would definitely not and '4' indicating the member would "definitely recommend the program to others", there was very little difference between genders. The responses were found to be similar for both genders for this question.

Program participants were asked in open-ended questions to identify what parts of the program were the most and least helpful. Both genders indicated that exercise, education on cardiovascular disease and the staff were the most helpful parts of the

program. Male participants also felt that the nutritional component was one of the most helpful components. All of the aspects of the program that were identified are displayed in Table 21. When asked to identify components which were not very useful, all of the women who provided an answer cited the body mind connection component. Men listed the body mind connection and nutrition classes as being the least helpful. This was not surprising as there were two more classes for both the body mind connection and nutrition held in the second and third months of the program thus they had not yet completed these classes at the time of this survey. The components identified as least helpful are listed in Table 22.

**Table 20: First Month Evaluation: Satisfaction with Program Components**

Gender	All services	Cardiac team	Cardiac disease	Exercise	Medications	Nutrition	Stress mgmt
Male							
Mean	1.19	1.16	1.29	1.26	1.72	1.53	1.56
N	57	56	56	57	57	57	55
S.D.	0.40	0.37	0.46	0.44	2.65	0.57	0.63
Female							
Mean	1.15	1.10	1.16	1.26	1.21	1.35	1.83
N	20	20	19	19	19	20	18
S.D.	0.37	0.31	0.37	0.45	0.42	0.49	0.99
Total							
Mean	1.18	1.14	1.25	1.26	1.59	1.48	1.63
N	77	76	75	76	76	77	73
S.D.	0.39	0.35	0.44	0.44	2.31	0.55	0.74

Cardiac members were asked whether or not they used the cardiac rehabilitation manual that was provided. This question used a response format where 1 = yes, 2 = occasionally, and 3 = no. However the question was not clearly stated using discrete categories so it is unclear as to whether participants meant 'yes, they had used the manual regularly' or merely that they have used the manual at least once. It is important to note

that all respondents indicated that they used the manual (see Table 23). They were also asked if they were following the advice that was offered to them. A four-point scale was provided with '1' indicating they always followed advice, '2' they almost always followed advice, '3' they occasionally followed advice and '4' they never followed the advice provided. The most popular response for both genders was "almost always" (see Table 24).

**Table 21: First Month Evaluation: Most Helpful Components by Gender**

Most Helpful Components	Females		Males	
	N	Percent	N	Percent
Exercise	6	35.3	16	31.4
Education on CVD	4	23.5	16	31.4
Staff	4	23.5	10	19.6
Nutrition	2	11.8	10	19.6
Medications	2	11.8	2	3.9
Everything was helpful	1	5.9	6	11.8
Lectures	1	5.9	4	9.8
Social support	1	5.9	0	0.0
Provided motivation	0	0.0	2	3.9
Manual	0	0.0	1	2.0
Stress (body mind connection)	0	0.0	1	2.0

Note: N refers to number of responses and each respondent could identify multiple components. Seventeen women and 51 men answered this question. The percent is based on the number of respondents.

**Table 22: First Month Evaluation: Least Helpful Components by Gender**

Least Helpful Components	Females (n = 5)	Males (n = 10)
Exercise	0	1
Nutrition	0	3
Stress	5	3
Staff	0	1
Medications	0	2
Lectures	0	1
Manual	0	1

**Table 23: First Month Evaluation: Use of Manual**

Gender	Yes	Occasionally	No
Female	70.0%	30.0%	0
Male	66.7%	33.3%	0

Note: N = 20 for women and 57 for men

Finally, cardiac members were provided space to identify any additional topics or classes that they would like to see covered by the cardiac program. Relatively few members completed this question (10 males and 2 females). For the male respondents, additional classes on exercise (n = 3) and nutrition (n = 2), as well as a class on diabetes (n = 2) were requested. More social events, more information on stress, and more information on symptoms were each suggested by one male respondent. The two females both requested more information on nutrition.

**Table 24: First Month Evaluation: Following Advice by Gender**

Gender	Always	Almost Always	Occasionally	Not at all
Female	7	13	0	0
Male	18	37	2	0

#### Current Respondents, Week 10 Questionnaire Results

Of the 82 current cardiac members who participated in this study, 55 (67.1%) completed and returned the week ten questionnaire. Completed questionnaires were returned by 62.3% (n = 43) of the male respondents and 92.3% (n = 12) of female respondents. Three (3.7%) additional questionnaires were returned uncompleted. Two questionnaires were returned due to the death of the participant (one male and one female), while the third was 'returned to sender' as the male participant was no longer at

that address. None of the participants who completed the questionnaire indicated that there had been a change in marital status or their living situation.

As in the initial questionnaire, respondents were asked to consider their physical ability at the time of completing the questionnaire. Both genders rated their ability as 6.83 on a scale of '1' to '10', with '5' indicating the ability to do half of the physical activities they wanted and '10' indicating they were able to all of them. As expected, this was an improvement for both genders from when they completed the first questionnaire at the beginning of the program. Respondents were asked to consider if they felt they had a family member or friend that they were able to talk to about their problems, triumphs and frustrations. The choices were 1 = definitely not, 2 = no, not really, 3 = yes, generally, and 4 = yes, definitely. The mean score was 3.58 (n = 41) for men, and 3.71 (n = 12) for women. These scores indicated that most respondents felt they generally or definitely had someone they could talk to. Using the independent t-test no statistically significant difference in means was found between genders.

In a question similar to the one found in the initial questionnaires, respondents were asked to identify up to three most useful and three least useful components of the program. The choices included exercise, relaxation techniques, education, social support, nutrition, body mind connection, medications and other, as specified. Both genders indicated that the exercise component of the cardiac rehabilitation program was most useful with the educational and nutritional components second and third. This is displayed in Table 25.

**Table 25: Week 10: Most Useful Components by Gender**

Most Useful Components	Females		Males	
	N	Percent	N	Percent
Exercise	12	100.0	39	90.7
Education	9	75.0	25	58.1
Nutrition	5	41.7	20	46.5
Social support	4	33.3	12	27.9
Relaxation techniques	2	16.7	7	16.3
Medication	2	16.7	13	30.2
Body mind connection	2	16.7	5	11.6

Note: N refers to number of responses and each respondent could select up to three choices. Twelve women and 43 men answered this question. The percent is based on the number of respondents.

Of the male participants who completed this portion of the questionnaire, the least helpful components of the program were indicated to be relaxation techniques, the body mind connection classes and social support. For female participants the least helpful components were the same but in a different order (relaxation techniques, social support, and the body mind connection). These results were expected and correspond with the components that were expected to be least helpful in the initial questionnaires. There were a few participants ( $n = 5$ ) who indicated that they found all components of the program to be helpful (see Table 26).

There were four classes offered to cardiac members after the first month of scheduled classes. These included two nutrition classes (label reading and heart smart cooking) and two body mind connection classes (stress management and how the body and mind interact). When compared with men, a larger percentage of female participants attended each of these classes. Label reading was the best attended with 73.2% of male and 91.7% of female participants. For the cooking class, female respondents were more likely to attend (9 of 11 or 81.1%) while this class had the lowest proportion of male

participants (15 of 32 or 46.9%). The body mind connection classes (2 and 3) were attended by 64.1% (n = 39) and 60.5% (n = 38) of males respectively, and 75.0% (n = 12) of females for each class. The lower attendance at these classes could have been one of the reasons these were chosen as one of the least helpful components or the view of these as least helpful could have been another reason for the low attendance.

**Table 26: Week 10: Least Helpful Components by Gender**

Least Helpful Components	Females		Males	
	N	Percent	N	Percent
Relaxation techniques	4	44.4	22	61.1
Social support	4	44.4	13	36.1
Nutrition	3	33.3	8	22.2
Body mind connection	2	22.2	14	38.9
All components were helpful	2	22.2	3	8.3
Exercise	1	11.1	3	8.3
Education	0	0.0	3	8.3
Medication	0	0.0	8	22.2

Note: N refers to number of responses and each respondent could select up to three choices. Nine women and 36 men answered this question. The percent is based on the number of respondents.

To establish a level of overall satisfaction with the program, respondents completed the Client Satisfaction Questionnaire (CSQ-8) found in Appendix H. Respondents were asked to answer questions about the program and rank their satisfaction using a four-point scale. Possible scores range from 8 indicating high levels of dissatisfaction to 32 indicating high levels of satisfaction with the program. Scores were found to be almost identical for male and female respondents, with mean scores of 28.63 (n = 43) and 28.67 (n = 12) respectively.

Respondents were asked to what extent the cardiac rehabilitation program staff members were available to answer questions and discuss individual needs; responses

were based on a four-point scale where '1' indicated none of their needs were met and '4' indicated almost all of their needs had been met. For males (n = 42) the mean score was 3.62 and for females (n = 12) it was 3.25. No significance difference in mean scores was found between the genders. Respondents were also asked if the program treated them as a person, on a scale of '1' to '4', with '4' indicating that they felt like they were definitely treated as a person and '1' indicating they definitely did not feel like they were treated like a person. Women (n = 12) had a slightly higher score than men (n = 40) with a mean of 3.75 as compared to 3.68. This difference in mean scores was not statistically significant using the independent t-test.

Respondents were asked if they used each of six additional services offered at the Wellness Institute. These included physiotherapy, private sessions with the dietitian, individualized counseling, specialized exercise classes, and massage therapy. The majority of participants indicated that they did not use additional services offered by the Wellness Institute. The services that were most frequently used by both genders was specialized exercise classes such as yoga, tai chi, aquasize, etc. For male respondents physiotherapy and private sessions with the dietitian were tied for the second most frequently used service. For women, physiotherapy was second (see Table 27).

While the order of use of services changed, the top three services used by male respondents corresponded with the services that males had previously listed as those most likely to be used (as was discussed in the reporting of results from the Initial Questionnaire). The results for females was not expected as specialized exercise classes were not among the top three expected services to be used, yet it was the service used

most frequently. It is important to note that since the number of respondents was small this may not actually be the case for the majority of women.

**Table 27: Week 10: Use of Additional Services offered by the Wellness Institute by Gender**

Additional Services Used	Females		Males	
	N	Percent	N	Percent
Specialized exercise classes	3	27.3	12	27.9
Physiotherapy	2	18.2	8	18.6
Dietitian	1	9.1	8	18.6
Individual counseling	1	9.1	6	14.0
Massage therapy	1	9.1	2	4.7

Note: N refers to number of responses. Eleven women and 43 men answered this question, with not all of the respondents using additional services.

Participants were asked to indicate by a 'yes' or 'no' response, if they felt six additional services would be beneficial if added to the cardiac program. These included additional programming on smoking cessation, a support group for cardiac members, a walking group, a support group for family members, occupational counseling and longer scheduled exercise. The majority of both genders felt that a support group for cardiac members would be most beneficial. A large percentage of male participants also indicated that a support group for family members as well as a walking group would be helpful. Female participants thought occupational counseling and a walking group would be most helpful. Table 28 shows the breakdown of how many participants thought each service would be helpful. One male indicated he felt all of these services were already available.

**Table 28: Week 10: Potential Additional Services by Gender**

Potential services	Females		Males	
	N	Percent	N	Percent
Support group for cardiac members	5	55.6	26	60.5
Walking group	4	44.4	19	44.2
Occupational counseling	4	44.4	14	32.6
Longer scheduled exercise	3	33.3	17	39.5
Smoking cessation	2	22.2	16	37.2
Support group for family members	2	22.2	20	46.5

Note: N refers to the number of responses. Nine women and 43 men answered this question. The percent is based on the number of respondents.

Of the 20 respondents who indicated they would like the scheduled exercise portion of the program to be extended, ten gave suggestions about the preferred length of time. The current program has four weeks of scheduled, supervised exercise. Four participants suggested this be increased to a total of 8-12 weeks, three suggested the full 16-week program, and three suggested six months to a year.

Study respondents were asked, in an open response format, if there were any particular parts of the program that encouraged their participation in the first two months of the program. For this section, 26 males and 8 females were able to identify one or more contributing factors. Certain parts of the program were identified as encouraging participants to complete the first two months of the program. For males, the friendliness and helpfulness of the staff was the most positive aspect, with exercise, and general or overall improvement in health also being important. For females, two out of eight women said that the facility was the most important factor; as indicated in Table 29, one response each was received for the seven other factors

**Table 29: Week 10: Reasons for Remaining in the Program by Gender**

Reasons for remaining in the program	Female (n = 8)	Male (n = 26)
Facilities	2	4
Staff	1	12
Exercise	1	6
Improved health	1	6
Education	1	5
Family support	1	3
Social support	1	3
Structure of program	1	0
Atmosphere	0	4

Note: Identified by number of responses due to low numbers; respondents could specify multiple reasons.

Respondents were asked in an open-ended question if there were any program areas that could be improved. The most common suggestion was a longer period of scheduled contact with staff (males = 7, females = 2). This corresponds with earlier suggestions made by respondents. It was suggested this would allow staff to offer additional support and structure to members during their transition to independent exercise. One such suggestion included having staff contact members monthly to provide more frequent evaluation of physical health. More individualized help throughout the program, particularly after the first month was suggested by two male participants and one female participant. Sample menus to provide examples of low fat/low sodium meals and having more choices in class times offered were each suggested by two males. Having staff encourage participants to workout together was suggested by one male and one female.

Respondents were also given a chance to provide examples of other personal problems or challenges that were an issue for them. Only a small number of participants completed this section (16 males and 3 females) so these results cannot be generalized

even to the full sample. Male participants indicated stress, other illnesses or health concerns, and personal characteristics created the greatest challenges. Other issues included work, depression, eating out, weather, money, smoking and addictions. The challenges females encountered tended to be evenly distributed with each problem being an issue for only one respondent. These included stress, other illnesses, weather, transportation, lack of social support and eating out.

As was the case in the initial questionnaire, respondents were again asked to list any personal goals they wished to achieve as a result of the program. There was a variety of goals given that fit into ten different categories. For both genders, exercise goals were most common with 100% (n = 9) of females and 86.1% (n = 36) of males indicating this as one of their goals. Exercise related goals included learning to exercise safely, improving cardiovascular strength, increasing endurance, learning to use exercise equipment properly, etc. Female participants indicated that improved nutrition, weight loss and self care (decreasing stress, improved mental well-being) were also important goals. Nutritional goals and general improved health or obtaining a healthier lifestyle tied for the second most common goals amongst men, followed by weight loss. This corresponds with the initial questionnaire responses where exercise was also listed as the most important goal and objective. The other important goals were also in general agreement with the previous findings. A complete frequency of goals is provided in Table 30.

Respondents were asked to rate to what extent they felt they were able to achieve their goals, with 1 = a small extent, 2 = partially and 3 = a large extent. Male respondents had a slightly higher average score than female respondents (2.5 and 2.3 respectively). The

mean scores indicate that most respondents felt their goals had been at least partially achieved. The difference in mean scores between genders was not statistically significant.

**Table 30: Week 10: Goals by Gender**

Goals	Females		Males	
	N	Percent	N	Percent
Exercise	9	100.0	31	86.1
Nutrition	5	55.6	11	30.6
Weight loss	4	44.4	9	25.0
Healthier lifestyle	2	22.2	11	30.6
Self-care, decrease stress	2	22.2	6	16.7
Knowledge of CVD	2	22.2	5	13.9
Improve other health conditions	2	22.2	4	11.1
Stop smoking	2	22.2	1	2.8
Learn about, decrease medications	0	0.0	2	5.6
Social support	0	0.0	1	2.8

Note: N refers to number of responses and each respondent could identify up to three goals. Nine women and 36 men answered this question. The percent is based on the number of respondents.

The majority of participants indicated they were still exercising at the Wellness Institute. This was true for 80.5% (n = 33) of males and 90.0% (n = 9) of females. For individuals who were not exercising at the Wellness Institute, eight were male and one was female. Four of the males and the female were on medical hold. Of the other four males, three gave explanations. These included another illness, exercising at home, and letting nature take its course. When asked if participants were continuing to participate in the healthy lifestyle taught, all female respondents to this question (n = 12) and 39 out of 40 men indicated they were.

### Results for Past Participants of the Cardiac Program

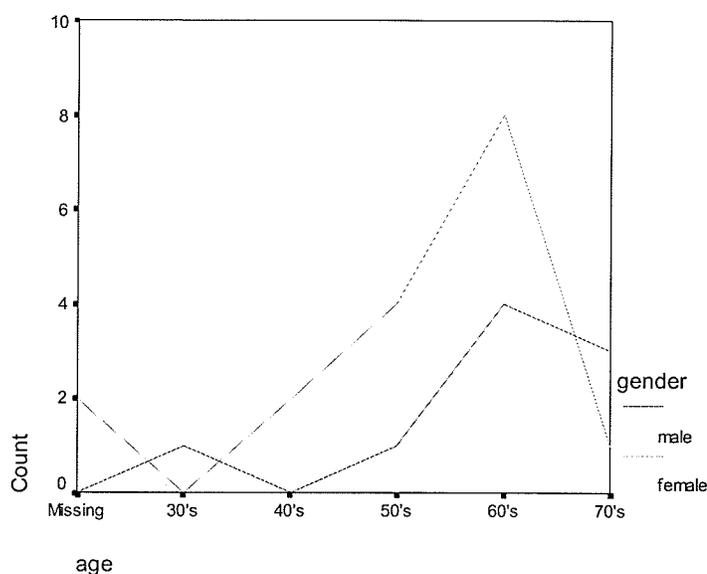
As previously mentioned, past cardiac rehabilitation program members were also asked to participate in this study. Of the 105 past members asked to participate in this portion of the evaluation, 24.8% agreed to participate. Of this, there were 17 females and 9 males. Due to the low numbers, statistical significance between genders was not calculated for this sample. One female completed the questionnaire by phone while two females discussed answers by phone in addition to completing the mail-in questionnaire. The average age for male past participants was 67.6 years and for females it was 58.9 years. A distribution of ages is illustrated in Graph 5. The majority of both male and female past participants were married and living with their spouses (see Tables 31 and 32).

**Table 31: Past Participants: Marital Status by Gender**

Marital Status	Females (n = 17)	Males (n = 9)
Married	11	7
Widowed	4	1
Common-law	1	0
Divorced	1	0
Single	0	1

**Table 32: Past Participants: Living Situation by Gender**

Living Situation	Females (n = 17)	Males (n = 9)
Spouse/significant other	12	6
Alone	4	1
Other family	1	2

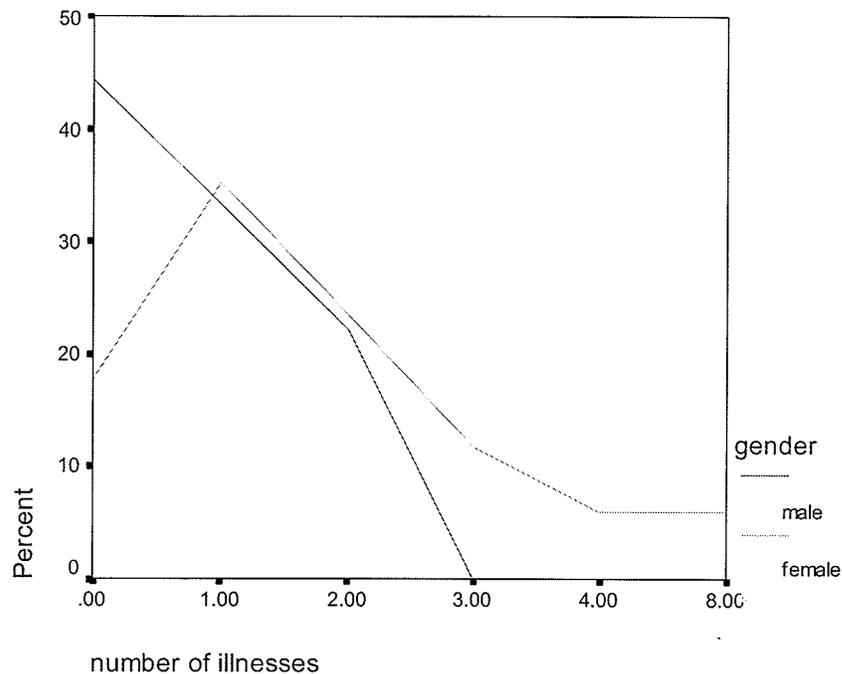
**Graph 5: Past Participants: Age Distribution by Gender**

The mean number of illnesses faced by participants in addition to CVD was 0.78 for men ( $sd = 0.83$ ) and 1.88 for women ( $sd = 1.93$ ). The range of illnesses was 0-2 additional illnesses for men and 0-8 for women. This information is illustrated in Graph 6. In terms of health insurance, 66.7% of the men but only 29.4% of the women had supplemental health insurance.

When asked to list three individuals whom they would turn to for emotional and/or social support, both genders indicated that their child(ren) were most commonly their support person(s), with their spouse or significant other and friends/co-workers as the next most popular choice. This is shown in Table 33. Respondents were also asked on a four-point scale where 1 = definitely not, 2 = no, not really, 3 = yes generally, and 4 = yes, definitely, if they had a support person with whom they were able to talk to about their problems, triumphs and frustrations. The mean score for men was 3.67 ( $n = 9$ ), and

3.27 (n = 15) for women. These scores indicated that most respondents felt they generally or definitely had someone they could talk to.

**Graph 6: Past Participants: Additional Illnesses by Gender**



Respondents were asked to identify who first told them about the cardiac rehabilitation program at the Wellness Institute. The choices included family doctor, social worker, heart specialist, hospital staff, friend, advertisement or family member. Male respondents were most frequently told about the cardiac rehabilitation program at the Wellness Institute by hospital staff (n = 5, 62.5%). Two males (25.0%) found out about the program through an advertisement while one male (12.5%) was told by his family doctor. Women were most commonly told about the program by their family doctors (n = 7, 43.8%), and hospital staff (n = 5, 31.3%). One respondent each indicated they found out about the program from a social worker, heart specialist or through an advertisement (n = 1, 6.3% for each).

**Table 33: Past Participants: Support Persons for Individuals with CVD by Gender**

Support person	Females (n = 15)	Males (n = 8)
Children	14	6
Spouse/significant other	11	5
Friend/co-worker	6	5
Sibling	4	3
Other family member	2	2
No one	1	0
Parents	0	1

When asked to identify who encouraged them the most to join the program, the choices given were similar to the previous question. The choices included: family doctor, social worker, heart specialist, hospital staff, a friend, self or family member. Female respondents were encouraged to join the cardiac program most frequently by their family doctor, hospital staff and by themselves. An equal number of female respondents were encouraged most frequently by a friend or family member. Past male respondents were encouraged most often by themselves and family members. Hospital staff, a social worker and a friend were also listed as having provided encouragement. It was also found that more past participants felt they encouraged themselves the most.

#### The Cardiac Rehabilitation Program

Past participants were asked to identify up to three most useful parts of the program. The choices included exercise, relaxation techniques, education, social support, nutrition, the body mind connection, medications or another aspect (specify). The most common responses for past female participants were exercise, nutrition, education and information on medications. For past male participants these were education, exercise, nutrition and social support (see Table 34).

**Table 34: Past Participants: Most Helpful Component of the Cardiac Program by Gender**

Most Helpful Components	Females (n = 16)	Males (n = 9)
Exercise	14	6
Nutrition	11	4
Education	8	7
Medication	7	2
Relaxation techniques	3	1
Social support	2	4
Body mind connection	1	1

Note: Respondents could specify more than one component

Past participants were also asked to identify what parts of the program they found to be least helpful. For women and men who responded to this question, relaxation techniques were identified most often with the body mind connection classes being the next least helpful (tied with information on medication for women). Two additional women indicated that they were happy with all components of the cardiac program. Current respondents also listed relaxation techniques and the body mind connection class as least helpful (see Table 35).

**Table 35: Past Participants: Least Helpful Component of the Cardiac Program by Gender**

Least Helpful Components	Females (n = 16)	Males (n = 6)
Relaxation techniques	4	4
Body mind connection	3	3
Medication	3	0
Education	2	1
Social support	2	2
Satisfied with everything	2	0
Nutrition	0	2

Note: Respondents could specify more than one component

When compared with men, more women attended the four classes that were held after the first month. Label reading was again the best attended with 86.7% (n = 13) of

women and 77.8% (n = 7) of men indicated they attended. The cooking class was the second most frequently attended class by both genders (n = 5, 55.6% of men and n = 13, 86.7% of women). The body mind connection classes were the least well attended with 33.3% (n = 3) of males attending body mind connection 2 and 44.4% (n = 4) attending body mind connection 3. For women, 53.3% (n = 11) and 40.0% (n = 6) attended the above mentioned classes.

Past participants were asked whether or not each of six different issues were a problem that they had to consider when joining the cardiac rehabilitation program. These were transportation, child/elder care, finances, other health concerns, work related issues, and lack of social/emotional support. Women identified finances, transportation, other health concerns and lack of social/emotional problems as the main issues. Only two out of five men identified lack of social/emotional support as their biggest difficulty (see Table 36).

**Table 36: Past Participants: Problems to be Considered before Joining Cardiac Rehabilitation by Gender**

Problems that had to be Considered	Females (n = 16)	Males (n = 9)
Finances	5	0
Transportation	4	0
Lack of social/emotional support	3	2
Other health concerns	3	1
Work related issues	2	1
Child/elder care	1	1

Past participants were also given an opportunity to describe any other difficulties that they had to overcome in order to participate in the program. The majority of men and women did not have any other difficulties to overcome. Of the men who had

difficulties, problems included healing from surgery and anger/fear (anxiety). Female participants described lack of strength and mobility issues most frequently, with weight and nutritional issues next common. Transportation, lack of social support, other health issues and anxiety were also concerns. These difficulties are listed in Table 37.

**Table 37: Past Participants: Additional Difficulties that had to be overcome**

Difficulties	Females (n = 17)	Males (n = 8)
None	9	5
Mobility/lack of strength	5	0
Weight/nutrition	3	0
Anxiety	2	1
Transportation	2	0
Lack of social support	2	0
Other health issues	2	0
Healing from surgery	0	2

Of those individuals who identified difficulties that arose, five past participants described how they were able to overcome them. The one male was able to overcome his anger/fear by attending stress/anger management courses. For the four women, each overcame her difficulties in a different way. Rest and medication, seeing a dietitian and trying to work harder (at exercise) were the different methods used. In addition, one female participant received help from cardiac rehabilitation staff in convincing her husband that the program would be beneficial for her. One woman felt that she was unable to overcome her numerous difficulties. Two women stated that the program in general was not helpful for them.

As was the case with current respondents, past participants were asked to consider six potential program services and decide whether or not they felt these would be useful for future cardiac members. As indicated in Table 38, the top three services past female

participants suggested were a support group for cardiac members, a walking group and longer scheduled exercise. Male participants suggested a support group for family members, a support group for cardiac members, and a walking group. In general, these findings correspond with those earlier reported for current respondents from the December 2003 to February 2004 group. The one major difference between past and current respondents was that for current respondents, occupational counseling instead of longer scheduled exercise, was one of the three most frequently suggested additional program components.

Past respondents were asked to what extent the cardiac rehabilitation program staff members were available to answer questions and discuss individual needs. Respondents were asked on a four point score where '1' indicated that none of their needs had been met and '4' indicated that almost all of their needs had been met. There was a difference between the genders with males being more likely to feel that more of their needs had been met. For males, the mean score was 3.89 (n = 9) and for females it was 3.25 (n = 16). These scores followed the same trend as those found for current respondents, with females having a lower average score than males.

**Table 38: Past Participants: Additional Suggested Components for the Cardiac Rehabilitation Program by Gender**

Suggested Components	Females (n = 17)	Males (n = 9)
Support group for cardiac members	12	4
Walking group	10	3
Longer scheduled exercise	8	3
Occupational counseling	7	0
Support group for family members	5	5
Smoking cessation	4	2

Past participants were also asked to recall if the program had treated them as a person. On a scale of '1' to '4', with '1' = "no, definitely not" and '4' = "yes, definitely". Men scored slightly higher than women [mean of 3.67 (n = 9) as compared to a mean of 3.43 (n = 15)]. While the men's score was the same as for current respondents, the women's score was somewhat lower, which indicated women were slightly less satisfied with the program than men.

Past participants were asked to think of their physical ability and what they were able to do at the time they started the cardiac rehabilitation program. They were asked to rank their ability on a scale of '1' to '10', with '1' indicating they were unable to do any of their desired physical activities and with '10' indicating they were able to do all of the physical activities they want. The mean score was 4.13 for men and 4.70 for women. Past participants were then asked to think of their physical ability and what they were able to do at the end of the cardiac rehabilitation program using the same scale. The mean score was 8.00 for men and 6.83 for women. While female participants had a higher initial mean score than men, their second mean score was lower. Mean scores indicate that past male participants felt their physical ability improved more than that of current male respondents.

An open-ended question asked about ways in which the program could be improved. Due to the limited responses to any one suggestion it is difficult to draw much in the way of conclusions from these results. However it was suggested by two men and two women that there be a longer period of scheduled contact with staff. Suggested ways in which this could be done included scheduled exercise times and having staff contact members monthly to provide more frequent evaluation of physical health. For females,

more attention to individual nutrition needs, the group make-up (smaller groups and a class for women only were suggested), and more choices of times for classes after the first month) were suggested (each suggestion noted by two respondents). Other issues for women included not starting the program so soon after surgery and placing more emphasis on the psychological/emotional aspect throughout the program, not just at three classes. Other suggestions made by past male participants included allowing a spouse to exercise with the member a few times at the beginning to help establish support for after the program, decreased cost, location, more focus on the emotional aspect (anger/stress management), and having staff continue to be friendly and helpful after the program instead of only during the first month of the program.

Past participants were also asked to identify if there were any other personal problems or challenges that were an issue for them. The low response rate (2 males and 12 females) to this question suggests that there were few other issues that were a problem. Male participants indicated going on vacation and having medical restrictions making them unable to do any physical exercise as the greatest challenges. The major challenge females encountered tended to be not enough time due to other commitments. These commitments included housework, looking after an ill husband and spending time with grandchildren. Other common challenges were dealing with another illness or pain, depression or stress related problems, and lack of social support. All of the personal problems mentioned are shown in Table 39.

**Table 39: Past Participants: Personal Problems Faced by Gender**

Personal problem	Females (n = 12)	Males (n = 2)
Not enough time/scheduling	5	0
Depression and stress	3	0
Other illnesses, pain	3	0
Work	2	0
Weather	2	0
Lack of social support	2	0
Nutrition/diet problems	1	0
Vacation	0	1
Not allowed to do physical exercise	0	1

Note: Respondents could specify more than one problem

As was the case with current respondents, past participants were asked in an open-ended question about their goals for the program. There was a variety of goals given that fit into twelve different categories. For both genders, exercise goals were most common, which involved learning to exercise safely, improving cardiovascular strength, increasing endurance, learning to use exercise equipment properly, etc. This is consistent with results reported by the respondents who attended the program in December 2003 to February 2004. Weight loss and self care (decreasing stress, improved mental well-being) goals were both cited second most frequently amongst women. Male participants indicated that weight loss and improved nutrition were important goals (see Table 40).

Overall, male participants scored slightly higher when asked to rate the extent they felt they were able to achieve their goals. Men scored an average of 2.76 while the women's average was 2.49, on a three-point scale, where 1 = a small extent, 2 = partially and 3 = a large extent. Participants were asked to rank the extent to which they had continued to participate in the healthy lifestyle taught by the program, with 1 = not at all, 2 = occasionally and 3 = most of the time. For both genders the mean score was 2.88,

indicating that the majority of past participants were still continuing to participate in the healthy lifestyle taught in the program.

**Table 40: Past Participants: Goals by Gender**

Goal	Females (n = 16)	Males (n = 8)
Exercise	8	6
Weight loss	5	5
Self-care, decrease stress	5	0
Nutrition	4	2
Healthier lifestyle	3	1
Improve other health conditions	3	0
Gain knowledge on CVD	3	0
Avoid another cardiac event/acceptance	2	1
Social support	2	0
Persevere more	1	0
Medications	0	1
Stop smoking	0	1

Note: Respondents could specify more than one goal

An open-ended question was included to ascertain the views of respondents about why women did not attend cardiac rehabilitation programs as often as men. Male responses included: women not receiving support from their spouses; women aren't as interested; men are more likely to have CVD therefore the ratio should be about 10 men to every female; women might not believe they have a problem; women may be self-conscious due to weight; or women may not have enough time due to caring for the home. Female participants most frequently felt that women may not join cardiac rehabilitation programs as they believe they can handle the problem on their own. Other common female responses included the following: not enough time due to caring for the home; thinking exercise was "men's stuff"; transportation; thinking CVD was a "man's disease"; may not realize how beneficial a cardiac rehabilitation program can be both mentally and physically; and women have more complex problems than men. Other

reasons noted were that women may have more trouble getting referred to cardiac rehabilitation and women may think less of themselves. Some of these reasons suggested that CVD is a man's disease, but as was shown in the literature review, this is no longer true.

#### Focus Group with Key Informants

A focus group was held with key informants (9 staff members from the Cardiac Rehabilitation program at the Wellness Institute) to discuss why there is a lower rate of participation for women compared to men, any special concerns women have and if there is anything specific that can be done to recruit and retain female cardiac members.

Staff members were able to identify several reasons why they believe fewer female participate in cardiac rehabilitation programs. In their experience they have found that women are older and sicker when they develop cardiovascular disease, therefore they are less likely to survive or be well enough to participate. Thus there are not as many women with CVD alive or physically able to participate. This fits with research that found that not only are women hospitalized longer than men, but also are more likely to die from the disease (Makrides, 1999). They also thought that women may be less likely to be referred to cardiac rehabilitation programs due to the fact they have additional health concerns and heart disease may still be considered a man's disease. While automatic referral is in place in Winnipeg hospitals it does not mean that cardiac rehabilitation is prescribed automatically in doctor's offices. Staff felt that cardiac rehabilitation needs to be thought of as part of the continuum of care needed for a positive outcome.

It was also suggested that hospitals do not feel that cardiac rehabilitation is part of the standard of care and not considered the same as prescribing medication. While general referrals have been increasing there have been cases where individuals coming to the program have fallen through the cracks. An example given was an individual who waited a year for bi-pass surgery. While he ended up not requiring the surgery, he was not referred to cardiac rehabilitation until this was determined. It was suggested that providing information about cardiac rehabilitation to hospital staff, general physicians and specialists will help to increase the number of individuals who are referred to rehabilitation programs. There have also only been two female doctors who have given a general referral for their patients to attend cardiac rehabilitation at the Wellness Institute.

The third reason given for lower female participation was the traditional nurturing position of women within their families. Staff have often been told women were unable participate in the cardiac rehabilitation program due to looking after their husbands, children, grandchildren and home. This is especially common amongst women in their 50's and older. Key informants have found it is more common for older women to say that they are unable to come to the program due to caring for an ill husband, it doesn't fit with their husband's schedule (bowling, etc.) or their husband doesn't allow it. It was suggested that this generation of women feel that the family is more important than their individual health. On occasion the involvement of the patient's children has helped to overcome problems with the male spouse and encouraged women to participate in the program.

On a few occasions, women have asked cardiac staff members if it would be possible to have a class for just women as there are some issues with CVD that are

specific to women such as having unique risk factors due to menopause and the use of oral contraceptives. Women have also suggested to staff they would feel more comfortable and be able to share their thoughts more readily in this type of environment (Makrides, 1999). Unfortunately, to date this has not been possible as there have not been adequate numbers in any particular month to support such a class.

It has been noticed by staff that the largest group of individuals to drop out of the program or have the most difficulties are those members who return to work. It is often difficult for these members to incorporate continued participation in the program while returning to work. It is for this reason that members are encouraged to find someone either in the cardiac rehabilitation program, a family member or a friend with whom they can continue their exercise regime.

During the focus group key informants were given the opportunity to hear common suggestions made by both past and current respondents. One such suggestion was increasing the length of the cardiac program, particularly the exercise component. Both past and current respondents felt this would help members more firmly establish an active lifestyle. It was further suggested that having a scheduled time to exercise and meet others with similar problems was important as it would provide members with additional support and encouragement.

Almost all of the focus group respondents felt this could be accomplished by designating two or three times per week for any past or current cardiac member who had finished the first four weeks of the program, to meet and exercise together if they choose. A suggested time was during already scheduled stretch classes on Tuesdays and Thursdays at 2:15 pm as these times are generally slower. The stretch classes would still

be open to all Wellness Institute members; however it would also provide cardiac members with an opportunity to identify themselves if they were looking for an exercise buddy, were in need of support or had a question to ask. This may make the transition to independent exercise easier and less of a concern for cardiac rehabilitation members.

A minority of the key informants in the focus group felt that cardiac members should be self-reliant after four weeks of scheduled exercise and no changes to the program were necessary. Instead it was felt that individuals should focus on personal motivation.

#### Limitations

There were two main limitations in the analysis of the study results. The small number of respondents meant that in some cases statistical tests could not be performed, and results were limited to a descriptive presentation. In addition, since the study was unable to contact individuals who declined participation in cardiac rehabilitation, judgments were based on participant responses instead of non-participant responses. Therefore, this evaluation does not reflect the expectations and satisfaction levels of individuals who are not in the program. This is an area for further research, particularly in trying to determine why cardiac patients do not participate in cardiac rehabilitation programs.

#### Discussion of Results

In the interest of clarity, the following discussion will be organized around answering the previously mentioned research questions (see Chapter 3). These are reproduced below:

1. Does gender make it more or less likely for an individual to join CR?

2. Do male and female participants have different expectations and satisfaction levels with cardiac rehabilitation?
3. Is the CR program at the Wellness Institute meeting the needs identified by participants? What do participants identify as their service needs before and during the program?
4. Do male and female participants join the program for different reasons? Do different factors affect why men or women join the program?
5. Do participants have different sources of emotional support based on gender? Is there a relationship between emotional support provided and the continuation of the program? (Emotional support could include friends, family members, co-workers, medical professionals, etc., as well as the cardiac rehabilitation program and its staff members.)
6. Do females and males access different services while in the program?
7. Is there a gender difference in perceived improvement after completion of the program?

#### Characteristics of Cardiac Members

The first research question focused on gender differences in enrollment in cardiac rehabilitation programs. There was a difference in enrollment and program participant based on gender. Of the 365 file reviews completed for the time period between November 2002 and October 2003, only 28.5% (104 out of 365) were female. This was higher than found in studies completed by O'Farrell et al. (2000) and Cannistra et al. (1992), who found 18% and 22.7% of participants (respectively) in their studies, were female. While the age of women tended to encompass a larger range, the average age of

women was not significantly older than men. This contradicts information provided by Filip et al. (1999) and O'Farrell et al. (2000). Instead, there was a significant difference in age based on gender for past participants with women being younger than men. This suggests that while women may be older than men when they experience CVD, younger women may be more likely to attend cardiac rehabilitation programs. This fits with the focus group observations that older women may not be able to attend due to poorer overall health (as was found in the file review) and that women of this generation place more importance on family and home than on their individual health, therefore making it less likely for them to attend cardiac programs.

The majority of participants of both genders were living with their spouse or significant other. A significant difference was found between men and women with women reporting less previous exercise experience and visiting the facility less often while part of the program. Women were also significantly more likely to be diagnosed with a psychological condition, and have a family history of psychological conditions. The file review also found that women were significantly more likely than men to have additional health problems. Men tended to have a higher MET level both before and after the program indicating that men were generally in better physical health than the female participants.

This information suggests that while there are some significant differences based on gender for the participants who attended the cardiac rehabilitation program, there are not huge differences in most areas. Based on the information provided from this study and the referral information, a smaller percentage of men compared to women join cardiac rehabilitation after being referred to the program. This study was unable to

determine if this was related to fewer women being eligible to participate due to a higher rate of death and additional illness in women. However, those women who attended cardiac rehabilitation were quite similar to their male counterparts particularly in relation to demographic characteristics and presenting issues.

### Expectations and Satisfaction

The second research question focused on gender differences pertaining to expectations and satisfaction with cardiac rehabilitation. Cardiac members' perceptions of the cardiac rehabilitation program were generally favorable with several areas being considered the most helpful. There were also some areas identified for improvement.

At the beginning of the program, participants were asked to identify what parts of the program they felt would be most useful, the vast majority of both genders indicated exercise. Education, nutrition and medications were also seen as important by both genders; however education and nutrition were seen as more important for a larger number of males than females. For this group of participants, exercise was still seen as the most helpful component at week ten of the program for both genders. This was followed by education and nutrition. Women tended to place more importance on the latter two in comparison to men.

Exercise, education and nutrition were also ranked highly by past participants and current members who completed the Wellness Institute's one month evaluation. At this time, all of the few female responses on this topic indicated the body mind connection (stress management) was the least helpful. The men indicated that the body mind connection and nutrition were the least helpful. This is not surprising as members complete two more classes in each after the first month.

The program components that were identified as the least helpful, for past and current (week ten) respondents were relaxation techniques for both genders. A greater proportion of men than women indicated this. The body mind connection and social support were also viewed as not being very helpful.

Both men and women experienced similar levels of satisfaction with the different aspects of the program after the first month and in general, participants were satisfied with the program. Both genders also indicated that they would recommend the program to others.

Results from the CSQ-8 were almost identical for the two genders with average scores of 28.63 and 28.67 out of 32. This indicated that men and women were equally satisfied with the program overall. Men and women also had comparable results in terms of the extent to which the program treated them like a person. There was however a significant difference in the extent to which respondents felt program staff were able to answer questions and discuss individual needs for both current and past respondents. Among both groups, men were significantly more likely to feel that their individual needs had been met. Women were more somewhat likely to feel that they were not treated as an individual and this feeling may be related to comments made by past respondents to the effect that women had unique or more complex problems than some of their male counterparts.

There are two ways one could consider these results within a feminist framework. The first is that the differences between men and women are fundamentally different such that the program content needs to be dramatically different. The second perspective is that access and orientation to the program is a more persuasive reason for any observed

differences. Given the general results that suggest some but no fundamental differences among men and women in their response to the program, it is concluded that the second explanation is more plausible for those who attended the program. Thus it appears that the program can respond to the needs of both genders with some adaptation. However, it is unknown whether this would be true for men and women who did not participate in cardiac rehabilitation.

#### Needs Identified by Participants

The third research question focused on whether or not the cardiac rehabilitation program at the Wellness Institute met the needs identified by participants. Based on interviews and questionnaires completed by past and current program participants, it appears that most of the participants' needs were met. The study however was unable to determine what needs exist for those who chose not to join or were unable to attend the program.

When respondents were asked whether or not they felt different potential additions to the cardiac rehabilitation program would be useful, their responses differed by gender. For past and current female participants a support group for cardiac members was thought to be the most promising addition. Other potential additions that women endorsed most frequently were a walking group, occupational counseling, and a longer period of scheduled exercise. Women were significantly more likely to endorse occupational counseling than men. For male participants, support groups for cardiac members, as well as one for their families, and a walking group were all considered important. Males also recommended increasing the length of time for scheduled exercise as part of the program.

Respondents were asked how the program could be improved to better meet their needs. Some of the areas for improvement that were identified by participants in an open-ended format include:

- Have formal contact with staff for a longer period of time;
- Have scheduled exercise times extend beyond the first four weeks of the program; and
- Place more importance on individual nutritional needs by doing things such as providing sample menus.

Current respondents and past participants were asked if they encountered problems in each of six different areas that were previously discussed in the results section. These were transportation, child/elder care, lack of social/ emotional support, financial concerns, other health concerns and work related issues. While differences between genders for transportation, finances, other health issues, and work related issues were found to be statistically significant for current respondents, transportation had the largest difference between the genders, with women being more likely to have difficulties in this area. Past women participants' responses were in agreement with current responses. This was somewhat expected as women were significantly more likely to have additional health concerns than men based on the file review results; as well focus group participants mentioned that women were more likely to have transportation problems.

A personal problem or barrier faced by women that was mentioned in three different components of the evaluation was other commitments. For past female participants, comments about having a lack of time due to their nurturing role including

tasks such as housework, looking after an ill husband and spending time with grandchildren were made. Caring for a home and family commitments were suggested as reasons for women not participating in cardiac programs by both past participants and the focus group of key informants. This suggests that women have more home and family obligations than men due to their traditional nurturing role. As was said by a respondent as well as focus group members, "women tend to still put their family before themselves".

#### Participation in Cardiac Rehabilitation

To determine why participants joined cardiac rehabilitation and to determine if different factors affect why men and women join the program, respondents were asked about their goals for the program. When asked to provide up to three goals, exercise goals were most common for both genders. This included learning to exercise properly, increasing cardiovascular strength, improving flexibility and improving endurance. Nutrition and weight loss were also mentioned as being important for both genders. While exercise, nutrition and weight loss were mentioned as a goal frequently across both past participants and current respondents, other goals varied. Women were more likely to mention self-care (decreasing stress, improving mental well-being), and the need to improve other health conditions than men. As the results from the file review suggest, women had significantly more health conditions than men, so this was not surprising. Men were more likely to mention stop smoking. These findings suggest that while the main reasons for joining cardiac rehabilitation were similar, the secondary goals described by respondents differed somewhat by gender.

To determine if different factors affected why individuals joined cardiac rehabilitation, respondents were asked how they heard about the program and who encouraged them the most to join the program. Male respondents indicated that they most often heard about the program through hospital staff. Past male participants felt most encouraged to join the program through self motivation and by family members, while current members felt most encouraged by family members and their family doctor. Meanwhile, women were most commonly told about the program by their family doctors. Women also indicated that their family doctors' recommendations were what encouraged them the most to join a cardiac rehabilitation program.

There were no significant gender differences in how respondents heard about the program. However, in the case of who provided the most encouragement to respondents, there was a significant difference for past respondents. This suggests that doctors encouragement and opinions are more influential to women than men. These findings are consistent with results reported by Lieberman et al. (1998) and Missik (2001) who stress the importance of physician recommendations for women who are deciding whether or not to join cardiac rehabilitation. Despite this, a study done by Grace et al. (2002) found that women were less likely to be referred to cardiac rehabilitation by their physician than men. This is discouraging and suggests that physician education on the benefits of cardiac rehabilitation for both men and women may be beneficial.

#### Sources of Emotional Support

Emotional support for respondents could include friends, family members, co-workers, medical professionals, etc., as well as the cardiac rehabilitation program, program staff and other cardiac members. This study sought to determine if participants

have different sources of emotional support based on gender and if there is a relationship between emotional support provided and the continuation of the program.

In terms of identifying three people to whom respondents would turn to for emotional and/or social support, children, spouse/significant other, and friends/co-workers were consistently the most common choices. A larger percentage of women tended to turn to their adult children for support than men did, indicating adult children's opinions may be more influential for women than men. For current respondents particularly, men named their spouse/significant other more frequently than women. This is consistent with results reported by Lieberman et al. (1998) who found that women were more likely to be influenced by adult children, whereas men were more reliant on their spouses' opinion.

Respondents were also asked if they had a support person with whom they were able to talk about both their joys and frustrations. For current respondents there was a significant difference was found between genders, with women being more likely to feel they had someone to talk to. This is in agreement with the study completed by Grace et al. (2002) who found that men have fewer social supports than women. For past participants however, the opposite was found. Women were less likely than men to feel that they had a support person, a finding supported by Verrill et al. (2001) and Hurdle (2001) in their research. Both of these authors found that women had a smaller social support system than men. While the findings for current and past respondents are contradictory, it is important to note, that the average score on this question for all participants was still between 'yes, generally' and 'yes, definitely'.

This study was unable to determine if there was a relationship between emotional support provided and the continuation of the cardiac rehabilitation program and a healthy lifestyle. Further investigation is necessary to determine if individuals who have increased social support are more likely to join and complete cardiac rehabilitation programs. This could be assessed by comparing the level of experienced emotional support with attendance at the end of the 16-week program. A study involving a larger sample size would allow researchers to determine if women respondents are still significantly less likely to feel that they have someone they can turn to for social/emotional support. If this is found to be the case, cardiac programs could evolve to provide more of this support to their female participants.

#### Access of Services

The next research question focused on determining if men and women accessed different services while in the program. In terms of accessing classes after the first month of the program, the class on label reading was the best attended by both genders. However, current female respondents were more likely to attend the cooking class than men. This may be due to women traditionally being responsible for this role within the family. Both body mind connection classes were not as well attended even though participants indicated they did not receive enough information on this topic. In general, there were a larger percentage of women than men who attended classes after week four. It is not clear how much of this was related to the time classes were offered or the timing at which respondents went back to work (if they were still in the work force).

The majority of participants indicated that they did not use additional services offered by the WI. The service most frequently used by both genders was specialized

exercise classes such as tai chi, yoga, aquasize, etc. For males this was most commonly followed by private sessions with a dietitian while it was followed by physiotherapy sessions for women. This reflects the anticipated use of services by women who at the beginning of the program indicated that exercise and physiotherapy would be accessed most frequently. For men, however, physiotherapy was considered to be the most important with private dietetic session's second and specialized exercise classes third.

#### Differences in Perceived Improvement

The final research question focused on gender difference in perceived improvement after completion of the program. When respondents were asked to rank their general physical ability, past participants tended to rank their initial physical ability lower than current participants. This could be due to the fact that a substantial period of time had passed for these participants, while current participants had assessed how they felt at that particular time. Men tended to have slightly lower initial scores than women. The women's post-test score was the same (6.83) for both past and current members. Current male respondents had an identical post-test score of 6.83. Past male participants however had a higher final score of 8.00.

Overall, both current and past members scored high when asked to what extent they felt they were able to achieve their goals. Past respondents for both genders tended to indicate they had achieved their goals to a larger extent. This was expected as past members have completed the program while current members were at approximately week ten of the 16 week program.

This study found no significant differences between the genders with respect to perceived improvements. This corresponds with most previous research that suggests that cardiac rehabilitation is equally beneficial for both genders.

## **Chapter 5**

### **Student Learning and Conclusions**

This chapter will discuss how learning goals were accomplished and changes that could be made to make future evaluations more effective. The small sample size of this evaluation makes it difficult to generalize the results to all individuals who participate in or are eligible for cardiac rehabilitation. However, conclusions, based on the findings of this study do provide important considerations for cardiac rehabilitation programs and suggest areas for further research.

#### Personal Learning Goals

Through the course of my practicum experience, I was able to meet my personal learning goals through frequent meetings with my advisor and the cardiac rehabilitation program manager. This enabled me to have a forum to discuss any questions or concerns as they arose, while remaining focused and on track with this evaluation. As a result I was able to develop an understanding of and gain experience in designing, planning and implementing a program evaluation.

Through my literature review and the process of conducting an evaluation I gained both theoretical knowledge and practical experience in the areas of both program evaluation and cardiac rehabilitation. I became aware of some of the ways in which gender differences affect which individuals participate in health related programs as well as the challenges this creates for program designers, policy makers and evaluators. I also became aware of the difficulties of recruiting gender specific participants for a research study.

To develop skills in using both qualitative and quantitative data collection measures, I developed an interview guide, and three different questionnaires. I also conducted a focus group and several interviews. A self-evaluation of the evaluator's interview skills was completed using a part of the *Social Work Skills Interview Rating Form* (Cournoyer, 1991). As was discussed in Chapter 1, this form includes 42 questions of which only the first 20 were relevant making a possible score range from -60 to +80. I set a goal to achieve a score of +60 to +80 as this would indicate I had effective interview skills. This interview rating form also included an example of how to judge each question with a range in scores from -3 to +4. Based on my experience as an interviewer, I felt that I deserved a score of +4 (skill attempted at an appropriate time, in a suitable context and was demonstrated at a superior level) for 14 of the questions. I gave myself a score of +3 (skill attempted at an appropriate time, in a suitable context and was demonstrated at a good level of competence) for the remaining six questions. I was able to achieve a score of +74 which indicates very effective interview skills.

While this score result is biased based on my experience as an evaluation, I felt this was appropriate as during the course of the interview, the skills evaluated were attempted at an appropriate time, in a suitable context and were generally demonstrated competently. I feel my strongest areas were verbal communication (speaking and listening) and beginning the interviews (introducing myself and the study). Interview participants commented on feeling at ease and that I was able to help them clarify their thoughts. Areas in which I would like to gain further interview experience include probing and reflecting upon complex communications.

The practicum was designed to give me an opportunity to use evaluation skills in a practical setting. An area in which I found this experience to be most useful was with statistical analysis of the results. While I have taken two statistics courses as part of my undergraduate degree, I have never applied these skills to an evaluation. It would have been useful for me to take a refresher statistics course before attempting to analyze the data as the statistical program SPSS has changed enormously since I last used it. I had also forgotten when to use which statistical test; for example, that a chi-square test can not be used on cells with less than five responses. This practicum has been extremely helpful in providing me with an opportunity to practice analyzing statistical data and interpreting the results. I also found that writing the presentation of results for this practicum report was different than writing a term paper, and this experience provided me with an opportunity to learn this skill. In my continued growth I would like to take another statistics course to further build upon my skills in this area.

By examining existing literature and through the guidance of my advisor I was able to get a basis from which to start writing an evaluation report. This, as well as the experience of completing a program evaluation, provided some insight into how a more comprehensive evaluation could have been designed. It would have been beneficial to conduct the evaluation over a longer period of time, with a larger group of study participants. This would have been very helpful as it was difficult to focus on the experiences of women when there were so few women in the program during the time period of the study. Extending the length of the study would have enabled me to enlist more female participants and thereby increasing the validity of the study. It would have also provided an opportunity to recruit enough females to conduct a number of focus

groups for both past and present female participants of the cardiac rehabilitation program. This would have provided women with a chance to provide more detailed information about expectations, satisfaction, suggestions for program improvement, difficulties accessing the program, ways in which they felt the program would be attractive and accessible to women, etc.

Another recommended strategy for future evaluations would be to contact individuals, particularly women, who choose not to participate in cardiac rehabilitation programs. One way in which this could be done is by contacting women as they leave the hospital to gain more detailed information on the reasons behind why some women choose to participate in cardiac rehabilitation programs while others do not. It would have also been beneficial to conduct a focus group with this population. This would enable program staff, policy makers and evaluators to determine what makes it more likely for some people to join cardiac rehabilitation. It would also provide an opportunity for women to discuss the barriers they face and how they could potentially be overcome.

### Conclusions

A partial evaluation with relatively few female participants cannot fully answer all of the research questions put forward. However, evaluation results do indicate high levels of participant satisfaction with the program content and the staff regardless of gender. As well, several benefits pertaining to participants that appear to be associated with program attendance and use of the information provided as part of the program. Results from the study, do however, raise some suggestions for program improvement that could be further considered and addressed in the ongoing evolution of the program.

### Extending the period of scheduled exercise

Respondents felt that four weeks is not an adequate period of time for scheduled exercise, and there was a frequent suggestion that additional time would allow participants to firmly establish a change in lifestyle while providing additional support and encouragement. As suggested by some participants, this may be accomplished by setting aside times throughout the week for individuals who have completed the first four weeks of the program to meet and exercise together. This could also become a meeting spot for individuals who want to participate in a walking group. This could be done without too much difficulty and could further ensure that cardiac members feel they are supported by the program after the first month.

### Increase awareness of medical community

Increasing the awareness of individuals involved in the health care system about the benefits and availability of cardiac rehabilitation for both genders would accomplish more than one purpose. It would ensure that the appropriate individuals are referred to the program and would make it more likely that physicians would endorse such programs and encourage patients to join. It is also important to make both the medical community and the public aware the cardiovascular disease is no longer a "man's" disease. This is key to increase women's participation in cardiac rehabilitation, given the role physicians play as referral agents. In addition, physicians were commonly the person who's support and endorsement of cardiac rehabilitation encouraged women to join the program.

### Social support

There are a few things that might be done to increase the social support available for women within the cardiac rehabilitation program. It would be beneficial to look into

the psychological aspect of the program to determine if it is offering as much as it can, as this part of the program was often reported as one of the least helpful. The addition of a support group for cardiac members to discuss relevant issues is one way in which cardiac members could further benefit from the program.

Other ways in which social support can be increased is by introducing a class for female participants (a strategy also supported by the focus group, numbers permitting), and when numbers do not permit a separate class, ensuring that more than one female is in each class whenever possible. It is also important for staff to encourage participants, particularly women, to bring a support person with them to the program, such as an adult child, friend, niece/nephew, etc. One way in which the program could do this is by giving cardiac members with a few (2 or 3) guest passes so that this support person can try out the facility and potentially become an exercise partner for the cardiac member (either by joining the facility or exercising with them elsewhere). This would increase the level of support and encouragement to participants. While guests would be encouraged to stretch, walk with or exercise with the member of the program, it would be made clear that they would not be monitored or considered to be full cardiac rehabilitation participants.

As women are more likely than men to rely upon or take into consideration the opinions of their adult children, involving their children as much as possible in the decision could be beneficial. Ways in which this could be done are providing information or encouraging women to discuss the benefits of cardiac rehabilitation programs with their children or other support persons.

### Problems commonly encountered

Further research should be conducted on individuals who do not attend cardiac rehabilitation programs, particularly women. While it was found that transportation and other illnesses were problems for women in the program, the extent to which women who do not attend cardiac rehabilitation programs are affected by these problems is unclear. It is essential to determine the reasons for non-participation in cardiac programs. Once the problems are pinpointed further ways to decrease these obstacles can be more closely examined.

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## **Appendix A**

### **Social Work Skills Interview Rating Form**

### Social Work Skills Interview Rating Form

This rating form may be used by social workers as part of the process of evaluating their own or others' performance of the social work skills during interviews with clients.

N/A During the course of the interview, the skill in question was not appropriate or necessary and was therefore not used, having no effect upon the interview.

-3 During the course of the interview, the skill in question was used at an inappropriate time or in an unsuitable context, seriously detracting from the interview.

-2 During the course of the interview, the skill in question was attempted at an appropriate time and in a suitable context but was done so in an incompetent manner, significantly detracting from the interview.

-1 During the course of the interview, the skill in question was not used at times or in contexts when it should have been, detracting from the interview.

0 During the course of the interview, the skill in question was used and demonstrated at a minimal level of competence. Its use did not detract from nor contribute to the interview.

+1 During the course of the interview, the skill in question was attempted at an appropriate time and in a suitable context and was generally demonstrated at a fair level of competence. Its use represented a small contribution to the interview.

+2 During the course of the interview, the skill in question was attempted at an appropriate time and in a suitable context and was generally demonstrated at a moderate level of competence. Its use represented a significant contribution to the interview.

+3 During the course of the interview, the skills in question was attempted at an appropriate time and in a suitable context and was generally demonstrated at a good level of competence. Its use represented a substantial contribution to the interview.

+4 During the course of the interview, the skill in question was attempted at an appropriate time and in a suitable context and was generally demonstrated at a superior level of performance. Its use represented a major contribution to the interview.

**Talking and Listening – The Basic Interpersonal Skills**

## 1. Voice and Speech

N/A	-3	-2	-1	0	+1	+2	+3	+4
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## 2. Body Language

N/A	-3	-2	-1	0	+1	+2	+3	+4
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## 3. Hearing

N/A	-3	-2	-1	0	+1	+2	+3	+4
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## 4. Observing

N/A	-3	-2	-1	0	+1	+2	+3	+4
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## 5. Encouraging Comments

N/A	-3	-2	-1	0	+1	+2	+3	+4
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## 6. Remembering

N/A	-3	-2	-1	0	+1	+2	+3	+4
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## 7. Active Listening

N/A	-3	-2	-1	0	+1	+2	+3	+4
-----	----	----	----	---	----	----	----	----

**Beginning**

## 8. Introducing Oneself

N/A	-3	-2	-1	0	+1	+2	+3	+4
-----	----	----	----	---	----	----	----	----

## 9. Seeking Introductions

N/A	-3	-2	-1	0	+1	+2	+3	+4
-----	----	----	----	---	----	----	----	----

## 10. Describing Initial Purpose

N/A	-3	-2	-1	0	+1	+2	+3	+4
-----	----	----	----	---	----	----	----	----

## 11. Outlining the Client's Role

N/A	-3	-2	-1	0	+1	+2	+3	+4
-----	----	----	----	---	----	----	----	----

## 12. Discussing Policy and Ethical Considerations

N/A	-3	-2	-1	0	+1	+2	+3	+4
-----	----	----	----	---	----	----	----	----

## 13. Seeking Feedback

N/A	-3	-2	-1	0	+1	+2	+3	+4
-----	----	----	----	---	----	----	----	----

**Exploring**

## 14. Probing

N/A	-3	-2	-1	0	+1	+2	+3	+4
-----	----	----	----	---	----	----	----	----

15. Seeking Clarification	N/A	-3	-2	-1	0	+1	+2	+3	+4
16. Reflecting Content	N/A	-3	-2	-1	0	+1	+2	+3	+4
17. Reflecting Feeling	N/A	-3	-2	-1	0	+1	+2	+3	+4
18. Reflecting Complex Communications	N/A	-3	-2	-1	0	+1	+2	+3	+4
19. Partializing	N/A	-3	-2	-1	0	+1	+2	+3	+4
20. Going Beyond What is Said	N/A	-3	-2	-1	0	+1	+2	+3	+4

Source: Cournoyer, 1991.

**Appendix B**

**File Review Variables**

### File Review Variables

1. Gender
  - a. Male
  - b. Female
2. Month started program
3. Age
  - a. 20's, 30's, 40's, 50's, 60's, 70's, 80's, 90's, 100+
4. Social support
  - a. Living alone with spouse or other
  - b. Living alone –available support
  - c. Living alone – no available support
5. Employment
  - a. Employed
  - b. Unemployed
  - c. Retired
6. Exercise Experience
  - a. None
  - b. <2x/week
  - c. 2-3 x/week
  - d. >3 x week
7. Family history of CV disease
  - a. Yes
  - b. No
8. Smoking
  - a. Non-smoker
  - b. Presently smoking
  - c. Quit within one year of cardiac event
9. Psychological history
  - a. Depression
  - b. Anxiety
  - c. Substance abuse
  - d. Psychosis
  - e. Other
  - f. None
10. Family psychological history
  - a. Depression
  - b. Anxiety
  - c. Substance abuse
  - d. Psychosis
  - e. Other
  - f. None
11. Previous medical problems or physical limitations

12. Risk stratification
  - a. High
  - b. Moderate
  - c. Low
13. Number of visits
  - a. 0-9
  - b. 10-19
  - c. 20-29
  - d. 30-39
  - e. 40+
14. Method of payment
  - a. Patient pays
  - b. Third party pays
  - c. WRHA subsidy
15. Program was...
  - a. Uncomplicated by cardiac events
  - b. Complicated by cardiac events
  - c. Complicated by other events
16. Outcome measurements (initial assessment and at four month assessment)
  - a. Physical measurements
    - i. Weight
    - ii. Height
    - iii. BMI
    - iv. Waist girth
    - v. Blood pressure
    - vi. Resting heart rate
  - b. Blood work
    - i. Total cholesterol
    - ii. LDL
    - iii. HDL
    - iv. Triglycerides
    - v. TC/HDL ratio
    - vi. Blood glucose
  - c. Test results
    - i. MET level
    - ii. Maximum heart rate
    - iii. Maximum blood pressure

## **Appendix C**

### **Interview Guide for Current Respondents**

**December 2003 to February 2004**

### Interview Guide for Current Respondents

Name: \_\_\_\_\_ Month entered program: \_\_\_\_\_

1. Date of birth: \_\_\_\_\_

2. Gender:            Male                            Female

3. Marital Status:    Married                    Common-law  
                            Divorced                  Single  
                            Separated                Widowed

4. Living Status:    Spouse  
                            Alone  
                            Other family member, specify: \_\_\_\_\_  
                            Other, specify: \_\_\_\_\_

5. Other major health concerns:

\_\_\_\_\_

\_\_\_\_\_

6. Do you have health insurance to cover the cost of this program?

Yes                            No

If yes, did the insurance cover a portion of or the entire cost of the program?

\_\_\_\_\_

7. Will you receive a fee waiver?

Yes                            No

8. List the top three persons and their relationship to you, whom you turn to for emotional/social support.

a) \_\_\_\_\_  
 b) \_\_\_\_\_  
 c) \_\_\_\_\_

9. What were your reasons for joining the cardiac rehabilitation program?

\_\_\_\_\_

\_\_\_\_\_

10. Who told you about the cardiac rehabilitation program at the Wellness Institute?

- Family doctor
- Social worker
- Heart Specialist
- Hospital staff
- Friend
- Family member, specify: \_\_\_\_\_

11. Who encouraged you the **most** to join the cardiac rehabilitation program at the Wellness Institute?

- Family doctor
- Social worker
- Heart Specialist
- Hospital staff
- Friend
- Family member, specify: \_\_\_\_\_

12. What services do you expect to access?

- | Yes                      | No                       |   |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Physiotherapy                                     |
| <input type="checkbox"/> | <input type="checkbox"/> | Dietitian (private session)                       |
| <input type="checkbox"/> | <input type="checkbox"/> | Individual Counseling                             |
| <input type="checkbox"/> | <input type="checkbox"/> | Specialized exercise classes (yoga, tai chi, etc) |
| <input type="checkbox"/> | <input type="checkbox"/> | Other, specify: _____                             |

13. Which parts of the program do you think will be helpful to you? Choose up to three items.

- | Yes                      | No                       |                       |
|--------------------------|--------------------------|-----------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Exercise              |
| <input type="checkbox"/> | <input type="checkbox"/> | Relaxation techniques |
| <input type="checkbox"/> | <input type="checkbox"/> | Education             |
| <input type="checkbox"/> | <input type="checkbox"/> | Social support        |
| <input type="checkbox"/> | <input type="checkbox"/> | Nutrition             |
| <input type="checkbox"/> | <input type="checkbox"/> | Body mind connection  |
| <input type="checkbox"/> | <input type="checkbox"/> | Social Supports       |
| <input type="checkbox"/> | <input type="checkbox"/> | Medications           |
| <input type="checkbox"/> | <input type="checkbox"/> | Other, specify: _____ |

14. What do you hope to achieve as a result of the program? What are your personal goals for the program? What are your personal objectives for the program?

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15. Did you have any difficulties that you had to overcome before joining the program? What types of difficulties were they? How were you able to overcome them? Are there any that are still causing you problems?

---



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16. Were any of the following issues a problem for you?

- | Yes                      | No                       |                                  |
|--------------------------|--------------------------|----------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Transportation                   |
| <input type="checkbox"/> | <input type="checkbox"/> | Child/elder care                 |
| <input type="checkbox"/> | <input type="checkbox"/> | Finances                         |
| <input type="checkbox"/> | <input type="checkbox"/> | Other health concerns            |
| <input type="checkbox"/> | <input type="checkbox"/> | Work related issues              |
| <input type="checkbox"/> | <input type="checkbox"/> | Lack of social/emotional support |

17. Think of your physical ability and what you can do now. On a scale of 1 to 10, how do you rate your physical ability compared to what you would like to be able to do? Circle the appropriate number.

Able to do none of the physical activities					Able to do about half of the physical activities					Able to do all of the physical activities I want
1	2	3	4	5	6	7	8	9	10	

18. Is there anything else that you feel I should know about your particular situation?

---



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## **Appendix D**

### **Initial Questionnaire for Current Respondents**

**December 2003 to February 2004**

### Initial Questionnaire for Current Respondents

Name: \_\_\_\_\_

Month entered program: \_\_\_\_\_

1. Date of birth: \_\_\_\_\_

2. Gender:            Male                          Female

3. Marital Status:        Married                          Common-law  
                                      Divorced                          Single  
                                      Separated                          Widowed

4. Living Situation:        With spouse  
                                      Alone  
                                      With other family member, specify: \_\_\_\_\_  
                                      Another living situation, specify: \_\_\_\_\_

5. Major health concerns:

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6. Do you have health insurance to cover the cost of this program?

   Yes                          No

If yes, does your insurance cover a portion of or the entire cost of the program?

---

7. Will you receive a fee waiver?

   Yes                          No

8. List the top three persons and their relationship to you, whom you turn to for emotional/social support.

- a) \_\_\_\_\_  
 b) \_\_\_\_\_  
 c) \_\_\_\_\_

9. Who told you about the cardiac rehabilitation program at the Wellness Institute?

- Family doctor
- Social worker
- Heart Specialist
- Hospital staff
- Friend
- Advertisement
- Family member, specify: \_\_\_\_\_

10. Who encouraged you the **most** to join the cardiac rehabilitation program at the Wellness Institute? Please check only one box.

- Family doctor
- Social worker
- Heart Specialist
- Hospital staff
- Friend
- Self
- Family member, specify: \_\_\_\_\_

11. What services do you expect to access? Please check yes or no for each item.

- | Yes                      | No   |
|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> Physiotherapy                                     |
| <input type="checkbox"/> | <input type="checkbox"/> Dietitian (private session)                       |
| <input type="checkbox"/> | <input type="checkbox"/> Individual Counseling                             |
| <input type="checkbox"/> | <input type="checkbox"/> Specialized exercise classes (yoga, tai chi, etc) |
| <input type="checkbox"/> | <input type="checkbox"/> Massage therapy                                   |

12. Which parts of the program do you think will be helpful to you? You may choose up to three items, but please check no more than three boxes.

- Exercise
- Relaxation techniques
- Education
- Social support
- Nutrition
- Body mind connection
- Medications
- Other, specify: \_\_\_\_\_

13. a) What is your general goal for the cardiac rehabilitation program?

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b) Now thinking of that general goal, what are the specific things you need to do to meet that goal?

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14. a) What types of difficulties did you have to overcome before joining the cardiac rehabilitation program? If none, please note this.

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b) Please refer to any difficulties identified in 14a. How were you able to overcome these difficulties?

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c) Do any of these difficulties still cause you problems?

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15. Were any of the following issues a problem for you? Please check yes or no for each item.

Yes	No	
<input type="checkbox"/>	<input type="checkbox"/>	Transportation
<input type="checkbox"/>	<input type="checkbox"/>	Child/elder care
<input type="checkbox"/>	<input type="checkbox"/>	Finances
<input type="checkbox"/>	<input type="checkbox"/>	Other health concerns
<input type="checkbox"/>	<input type="checkbox"/>	Work related issues
<input type="checkbox"/>	<input type="checkbox"/>	Lack of social/emotional support

16. Think of your physical ability and what you can do now. On a scale of 1 to 10, how do you rate your physical ability compared to what you would like to be able to do? Circle the appropriate number.

Able to do  
none of the  
physical  
activities

Able to do about  
half of the physical  
activities

Able to do all  
of the physical  
activities I  
want

1            2            3            4            5            6            7            8            9            10

18. Is there anything else that you feel I should know about your particular situation?

---



---



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## **Appendix E**

### **Telephone Interview Guide for Non-participants of the Cardiac Rehabilitation Program**



9. Who told you about the cardiac rehabilitation program at the Wellness Institute?

- Family doctor
- Social worker
- Heart Specialist
- Hospital staff
- Friend
- Family member, specify: \_\_\_\_\_

10. Were any of the following issues a problem for you?

- | Yes                      | No                       |                                  |
|--------------------------|--------------------------|----------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Transportation                   |
| <input type="checkbox"/> | <input type="checkbox"/> | Child/elder care                 |
| <input type="checkbox"/> | <input type="checkbox"/> | Finances                         |
| <input type="checkbox"/> | <input type="checkbox"/> | Other health concerns            |
| <input type="checkbox"/> | <input type="checkbox"/> | Work related issues              |
| <input type="checkbox"/> | <input type="checkbox"/> | Lack of social/emotional support |

17. Think of your physical ability and what you can do now. On a scale of 1 to 10, how do you rate your physical ability compared to what you would like to be able to do?

Circle the appropriate number.

Able to do none of the physical activities

Able to do about half of the physical activities

Able to do all of the physical activities I want

1            2            3            4            5            6            7            8            9            10

18. Is there anything else that you feel I should know about your particular situation?

---



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## **Appendix F**

### **Current Cardiac Rehabilitation Program Evaluation**

Name \_\_\_\_\_ (optional) Program month \_\_\_\_\_

Date \_\_\_\_\_

### Current Cardiac Rehabilitation Program Evaluation Form

Your honest evaluation will help us make the Cardiac Rehab Program become a more comprehensive and complete program. Please complete the following and include your suggestions and comments.

1. Where did you first hear about the Cardiac Rehab Program?

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2. Do you know your heart disease risk factors and **warning** signals/symptoms? What do you need to do if these symptoms should occur?

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#### RATING SCALE

<b>GOLD STAR</b>	<b>GOOD</b>	<b>NOT SO GOOD</b>	<b>NEEDS IMPROVEMENT</b>
☆	☺	☹	X

- 3.) Was the cardiac rehab team **helpful** and approachable? ☆ ☺ ☹ X

- 4.) Was the program **organized**? ☆ ☺ ☹ X

- 5.) Did you receive enough information/help with the following topics? Please comment

A.) Your **Cardiac** Disease ☆ ☺ ☹ X

B.) Your **Exercise** Program ☆ ☺ ☹ X

C.) Your **Medications** ☆ ☺ ☹ X

D.) Your **Nutrition** ☆ ☺ ☹ X

E.) Your **Stress** Management

☆ ☺ ☹ X

6.) Have you used your **manual** for reference? Yes    Occasionally    No

7.) Are you following the **advice** that was offered to you?

Always                      Almost always              Occasionally                      Not at all

8.) What did you find the **most** helpful?

\_\_\_\_\_

\_\_\_\_\_

9.) What did you find least helpful?

\_\_\_\_\_

\_\_\_\_\_

10.) Would you like to see **additional topics**/classes covered in our program? Please describe.

\_\_\_\_\_

\_\_\_\_\_

11.) In an overall, general sense, how satisfied are you with the services you have received?

1	2	3	4
Very satisfied	Mostly satisfied	Indifferent or mildly dissatisfied	Quite dissatisfied

12.) Would you recommend this program to others?

1	2	3	4
No, definitely not	No, not really	Yes, generally	Yes, definitely

13.) Do you have additional thoughts or **concerns**?

\_\_\_\_\_

\_\_\_\_\_

*Thank you for your time*

## **Appendix G**

### **Cardiac Rehabilitation Questionnaire Completed in Week Ten**

### Cardiac Rehabilitation Questionnaire Completed in Week Ten

Name: \_\_\_\_\_ Month entered program: \_\_\_\_\_

1. Has your marital status changed since entering the program?

Yes

No

If yes, how? \_\_\_\_\_

2. Has your living status changed since entering the program?

Yes

No

If yes, how? \_\_\_\_\_

3. What services did you access?

Yes

No



Physiotherapy



Dietitian (private session)



Individual Counseling



Specialized exercise classes



Other, specify: \_\_\_\_\_

4. What part of the program did you find **most** helpful?

Yes

No



Exercise



Relaxation techniques



Education



Social support



Nutrition



Body mind connection



Social Supports



Medications



Other, specify: \_\_\_\_\_

5. Which of the following classes did you attend?

Yes

No



Label Reading



Cooking Class



Body Mind Connection 2



Body Mind Connection 3

6. What part of the program did you find least helpful?

Yes	No	
<input type="checkbox"/>	<input type="checkbox"/>	Exercise
<input type="checkbox"/>	<input type="checkbox"/>	Relaxation techniques
<input type="checkbox"/>	<input type="checkbox"/>	Education
<input type="checkbox"/>	<input type="checkbox"/>	Social support
<input type="checkbox"/>	<input type="checkbox"/>	Nutrition
<input type="checkbox"/>	<input type="checkbox"/>	Body mind connection
<input type="checkbox"/>	<input type="checkbox"/>	Social Supports
<input type="checkbox"/>	<input type="checkbox"/>	Medications
<input type="checkbox"/>	<input type="checkbox"/>	Other, specify: _____

7. What services would you like to see added to the cardiac program?

Yes	No	
<input type="checkbox"/>	<input type="checkbox"/>	Smoking cessation
<input type="checkbox"/>	<input type="checkbox"/>	Walking group
<input type="checkbox"/>	<input type="checkbox"/>	Support group for cardiac members
<input type="checkbox"/>	<input type="checkbox"/>	Support group for family members of cardiac members
<input type="checkbox"/>	<input type="checkbox"/>	Occupational counseling
<input type="checkbox"/>	<input type="checkbox"/>	Scheduled, monitored exercise for a longer period of time, specify how long: _____
<input type="checkbox"/>	<input type="checkbox"/>	Other: _____

8. List three personal goals you wished to achieve with the help of the cardiac rehabilitation program.

---



---



---

9. Of the three above mentioned goals, how many did you achieve? Please circle the number that applies.

None            1            2            3

If you did not achieve your goals, what prevented you from doing so? How could the program have helped you better to achieve your goals?

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10. Did you receive adequate social support from the program?

Yes

No

If no, in what ways can the program improve?

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11. To what extent were staff members available to answer your questions and talk to you about your individual needs?

4	3	2	1
Almost all of my needs have been met	Most of my needs have been met	Only a few of my needs have been met	None of my needs have been met

12. Do you feel that you have family members or friends that you are able to talk to about your problems, triumphs and frustrations?

1	2	3	4
No, definitely not	No, not really	Yes, generally	Yes, definitely

13. Did you feel the cardiac rehabilitation program treated you as a person instead of a number?

1	2	3	4
No, definitely not	No, not really	Yes, generally	Yes, definitely

14. On a scale of 1 to 10, with 1 being not being able to do anything and 10 being able to do everything you want, how do you rate your ability?

1	2	3	4	5	6	7	8	9	10
Able to do none of the physical activities I want				Able to do about half of the physical activities I want			Able to do all of the physical activities I want		

15. What aspects of the program encouraged you to complete or drop out of the first two months of the cardiac rehabilitation program?

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16. Are you still exercising at the Wellness Institute? If not, are you exercising elsewhere? Please indicate where (home, another gym, outside, etc.).

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17. Are you continuing to participate in the healthy lifestyle taught by the program?

If yes, please describe what aspects you are practicing (exercise, healthy eating, reduced stress, stopped smoking) and how you are maintaining this lifestyle. Please list any challenges you are facing.

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If no, please describe what challenges have prevented you from continuing a healthy lifestyle.

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## **Appendix H**

### **Client Satisfaction Questionnaire (CSQ-8)**

### Client Satisfaction Questionnaire

Please help us improve the services we provide by filling out this short survey. Your honest input is important to us, whether positive or negative. Please answer all of the questions. We also welcome your comments and suggestions. Thank you very much; we really appreciated your help.

Please circle your answer:

1. How would you rate the quality of service you have received?

4	3	2	1
Excellent	Good	Fair	Poor

2. Did you get the kind of service you wanted?

1	2	3	4
No, definitely	No, not really	Yes, generally	Yes, definitely

3. To what extent has our program met your needs?

4	3	2	1
Almost all of my needs have been met	Most of my needs have been met	Only a few of my needs have been met	None of my needs have been met

4. If a friend were in need of similar help, would you recommend our program to him or her?

1	2	3	4
No, definitely not	No, not really	Yes, generally	Yes, definitely

5. How satisfied are you with the amount of help you received?

1	2	3	4
Quite dissatisfied	Indifferent or mildly dissatisfied	Mostly satisfied	Very satisfied

6. Have the services you received helped you to deal more effectively with your problems?

4	3	2	1
Yes, they helped	Yes, they helped a great deal	No, they really didn't help	No, they seemed to make things worse

7. In an overall, general sense, how satisfied are you with the service you have received?

4	3	2	1
Very satisfied	Mostly satisfied	Indifferent or mildly dissatisfied	Quite dissatisfied

8. If you were to seek help again, would you come back to our program?

1	2	3	4
No, definitely not	No, I don't think so	Yes, I think so	Yes, definitely

## **Appendix I**

### **Letter of Request for Past Member Participation**



## **Appendix J**

### **Cardiac Rehabilitation Questionnaire for Past Members**

### Cardiac Rehabilitation Questionnaire for Past Members

Name: \_\_\_\_\_ Month entered program: \_\_\_\_\_

Instructions: Thank you for agreeing to participate in this study. Many questions can be answered by checking the appropriate box, while some questions require a written response.

1. Date of birth: \_\_\_\_\_

2. Gender:            Male                            Female

3. Marital Status:    Married                        Common-law  
                            Divorced                      Single  
                            Separated                    Widowed

4. Living Situation:    With spouse  
                               Alone  
                               With other family member, specify: \_\_\_\_\_  
                               Another living situation, specify: \_\_\_\_\_

5. Major health concerns (For example: Diabetes, Arthritis, Asthma, Joint Problems, etc.)

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---

6. In which month and year did you complete the cardiac rehabilitation program at the Wellness Institute?

---

7. Did you have health insurance to cover the cost of this program?

Yes                            No

If yes, did your insurance cover a portion of or the entire cost of the program?

---

8. Did you receive a fee waiver?

Yes                            No

9. List the top three persons and their relationship to you, whom you turn to for emotional/social support.

a) \_\_\_\_\_

b) \_\_\_\_\_

c) \_\_\_\_\_

10. Who told you about the cardiac rehabilitation program at the Wellness Institute?

- Family doctor
- Social worker
- Heart Specialist
- Hospital staff
- Friend
- Advertisement
- Family member, specify: \_\_\_\_\_

11. Who encouraged you the **most** to join the cardiac rehabilitation program at the Wellness Institute?

- Family doctor
- Social worker
- Heart Specialist
- Hospital staff
- Friend
- Self
- Family member, specify: \_\_\_\_\_

12. a) What types of difficulties did you have to overcome before joining the cardiac rehabilitation program? If none, please note this.

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---

b) Please refer to any difficulties identified in 12a. How were you able to overcome these difficulties?

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---

c) Do any of these difficulties still cause you problems?

---



---



---

13. Were any of the following issues a problem for you? Please check yes or no for each item.

- | Yes                      | No                       |                                  |
|--------------------------|--------------------------|----------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Transportation                   |
| <input type="checkbox"/> | <input type="checkbox"/> | Child/elder care                 |
| <input type="checkbox"/> | <input type="checkbox"/> | Finances                         |
| <input type="checkbox"/> | <input type="checkbox"/> | Other health concerns            |
| <input type="checkbox"/> | <input type="checkbox"/> | Work related issues              |
| <input type="checkbox"/> | <input type="checkbox"/> | Lack of social/emotional support |

14. Which of the following classes did you attend? Please check yes or no for each of the following:

- | Yes                      | No                       |                        |
|--------------------------|--------------------------|------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Label Reading          |
| <input type="checkbox"/> | <input type="checkbox"/> | Cooking Class          |
| <input type="checkbox"/> | <input type="checkbox"/> | Body Mind Connection 2 |
| <input type="checkbox"/> | <input type="checkbox"/> | Body Mind Connection 3 |

15. What part of the program did you find **most** helpful? You may choose up to three items, but please check no more than three boxes.

- |                          |                       |
|--------------------------|-----------------------|
| <input type="checkbox"/> | Exercise              |
| <input type="checkbox"/> | Relaxation techniques |
| <input type="checkbox"/> | Education             |
| <input type="checkbox"/> | Social support        |
| <input type="checkbox"/> | Nutrition             |
| <input type="checkbox"/> | Body mind connection  |
| <input type="checkbox"/> | Medications           |
| <input type="checkbox"/> | Other, specify: _____ |

16. What part of the program did you find **least** helpful? You may choose up to three items, but please check no more than three boxes.

- Exercise
- Relaxation techniques
- Education
- Social support
- Nutrition
- Body mind connection
- Medications
- Other, specify: \_\_\_\_\_

17. What services would you like to see added to the cardiac program? Please check yes or no for each of the following:

- | Yes                      | No                       |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Smoking cessation  |
| <input type="checkbox"/> | <input type="checkbox"/> | Walking group  |
| <input type="checkbox"/> | <input type="checkbox"/> | Support group for cardiac members  |
| <input type="checkbox"/> | <input type="checkbox"/> | Support group for family members of cardiac members                                |
| <input type="checkbox"/> | <input type="checkbox"/> | Occupational counseling  |
| <input type="checkbox"/> | <input type="checkbox"/> | Scheduled, monitored exercise for a longer period of time, specify how long: _____ |
| <input type="checkbox"/> | <input type="checkbox"/> | Other: _____   |

18. List up to three personal goals you wished to achieve at the time of enrollment in the cardiac rehabilitation program.

1) \_\_\_\_\_

2) \_\_\_\_\_

3) \_\_\_\_\_

19. For each of your above goals, please indicate to what extent you feel you were able to achieve the goal.

1)        To a small extent        Partially        To a large extent

2)        To a small extent        Partially        To a large extent

3)        To a small extent        Partially        To a large extent

20. a) If you did not fully achieve your goals, what prevented you from doing so?

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b) How could the program have helped you better to achieve your goals?

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21. a) To what extent were staff members at the cardiac rehabilitation program available to answer your questions and talk to you about your individual needs?

4	3	2	1
To a great extent	To a moderate extent	Only slightly	Not at all

b) Do you have any suggestions for ways in which the program can improve?

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22. Do you feel that you have family members or friends that you are able to talk to about your problems, triumphs and frustrations?

1	2	3	4
No, definitely not	No, not really	Yes, generally	Yes, definitely

23. Did you feel the cardiac rehabilitation program treated you as a person instead of a number?

1	2	3	4
No, definitely not	No, not really	Yes, generally	Yes, definitely

24. Think back to before you started the program, on a scale of 1 to 10, with 1 being not being able to do anything and 10 being able to do everything you want, how would you rate your ability at that time?

1	2	3	4	5	6	7	8	9	10
Able to do none of the physical activities I want				Able to do about half of the physical activities I want			Able to do all of the physical activities I want		

25. On a scale of 1 to 10, with 1 being not being able to do anything and 10 being able to do everything you want, how would you have rated your ability at the end of the program?

1	2	3	4	5	6	7	8	9	10
Able to do none of the physical activities I want				Able to do about half of the physical activities I want			Able to do all of the physical activities I want		

26. a) Are you continuing to participate in the healthy lifestyle taught by the program?

Most of the time       Occasionally       Not at all

b) If yes, please describe what aspects you are practicing (exercise, healthy eating, reduced stress, stopped smoking).

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c) If no, please describe what challenges have prevented you from continuing a healthy lifestyle.

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27. It appears that women do not come to cardiac rehabilitation programs as often as men. Why do you think this is the case?

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28. a) Would you be willing or prefer to discuss any of your answers in detail with the researcher by telephone or in person?

Yes  No

b) If you would like a summary of the final report, please indicate so below:

Yes  No

Note: Please put the completed survey in the stamped, addressed envelop provided and drop in the mail as soon as possible.

Thank you very much for your participation.

## **Appendix K**

### **Letter of Explanation to Past Participants**

### **Letter of Explanation to Past Participants**

Date, 2004

Thank you for agreeing to participate in the study "Gender Expectations and Satisfaction: An Evaluation of Cardiac Rehabilitation". You probably first heard about this study through Kelly Seward at the Wellness Institute.

The purpose of this evaluation is to record, describe and contrast differences in participation, expectation, satisfaction and social supports based on gender. It is expected this evaluation will help the cardiac rehabilitation program cope better with gender differences. The findings will be used to evaluate gender differences in the Wellness Institute's cardiac rehabilitation program in relation to expectations, satisfaction, as well as some outcome measures. Part of the results will also be used to complete my practicum which is a requirement of the Master of Social Work Program at the University of Manitoba.

As a previous cardiac rehabilitation program member, your opinions and experiences are very important. If you could please take a few minutes of your time to read and sign the enclosed consent form and the enclosed questionnaire. After you have completed these, please put the completed consent form and the questionnaire in the stamped, pre-addressed envelop and drop in the mail. Also information provided is confidential and no individual will be identified when the results of this study are reported.

Thank you for your participation in this study.

Sincerely,

Andria Janique Mudry

## **Appendix L**

### **Participant Consent Form**

## Participant Consent Form

Principal Investigator: Andria Mudry, .

Faculty Advisor: Dr. Brad McKenzie, 474-8767

The purpose of this practicum is to record, describe and contrast differences in participation, expectation, satisfaction and social supports based on gender. It is expected this evaluation will help the cardiac rehabilitation program cope better with gender differences. The findings will be used to evaluate gender differences in the Wellness Institute's cardiac rehabilitation program in relation to expectation, satisfaction, as well as some outcome measures.

The general results of this evaluation will be summarized and presented to the Wellness Institute, Reh-Fit Centre and Winnipeg Regional Health Authority in the form of a written report. A presentation on the evaluation and its results will be made at both the Wellness Institute and the University of Manitoba. This practicum will be used toward Andria Mudry's Master of Social Work degree.

This research has been approved by the Joint-Faculty Research Ethics Board. If participants have complaints about the project they may contact the Human Ethics Secretariat at 474-7122.

Individuals who enroll in the Wellness Institute's cardiac rehabilitation program for the November or December 2003 classes may be asked to participate in this study. Approximately 40-45 individuals will be in the study. As part of the evaluation participants will be asked to complete a pre program interview and a post survey to be completed in week 10 of the program. Information gathered as part of the cardiac rehabilitation program may also be used by the principle investigator for evaluation purposes. All information gathered will be kept anonymous and no identifying information will be contained in the evaluation report. During the practicum, completed interviews and questionnaires will be kept in a locked filing cabinet under the supervision of the principal investigator and will be destroyed after the practicum is completed.

Specific information discussed in the interview will remain confidential with the exception of disclosure of child abuse/neglect or intention to harm one's-self.

Your participation is voluntary and you have the right to participate or decline in any/all components of the evaluation, and you can withdraw from the program at any time.

By agreeing to participate in the evaluation, you will agree to participate in an interview and the follow-up questionnaire that will be distributed in week 12 of the cardiac rehabilitation program. If you consent to participate, please fill out the information below:

I \_\_\_\_\_ consent to participate in the cardiac rehabilitation evaluation being run in \_\_\_\_\_ (date), by Andria Mudry. I verify that I am giving my consent voluntarily. This practicum has been explained to me and I have received a copy of this consent form. I understand that I can withdraw from the program at any time.

\_\_\_\_\_  
Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Principal Investigator

\_\_\_\_\_  
Date

If you would like a summary of the final report, please write your name and address below:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## **Appendix M**

### **Telephone Consent Form**

### Telephone Consent Form

The purpose of this practicum is to record, describe and contrast differences in participation, expectation, satisfaction and social supports based on gender. This practicum will be used toward Andria Mudry's Master of Social Work degree and has been approved by the Join-Faculty Research Ethics Board. All information gathered will be kept anonymous and no identifying information will be contained in the evaluation report. Your participation is voluntary and you have the right to participate or decline in any/all of the components of this interview, and you can withdraw from the interview at any time.

Do you agree to consent to participating in this telephone interview?

\_\_\_\_\_  
Participant's Name

\_\_\_\_\_  
Date

## **Appendix N**

### **Past Participant Consent Form**

### **Past Participant Consent Form**

Principal Investigator: Andria Mudry,

Faculty Advisor: Dr. Brad McKenzie, 474-8767

The purpose of this study is to record, describe and contrast differences in participation, expectation, satisfaction and social supports based on gender. It is expected this evaluation will help the cardiac rehabilitation program cope better with gender differences. The findings will be used to evaluate gender differences in the Wellness Institute's cardiac rehabilitation program in relation to expectation, satisfaction, as well as some outcome measures.

The general results of this evaluation will be summarized and presented to the Wellness Institute, Reh-Fit Centre and Winnipeg Regional Health Authority in the form of a written report. A presentation on the evaluation and its results will be made at both the Wellness Institute and the University of Manitoba. Results will be used toward Andria Mudry's Master of Social Work degree.

This research has been approved by the Joint-Faculty Research Ethics Board. If participants have any concerns about the project they may contact the Human Ethics Secretariat at 474-7122.

Women who have previously participated in the Wellness Institute's cardiac rehabilitation program may be asked to participate in this study. Approximately 20 individuals will be in this part of the study. As part of the evaluation participants will be asked to complete a mail survey. If participants agree the principal investigator may contact some of the individuals to interview them in person. This information will be used to better understand the opinions of the participants. All information gathered will be kept confidential and no identifying information will be included in the evaluation report. During the practicum, completed interviews and questionnaires will be kept in a locked filing cabinet under the supervision of the principal investigator and will be destroyed after the practicum is completed.

Specific information completed in the questionnaire will remain confidential with the exception of intention to harm oneself. Under these circumstances, the investigator is required by law to report this information.

Your participation is voluntary and you have the right to participate or decline to answer any or all questions, and you can withdraw from participating in the evaluation at any time.

By agreeing to participate in the evaluation, you are agreeing to participate in completing a mail questionnaire. You may also consent to being contacted by Andria Mudry to be interviewed in person or by telephone to discuss your responses in more detail.

If you consent to participate, please fill out the information below:

I \_\_\_\_\_ consent to participate in the cardiac rehabilitation evaluation  
(Print Name)

being conducted by Andria Mudry. I verify that I am giving my consent voluntarily.  
This practicum has been explained to me and I have received a copy of this consent form.  
I understand that I can withdraw from this practicum evaluation at any time.

\_\_\_\_\_  
Participant Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Principal Investigator

\_\_\_\_\_  
Date

If you would like a summary of the final report, please indicate so below:

Yes

No

## **Appendix O**

### **Evaluation Schedule and Evaluation Time Allotment**

## Evaluation and Practicum Schedule

<b>Practicum Tasks</b>	<b>Task completion estimation</b>
Literature review	November to April
Develop questionnaire	September
Develop interview guideline	September
Schedule interviews	November & December
Interviews with cardiac members	December
Makes notes after interviews, review and type applicable sections 65 interviews x 1 hour = 65 hours	December
Complete file reviews	December to April
Phone Interviews	February to April
Copy and disseminate questionnaire	December to February
Review questionnaires	December to April
Create database	January
Enter data into database	January to May
Analyze data	April to May
Draft evaluation report	May
Present findings to the Wellness Institute	June
<b>Complete Evaluation and Practicum</b>	<b>Approximately June 2004</b>

## Evaluation Time Allotment

<b>Practicum Tasks</b>	<b>Number of hours assigned</b>
Literature review	45
Meetings with advisor and committee members	20
Complete file review	35
Phone interviews	5
Schedule interviews	5
Interviews with cardiac members	20
Develop file review and questionnaires	25
Copy and disseminate questionnaire	25
Code file reviews, questionnaires and interviews	60
Focus group	6
Enter data into database	50
Analyze data	120
Draft evaluation report	110
Write and disseminate summary of findings to interested participants	10
Present findings to the Wellness Institute	10
<b>Total hours</b>	<b>Approximately 550 hours</b>