

WOMEN'S EXPERIENCES DURING AN ACUTE MYOCARDIAL INFARCTION

by

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**DISSERTATION**

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Abstract  
Women's Experiences During an Acute Myocardial Infarction

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**Objective:** The objective was to describe the lived experience of women having a myocardial infarction and seeking healthcare, using the framework of the stress and coping theory (Lazarus & Folkman, 1984b).

**Setting:** Three acute care hospitals in a major metropolitan area in the North Texas region were the setting for the study.

**Method:** A total of 20 English speaking women were interviewed about their experience when having an acute myocardial infarction from the onset of their symptoms through their hospital stay. The interview questions and findings were aligned with the stress and coping theory concepts.

**Results:** The women realized they were experiencing a clinical situation when more than two symptoms began to emerge. They experienced fatigue/exhaustion, shortness of breath, sweating/being hot, and chest sensations, not necessarily pain. Women experienced some form of radiating pain that was not necessarily heart related during their myocardial infarction experience. The breaking point of when the women decided to seek healthcare was when they were no longer able to tolerate the severity of the sensations they were experiencing. Women knew they were having a myocardial infarction and would deny, rationalize, second guess or minimize the pain and would delay seeking healthcare. At times, women experienced a lack of urgency from healthcare providers. Some women experienced misinterpreted EKGs which

caused a delay in identifying the myocardial infarction. Although women had personal barriers to seeking healthcare, they also had other physical barriers to seeking care. Delayed ambulance transportation, road construction, preconceived ideas of women not having cardiac risk factors, and lack of insurance cause unexpected outcomes for the women having a myocardial infarction.

**Conclusions:** Women reported unique experiences when having a myocardial infarction. No patterns were distinguished when women had their myocardial infarction. More research is needed to explore the experience of non-English speaking women having a myocardial infarction and the types of procedures they endure.

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## **Chapter 1**

### **Introduction**

Women experience high mortality rates as a consequence of a myocardial infarction (MI). Morbidity and mortality rates increase when women delay seeking health care when experiencing an MI (Rosenfeld et al., 2005). Women have extended time frames from onset of chest pain to seeking medical attention (Moser, McKinley, Dracup, & Chung, 2005; Schoenberg, Peters, & Drew, 2003).

Quantitative researchers have conducted studies to identify the reasons women delay seeking health care for MIs (Moser et al., 2005), but few researchers have explored the qualitative experiences of women during an MI using a theory-based process. A theory-based process may lead to the development of an effective teaching tool for women having an MI. Increasing healthcare providers' understanding of a woman's experience during the MI episode may guide developing strategies to decrease the time from symptoms until treatment. Teaching women how to quickly identify MI symptoms and seek health care efficiently may prevent negative physiological cardiac outcomes, which could lead to long-term cardiac disease (Killip & Kimball, 1967).

This qualitative study described the lived experience of women having an MI and seeking healthcare, using the framework of the stress and coping theory (Lazarus & Folkman, 1984b). This chapter includes the background and significance of the study, the purpose of the investigation, the framework that was used as a guide within the philosophy of phenomenology, and questions that began the phenomenological interview process.

## **Background and Significance**

The causes of acute myocardial infarctions (AMI) are varied. In approximately 72% of patients who experience an MI, the cardiac tissue damage occurs due to a plaque build-up that ruptures in a coronary artery (Saaby et al., 2013). The plaque-ruptured MI is referred to as a Type I. The rupture causes a clot to form in the coronary artery, which in turn causes a coronary occlusion and the prevention of blood flow to the coronary muscle (Saaby et al., 2013). A Type 2 MI is due to the coronary muscle having an increased demand of oxygen to function properly, but a limited supply of oxygen delivery is available. The oxygen demand exceeds the supply to the coronary tissues (Saaby et al., 2013).

AMI treatment is readily available in tertiary care hospitals throughout the United States. The healthcare providers in the tertiary hospital's emergency department setting can activate an interventional cardiologist and a cardiac catheterization laboratory team, which is on call for these emergency situations. In the tertiary hospital, this team has a 90-minute window to inflate and re-perfuse the blocked coronary artery (O'Gara et al., 2013). This procedure, an angioplasty with coronary stents, is performed as needed to decrease the likelihood of the MI extending and causing further muscle damage to the heart (Cannon et al., 2000). An angioplasty is an invasive procedure, which expands a tiny balloon that pushes plaque build-up against the coronary intima. A metal stent can also be expanded to maintain the coronary artery opening to prevent re-occlusion, which allows blood and oxygen flow to feed the cardiac muscle. Hospitals without cardiac interventional capabilities have a 30-minute window to transport a patient having an MI to a tertiary hospital with interventional cardiology capabilities (O'Gara et al., 2013).

The Centers for Medicare and Medicaid (CMS) has set a national goal of opening a coronary artery for someone experiencing an MI due to coronary blockage within 90 minutes

(The Joint Commission, 2015). Less cardiac damage increases the likelihood of surviving the myocardial event and preventing future chronic cardiac conditions (Rosenfeld, Lindauer, & Darney, 2005).

Cardiovascular disease (CVD), also known as heart disease, is the leading cause of death in adult females in the United States (Mozaffarian et al., 2014). Women have been classified as having a low probability of acute coronary syndrome (ACS), which includes MI (Hess et al., 2010), and may view heart disease as a gender-specific risk for men (Higginson, 2008). In reality, since 1984, women have surpassed males in deaths related to heart disease (AHA, 2014). Women 45 years and older have a 26% chance of dying within one year of experiencing an MI (AHA, 2014). In 2007, more than 306,000 women died due to heart disease (U.S. Department of Health and Human Services, 2011). In the United States, a woman dies of heart disease every three minutes (AHA, 2012). For every three females, one has some form of heart disease (Mozaffarian et al., 2014). Ninety percent of U.S. women have at least one risk factor in the progression toward heart disease (AHA, 2012).

Only 20% of U.S. women believe heart disease is the most profound risk to their health (AHA, 2012), and yet heart disease has a higher mortality rate than all types of cancers aggregated (AHA, 2012). Although cardiovascular disease is the leading cause of death in women, 24% of the participants in cardiac-related research studies are female (AHA, 2012). Historically, men have been studied for symptoms of heart disease, and as such, standard myocardial screening has reflected the symptoms presented by men. For example, the American Heart Association (AHA, 2015) and the World Health Organization (WHO, 2011) list the symptoms of an MI as chest discomfort, pain in the jaw or arms, and shortness of breath.

In contrast, nurse researchers (McSweeney, et al., 2003; McSweeney & Crane, 2000; McSweeney, et al., 2010) found that women who had an MI presented with the primary symptoms of unusual fatigue, any type of chest pain/discomfort, and shortness of breath. Cohen (2005) found that women who had acute coronary syndrome events prior to hospital arrival experienced chest pain (54%), shortness of breath (7.4%), and nausea (6.6%). Women were not aware, however, of the typical MI symptoms experienced by females (Higginson, 2008). Women tend to have MIs in the later stages of life, and at a time when they are widowed and living alone (Quinn, 2008). An important aspect that is limited in the literature is women's descriptions of having MIs using a theory based process.

### **Philosophical/Theoretical Perspective**

The study of the experience of women having an MI is consistent with the philosophy of phenomenology, which conveys the participants' perspective of the experience (Munhall, 2012). Phenomenology unveils the richer meaning the experience has for the participant (Van Manen, 1990).

Within the context of phenomenology, the stress and coping theory (Lazarus & Folkman, 1984a) was used to provide structure for the review of the literature, the research questions, and data analysis. The theory was described from the female perspective, followed by application of the theory of this study.

### **Theory and Model**

The stress and coping theory (Lazarus & Folkman, 1984a) includes primary and secondary appraisals of stressors as predecessors to the person's ability to cope. The theory focuses on a woman's cognitive appraisal and her coping ability of an event, which may cause her stress.

When an event (stimuli) occurs, it triggers a woman to appraise the situation. The first concept of the stress and coping theory is appraisal of the stimuli. When a woman encounters a stimulus from the environment, she must determine if the situation is important to her well-being and the impact the event may have on her well-being (Lazarus & Folkman, 1984b). There are two types of cognitive appraisals: primary and secondary. Both the primary and secondary appraisals are facilitators for the stressful event and do not appear in a certain order (Lazarus & Folkman, 1987). During the primary appraisal, an event occurs and the woman makes an appraisal to determine if the event may be harmful or threatening to her own well-being. She determines whether she has anything at stake in the encounter. In determining whether the event is harmful or threatening, she bases her appraisal upon her own personal beliefs and goals.

In the secondary appraisal, the woman determines how she will handle the encounter (Folkman & Lazarus, 1985). She determines what resources the situation will require her to use (Lazarus & Folkman, 1984a). After the secondary appraisal, the woman proceeds to the coping phase of the theory. There is an interaction between the appraisal and the coping mechanisms.

Coping is the ability to navigate stressful situations, external or internal, which may overburden a woman's personal resources (Lazarus & Folkman, 1984b). During the coping phase, the woman determines whether she will be able to handle the situation, what actions to take to resolve the situation, or whether there is a need to accept the problem and continue. Coping may be resolved in two ways: one is to alter the stressful emotions and the other is to modify the environment which is causing the woman stress (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986). Stress may reveal itself as problem-focused, meaning something can be done about the situation, or emotion-focused, meaning the situation has to be accepted

(Lazarus & Folkman, 1984b). In meaning-focused coping, the woman uses her beliefs, values, and goals to inspire herself to challenge the stressful event (Park & Folkman, 1997). Lazarus and Folkman (1987) propose that individuals are less likely to view situations as threatening when they are confident in their abilities. The stressful event may be favorable or unfavorable (Lazarus & Folkman, 1984a). When events are resolved favorably for the woman, a feeling of pride and happiness is emoted. The process then moves to the final step in the theory, the event outcome.

Once the coping mechanism is determined, the woman evaluates the outcome. The immediate outcome pertains to the woman's evaluation of a successful solution to the event. The woman assesses the situation based upon personal values, goals, and expectations of the resolution to the stressful event (Folkman et al., 1986). The outcome of the event may be favorable (excitement or eagerness) or it could be unfavorable (distress). If the outcome is unfavorable, the woman re-evaluates the situation and then reverts back into the process of appraisal-coping-reappraisal of the outcome, which may lead to a chronically stressful situation (Folkman, 2008).

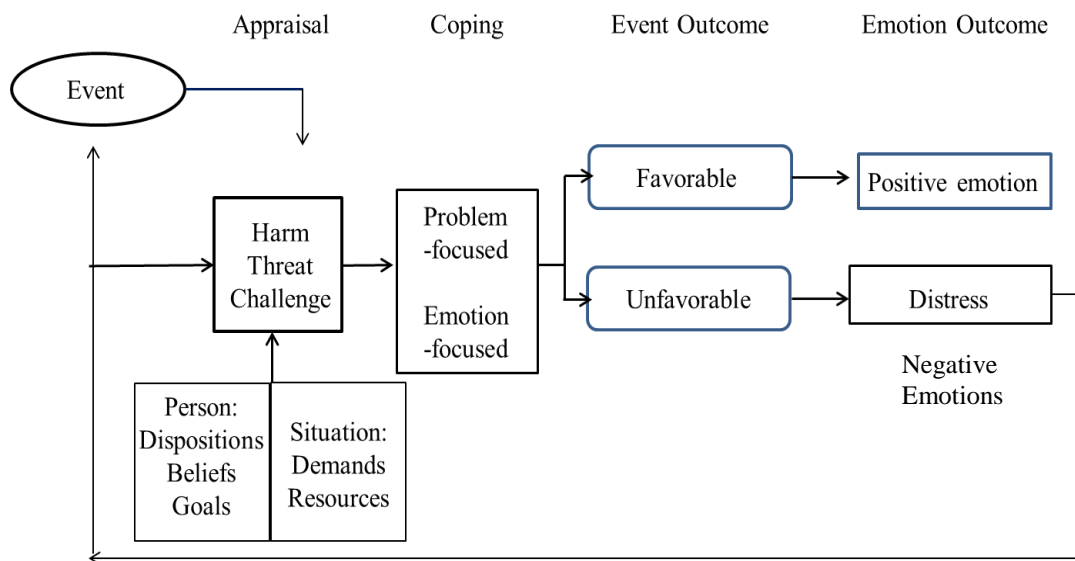
The stress and coping theory has had revisions to the secondary appraisal in the coping phase since the original theory was published in 1984. In 1985, a concept was added to include positive emotions (facilitators) that relate to challenging situations (Folkman & Lazarus, 1985). Negative emotions (barriers) such as sadness or anger are appraised as being harmful or result from an appraisal of harm. The negative emotions of anxiety or fear, are revealed in situations that are deemed as a threat (Folkman & Lazarus, 1985). For situations that are determined to be a challenge, the person displays emotions, which include confidence, eagerness, and excitement (Folkman & Lazarus, 1985). At the end of the appraisal phase, the primary and secondary



appraisals interact and the person determines if the outcome will be a harm, a threat, or a challenge to her (Folkman & Lazarus, 1985).

In applying the concepts of the stress and coping theory to the current study, the stimulus (event) in this study was considered as the initial assessment of the symptom. Decisions were similar to the determination of whether the symptom was serious (primary appraisal) and then what may have been done to alleviate the symptoms (secondary appraisals) (Figure 1).

The barriers and facilitators, were viewed as occurring during the secondary appraisal, and seeking care was the outcome. For this study, the review of the literature for each of the components was addressed. There was limited information regarding the actions or events that assisted women during the seeking care aspect of the MI. The majority of the studies addressed the barriers women experienced when assessing care related to an MI. This study focused on the issues or situations that women experienced during their MI event. Figure 1 provides a diagram of the stress and coping theory.



**Figure 1: Original stress and coping theory model (Lazarus & Folkman, 1984b).**

**Table 1. Theory Concepts**

<b>Concept</b>	<b>Meaning</b>
Stimuli	Cardiac symptoms women experience
Primary appraisal	Women ask themselves, “Is this serious?” “This can’t happen to me because I am a women and therefore not at risk of an MI.”
Secondary appraisal	Women ask themselves, “What can I do to alleviate the symptoms?” “Who can help me?” The women also determine what barriers exist to overcome the situation.
Coping (meaning-focused and action-focused )	Responses to the symptoms based on their primary and secondary appraisals. For example, women may: Ignore the situation Take medication Call someone Go to the hospital
Outcome	Care received and positive or negative emotions

### **Purpose**

The purpose of the study was to describe the lived experience of women having an MI and seeking healthcare, using the framework of the stress and coping theory (Lazarus & Folkman, 1984b). The findings from the study may assist in developing an educational tool for women and healthcare providers. The tool may facilitate women experiencing an MI to seek health care quickly to minimize cardiac damage.

### **Assumptions**

1. The women’s perception was their reality.
2. Women had enough awareness to communicate their perceptions and experiences.
3. The women were open to sharing their thoughts and perceptions with the researcher.
4. The women’s stories were told in a situated context.
5. The women’s stories revealed the meaning of their experiences.

In summary, heart disease is the number one killer of women, and yet, there are limited studies that explore women’s perceptions and experiences when having an MI utilizing a stress

and coping theory. The use of a qualitative research approach such as phenomenology to explore the MI experience of a woman may help healthcare providers better meet the needs of this group. A prompt recognition of symptoms and an effective response to a woman's MI encounter may assist in the prevention of high-risk long-term cardiac disease in women.

## **Chapter 2**

### **Review of the Literature**

The purpose of this phenomenological study was to describe the lived experience of women having an MI and seeking healthcare, using the stress and coping theory (Lazarus & Folkman, 1984b). This chapter includes a comparison, contrast, and synthesis of relevant research literature related to the symptoms women experience when having an MI, facilitators and barriers they encountered, and what occurred when the women did seek health care. The review also includes what prompted the women to seek health care, also known as facilitators when having an MI. The final component addressed is the care seeking process. The overall experience of women having an MI is essential in aiding the creation of an educational tool for adult women and healthcare providers. The review of the literature is presented using the concepts of the stress and coping theory (Lazarus & Folkman, 1984a).

### **Theory Overview**

The stress and coping theory developed by Lazarus and Folkman (1984a), includes primary appraisals and secondary appraisals. Primary appraisals are used when people determine whether they have anything at stake from an encounter. The individual seeks to determine how the encounter will impact them personally. In this study, the primary appraisals were made in response to the symptoms women experienced when having an MI. Secondary appraisals were how a person determined the options available to them in relation to an encounter (Folkman & Lazarus, 1985). In this study, the secondary appraisals were the facilitators and barriers women experienced when having an MI. In the following categories, duplication of examples may have occurred because coping is not a linear process. The appraisals, facilitators, barriers, coping mechanisms, and outcomes interacted during the process.

## **Primary Appraisals**

### **Symptom uncertainty**

Women may not recognize the symptoms they experience to be cardiac in nature.

Schoenberg, Peters, and Drew (2003) conducted a qualitative semi-structured interview study of 25 women, 40 years and older, with chronic heart disease in Kentucky. The researchers interviewed the women in their homes and found that 67% of the women did not seek health care due to symptom uncertainty. Lockyer (2005) conducted a qualitative, semi-structured interview study of 29 hospitalized women with coronary heart disease, who had undergone an angiogram. Lockyer found the women had difficulty interpreting their symptoms when having an MI. Rosenfeld et al. (2005) conducted a qualitative study of semi-structured interviews of 52 women experiencing their first MI in an acute care setting. The women were unable to explain the sensation they were experiencing when having an MI, but realized something was wrong. Some women did not realize the symptoms they were experiencing to be cardiac in nature (Moser, McKinley, Dracup & Chung, 2005; Rosenfeld et al., 2005) and therefore did not respond to them (Lockyer, 2005). Other women with non-descript symptoms were doubtful they needed to seek medical care (Lockyer, 2005).

McDonnell et al. (2014) surveyed Canadian women over 25 years of age (n = 1654). The results revealed that women had limited knowledge associated with heart disease risk factors. Forty-three percent of the women identified chest pain, 38% recognized shortness of breath, and 29% were aware that shoulder or neck pain were symptoms of heart disease risk factors. In this same study, women less than 45 years of age were generally unaware of cardiac risk factors.

## **Symptoms not serious**

The interpretation of female MI symptoms were challenging for women because they anticipated classic symptoms with crushing chest pain radiating to the neck and arms (Schoenberg et al., 2003). Some women did have chest pain as found by Roe (2006) in a descriptive correlational study of women who experienced an MI (n=102). The most common symptoms the women reported were chest pain (tightness and pressure). Higginson (2008) found that the MI symptoms women (n = 25) experienced were not what they expected. Some women did not perceive the symptoms they experienced to be a serious issue (Moser et al., 2005), because the symptoms were intermittent (Moser et al., 2005). Leeman-Castillo (2005) conducted a mixed method research study of 43 women, 31 to 89 years of age, (17 Latinas and 26 non-Latinas) who experienced an MI. Forty-two percent of the women were awakened due to discomfort during their sleep. The women attributed the sensation to sleeping incorrectly and dismissed the symptoms they experienced. Women sometimes experienced pain or discomfort for as long as two days before seeking care (Rosenfeld et al., 2005). Davis et al (2013) interviewed nine women over the age of 35 years with acute coronary syndromes. The research group found that all women in the study delayed seeking health care. One group of women had experienced an acute coronary syndrome previously. They were aware of the seriousness of the event. These women chose to wait to seek health care. They overestimated the time they had to get the health care that was needed.

Women experiencing cardiac symptoms may not recognize the symptoms as serious or critical. In Sweden, using interviews of 19 women in a CCU setting following their first MI, Sjostrom-Strand and Fridlund (2008) found that women were unable to describe and understand the discomfort they were experiencing while having an MI. Researchers Nymark et al. (2009)

had similar findings in their study. Using focus group discussions also in Sweden, seven females and eight males, ages 40-74, were interviewed about their first or second AMI experience. The women in the study had challenges describing their symptoms during the MI. In another study (Thuresson et al., 2007), a national survey of men ( $n = 1421$ ) and women ( $n = 480$ ) from 11 coronary intensive care units in Sweden, used a logistic regression method to find that some women thought the discomfort of coronary symptoms was related to back issues ( $n = 10$ ,  $p = .009$ ). In contrast, Schoenberg et al. (2003) found women confused the discomfort for stomach pain.

Researchers conducted a descriptive, correlational design study with 30 men and 30 women, who were being treated with thrombolytic therapy due to an AMI (King & McGuire, 2007). The women experienced less pain in the middle of their chest when compared to men ( $F [10] = 7.43$ ,  $p < .01$ ). If women perceived the symptoms to be serious, they were more likely to seek timelier urgent health care (Moser et al., 2005).

Women may not understand the degree of their illness when they experience cardiac symptoms. A contributing factor to women's delay in seeking health care while they were experiencing an MI is the perception of the degree of illness. Some women did not believe the pains they felt were serious in nature (Higginson, 2008; Sjostrom-Strand & Fridlund, 2008). Thirty-one percent of women may have silent ischemia and of these women, 44% will present with shortness of breath as their primary symptom (O'Donnell, McKee, O'Brien, Mooney, & Moser, 2012). Many women thought the pains experienced during their cardiac event would subside on their own (Thuresson et al., 2007; Sjostrom-Strand & Fridlund, 2008). When risk factors for CVD were perceived to be low, women were more likely to find a comorbidity reason for the sensations and may treat symptoms on their own (Gallagher, Marshall, & Murray, 2010).

Some women believed true cardiac pain would be aggressive (Nymark et al., 2009), and the pain they felt did not appear to be so severe that urgent medical care was warranted (Nymark et al., 2009). Despite being in severe discomfort, women thought that, when they went home, took off their clothes and relaxed, the pain would go away (Nymark et al., 2009). Pain severity did not always assure that the patient would seek medical care (Rosenfeld et al., 2005). When women perceived the pain to be a serious situation, however, health care was sought (Rosenfeld et al., 2005). Lefler (2006) conducted a quasi-experimental study of 96 racially diverse women from church settings, who had high risk factors for heart disease. The women from all racial backgrounds underestimated their risk of coronary heart disease ( $p < .001$ ).

Women experiencing cardiac events may rationalize their symptoms. A factor contributing to a delay in seeking health care during an urgent cardiac crisis was minimizing the symptoms. Women were inclined to attribute the symptoms to a general discomfort not being cardiac in nature (Higginson, 2008) or to a gastrointestinal upset or reflux (Rosenfeld et al., 2005). Patients tried to rationalize the illness as a minor clinical issue such as a tick bite or back pain soreness (Nymark et al., 2009). Women attempted to convince themselves that the discomfort was something other than heart pain (Sjostrom-Strand & Fridlund, 2008).

Women may delay seeking health care when experiencing an MI due to their fear of failure. Women were concerned they would call an ambulance for what turned out to be gas pains and then would feel embarrassed (Rosenfeld et al., 2005). They were also concerned they would be told they were wasting the hospital's time or they would be laughed at for having indigestion (Rosenfeld et al., 2005). Some women did not want to be regarded as "soft" for



seeking health care (Thuresson, 2007), or that they were unsuccessful in self-medication because they had to call for medical help and were unable to care for themselves (Nymark et al., 2009).

### **Engendered perception**

Women that delay seeking health care may perceive an MI as a man's illness. Women were found to have a perception that heart disease was a risk factor for the male population (Higginson, 2008). Their preconceived ideas were that male smokers that were overweight have heart attacks (Higginson, 2008). Women did not see themselves as being at risk for heart disease (Lockyer, 2005) and assumed they were protected until the time of menopause (Higginson, 2008). Women had a misrepresentation of their risk for having a heart attack. Some women believed they had more risk factors for breast cancer than heart disease due to media campaigns (Higginson, 2008).

In a comparative study of men and women (n = 194) in a coronary care unit and step-down unit, Moser and colleagues (2005) found that some women were not aware of the symptoms females experienced during an MI. In Wales, a qualitative interview study of 25 women in a cardiac rehabilitation post-MI setting revealed that a major deterrent to women's seeking health care was the confusion caused by the atypical symptoms women experienced when having the beginning symptoms of an MI (Higginson, 2008).

### **Secondary Appraisals**

#### **Social support**

Women that experienced an MI may have had a social support system. Some contacted family members and friends (Rosenfeld et al., 2005; Schoenberg et al., 2003), but most contacted their spouses for help (Thuresson et al., 2007). When calling family members for help, occasionally women would have to leave a message requesting assistance in seeking medical

care (Rosenfeld et al., 2005). Some women had support from others such as neighbors in seeking medical care (Nymark et al., 2009). Some women allowed the support person to take over making choices in deciding the course of action to follow (Nymark et al., 2009; Rosenfeld et al., 2005). At times women asked for help, but did not always accept the advice provided by their friends and family (Rosenfeld et al., 2005).

Rosenfeld et al. (2005) described a case of a woman that had a family member in the medical profession. When the woman in pain asked the health professional's opinion, the professional shared she thought the discomfort was probably reflux (Rosenfeld et al., 2005). Another case involved a woman at work experiencing discomfort. A co-worker mentioned she did not look well and contacted the supervisor to seek his help (Rosenfeld et al., 2005). An additional example of having support was a woman that was reluctant to seek medical attention because her son would be arriving home from school shortly. The twelve-year-old boy arrived home to find his mother appearing ill. He attempted to talk to his mother and she passed out (Rosenfeld et al., 2005). The last example of social support was a woman who called her friend to seek care for chest pains. Her friend took her in a car to the doctor's office (Rosenfeld et al., 2005).

### **Reasons women call their social support**

A delay in seeking health care may include the time it took a woman to call her social support group such as her family, friends, or a co-worker. Women shared their discomfort with their social support group for several different intents. The delay-seeker may have wanted to simply talk to a friend or loved one to share her discomfort. The woman was not necessarily seeking advice; she may have wanted someone to listen (Nymark, et al., 2009). The woman may have wanted support and guidance from her family and friends prior to calling for emergency

services (Sjostrom-Strand & Fridlund, 2008). At times, the person contacted needed to encourage the woman to seek urgent medical attention (Lockyer, 2005; Moser et al., 2005). Some women experiencing an MI asked others to call emergency services for them (Moser et al., 2005; Rosenfeld et al., 2005).

### **Seeking availability of health care assistance**

Women seeking health care encountered a variety of challenges. Nymark et al. (2009) found that some women experiencing an MI called the clinic for an appointment to see a healthcare provider, but were challenged to describe the pain and symptoms in order to determine the urgency of the clinic appointment. In the same study, many women did not call emergency services, such as 911, as a first level of care. Some women encountered an answering machine instead of a person, which may have caused a delay in seeking health care (Nymark et al., 2009). Some women preferred to go to the urgent care clinic during the MI episode instead of calling 911 (Rosenfeld et al., 2005).

Rosenfeld et al. (2005) found women reacted differently in off business hours. Some women tolerated the pain and discomfort through the night until their healthcare provider's clinic opened for regular business. An elderly female in an assisted living facility experienced an MI in the middle of the night. The resident did not alert anyone because the facility manager had previously stated the manager would call the ambulance. The patient did not want to wake up the facility manager in the middle of the night (Rosenfeld et al., 2005). Sjostrom-Strand and Fridlund (2008) found a woman that did not want to bother the ambulance drivers with her symptoms.

**Logistic and time related barriers to care**

Some women seeking the care of a healthcare provider were hindered by geographical issues. Women experiencing MI symptoms that resided in rural areas were referred to outpatient clinics, which may not have had emergency care or equipment available to treat the patient (Thuresson et al., 2007). When the closest hospital was far away, the patient would take pain medications at home until the clinic opened in the morning (Nymark et al., 2009). Patients living in urban areas may not have sought acute health care due to not wanting to wait long hours in emergency department waiting rooms (Thuresson et al., 2007).

**Traditional family values (barriers)**

Women may delay seeking health care when experiencing an MI due to their values about being females. The traditional marriage is patriarchal in nature; women's contributions are not valued; and the marriage is hierarchal with the male in the dominant role (Blaisure & Allen, 1995). Traditionally, women are responsible for household chores, child care and taking care of their families (Blaisure & Allen, 1995). The woman's job is to take care of her husband and her family.

**Family issues (barriers)**

Women may not seek care during an MI due to family obligations. Schoenberg et al. (2003) found one woman in cardiac rehabilitation described feelings of guilt and thoughts of letting her family down because of her MI. Another woman did not want to go to the hospital because she did not want to spend the family's Christmas money paying for the medical bills. An additional woman felt insecure because she did not have insurance to pay for the emergency room visit.

Women were apt to emphasize the health care needs of their family as more important than their own personal medical needs. Women were concerned with the question of who would provide care for their children, spouse or other dependent person in their home (Schoenberg et al., 2003; Sjostrom-Strand & Fridlund, 2008). Some women wanted to clean the house before calling an ambulance (Galdas, Johnson, Percy, & Ratner, 2010). Women sometimes felt the family could not get along without them (Schoenberg et al., 2003).

Schoenberg et al. (2003) found that women placed a priority on other people's needs and their home life over their own health care needs. They were concerned about their household chores and considered them more important than their own cardiac symptoms. Some women believed the mother was not supposed to be ill and the household chores would not be completed without her (Schoenberg et al., 2003). Sjostrom-Strand and Fridlund (2008) described a case of an ambulance arriving to take a wife to the hospital for an AMI. The elderly husband asked the wife who was going to take care of him because he could not manage by himself. The woman made arrangements for her elderly husband prior to going to the hospital (Sjostrom-Strand & Fridlund, 2008).

Schoenberg et al. (2003) found that some women did not feel they could leave the home due to social obligations. One woman had made arrangements to cook Sunday dinner for the neighbors. She felt an obligation to complete the meal so she did not seek medical attention for her symptoms. Another woman did not want to go to the emergency department because it was a Sunday (Schoenberg et al., 2003).

### **Inconveniencing others (barrier)**

Women may delay seeking health care because of not wanting to inconvenience others. Women were reluctant to disturb others for help during a myocardial event (Higginson, 2008;

Nymark et al., 2009). Women are reluctant to disturb the physician/medical team when experiencing an MI (Schoenberg et al., 2003). Some women did not like asking others for help (Rosenfeld et al., 2005) or imposing on their relatives for a ride to the hospital (Schoenberg et al., 2003).

Some women experienced severe pain during the night or on the weekends and did not call for help because of the disturbance this may have caused. One woman had pain at night during the weekend and did not want to disturb others. She waited until Monday morning to seek medical help (Rosenfeld et al., 2005).

### **Patient/physician issues (barrier)**

Women having MI symptoms may also delay seeking health care due to patient and physician issues. Some women had a perception of inequalities between the patient and the physician (Schoenberg et al., 2003). An obese woman called her physician with severe complaints of indigestion. The physician responded that she needed to stay away from fried chicken and other fried foods (Schoenberg et al., 2003). Another female had intermittent chest pain for two days. The physician told her it was a gastrointestinal problem and if it started again to go to the emergency department (Rosenfeld et al., 2005). A 39-year-old patient complained of severe pain to her physician and she was told she was too young to have a heart attack (Sjostrom-Strand & Fridlund, 2008).

Gallagher et al. (2010) studied ten Canadian women in a cardiac rehabilitation program. During interviews women revealed that they called their general practitioners who told the women to have someone drive them to the hospital or to take a taxi to the hospital for follow up care for their cardiac symptoms. Some of the women in the study realized an ambulance should have been the primary mode of transportation for emergency situations.

**Alternate transportation (barrier)**

Women may delay seeking health care because of alternate transportation concerns. Women wanted to prevent the anxiety related to their neighbors being aware that they were transported via ambulance when experiencing an MI (Nymark et al., 2009). Some women made decisions not to call 911 despite having symptoms (Rosenfeld et al., 2005). They sought to obtain alternative transportation. Only 10% of women in a study sought the emergency medical system when symptoms of an MI first started (Moser et al., 2005). One woman drove herself and other women asked for assistance from their spouse or child for a ride to the hospital (Rosenfeld et al., 2005). One woman asked her friend for a ride to the hospital and was stuck in road construction. The friend had to ask for assistance to pass through so she could seek medical care for her friend (Rosenfeld et al., 2005). Schoenberg et al. (2003) described a woman who called a taxi when she was experiencing an MI. The woman passed out in the taxi before arriving at the hospital (Schoenberg et al., 2003).

**Negative Emotion****Denial and fear (threat)**

Women may delay seeking health care when experiencing MI symptoms because of denial and fear. Due to denial of pain, women delayed seeking health care (Rosenfeld et al., 2005) although the women were aware the pain was present (Nymark et al., 2009). Some women were unable to accept they were having a heart attack (Higginson, 2008) and would ignore the pain until the symptoms were unbearable (Rosenfeld et al., 2005).

Women may not seek health care due to fear. Researchers found women were afraid to seek medical attention (Schoenberg et al., 2003). Some women were anxious, nervous and fearful during an MI (Nymark et al., 2009) and were afraid for themselves (Rosenfeld et al.,

2005). Some women were taken by surprise when having a heart attack and thought because they were taking medication they were not susceptible to heart emergencies (Fors, Dudas, & Ekman, 2014). Some women were also afraid they were going to die and, therefore, did not seek medical care (Sjostrom-Strand & Fridlund, 2008).

### **Coping**

Women cope with MIs in different ways. The following are a few examples of coping strategies women used when having an MI prior to arriving at an acute care facility.

#### **Rationalizing symptoms**

From their primary appraisal, women were inclined to attribute the symptoms to a general discomfort that was not cardiac in nature (Higginson, 2008), such as gastrointestinal upset or reflux (Rosenfeld et al., 2005). They tried to rationalize the illness as a minor clinical issue such as a tick bite or back pain and soreness (Nymark et al., 2009). Women attempted to convince themselves that the discomfort was something other than heart pain (Sjostrom-Strand & Fridlund (2008). When women perceived the pain to be a serious situation, however, health care was sought (Rosenfeld et al., 2005).

#### **Seeking Social Support.**

From their secondary appraisal, some women contacted family members and friends (Rosenfeld et al., 2005; Schoenberg et al., 2003), but most contacted their spouses for help (Blasdell, 2007; Thuresson et al., 2007) when experiencing an MI. The women may have wanted support and guidance from their family and friends prior to calling for emergency services (Sjostrom-Strand & Fridlund, 2008) or they may have asked others to call emergency services for them (Moser et al., 2005; Rosenfeld et al., 2005). Some women did not want to



share their medical concern with others to protect their loved ones from worrying about their health issue (Sutherland, 1997).

### **Seeking Help.**

Some women preferred to go to the urgent care clinic during the MI episode instead of calling 911 (Rosenfeld et al., 2005). As described earlier, during off business hours, women reported delaying care until regular business hours (Rosenfeld et al., 2005). Even when seeking help, women were not forthcoming with their symptoms (Sjostrom-Strand & Fridlund, 2008).

### **Losing self-control (threat)**

Women may delay seeking health care because of their concern about losing self-control (Higginson, 2008; Rosenfeld et al., 2005). In an effort to maintain control, women self-medicated (Rosenfeld et al., 2005) or tried a self-help remedy to relieve their symptoms (Moser et al., 2005).

## **Outcomes**

Outcomes for women who delay care include negative long-term effects, such as death and greater cardiac damage. As previously mentioned, cardiovascular disease (CVD), also known as heart disease, is the primary cause of death for women in the United States (Mozaffarian et al., 2014), and women have surpassed men in death rates due to MIs since 1984. Heart disease has a higher mortality rate for women than all types of cancers aggregated (AHA, 2012). Cardiac morbidity and mortality rates increase when women delay seeking health care when experiencing an MI (Rosenfeld et al., 2005). For women the length of time from onset of chest pain to seeking medical attention is longer than optimal (Moser, McKinley, Dracup, & Chung, 2005; Schoenberg, Peters, & Drew, 2003). With less cardiac damage comes increased

likelihood of surviving the myocardial event and preventing chronic cardiac conditions (Rosenfeld, Lindauer, & Darney, 2005).

Women delaying seeking health care may have a negative experience for themselves and their families. Women sometimes experienced pain or discomfort for as long as two days and did not recognize MI symptoms (Rosenfeld et al., 2005). A major deterrent to women's seeking health care was the confusion caused by the atypical symptoms women experienced when having the beginning symptoms of an MI (Higginson, 2008). At times, women may suffer in silence until they believe the time is less inconvenient for others (Rosenfeld et al., 2005). Some women were unable to accept they were having a heart attack (Higginson, 2008) and would ignore the pain until the symptoms were unbearable (Rosenfeld et al., 2005).

### **Summary of Literature**

#### **Limitations of the Literature**

The major studies related to women experiencing an MI were published more than five years ago (Aalto et al., 2005; Galdas et al., 2010; Gallagher, Marshall & Murray, 2010; Harralson, 2007; Hess et al., 2010; Higginson, 2008; Lockyer, 2005; McSweeney et al., 2003; McSweeney & Crane, 2000; McSweeney et al., 2010; Moser et al., 2005; Nymark et al., 2009; Rosenfeld, 2004; Rosenfeld, Lindauer & Darney, 2005; Schoenberg, Peters & Drew, 2003; Thuresson et al., 2007). Although the articles published by McSweeney were also older, she was and is the pioneer in nursing research studying the thread of women experiencing MI symptoms. Her studies provided the foundation for this genre of study. Another characteristic of the published studies was that many were conducted outside of the United States and their findings may not be applicable in the American health care system (Aalto et al., 2005; Fors et al., 2014; Galdas et al., 2010; Gallagher, Marshall & Murray, 2010; Hess et al., 2010; Higginson, 2008;

Lockyer, 2005; McDonnell et al., 2014; Nymark et al., 2009; O'Donnell et al., 2012; Sjostram-Strand & Fridlung, 2008; Thuresson et al., 2007). Many of the studies with women and MIs are qualitative, which appropriately have smaller sample sizes. However, their findings are not generalizable.

### **Knowledge Gaps in the Literature**

General information was available regarding women having MIs. Literature was available pertaining to women delaying seeking health care, barriers they experienced, and a few studies mentioned facilitators women may have used when experiencing an MI. The review of the literature revealed two gaps in knowledge related to women experiencing an MI and seeking healthcare. Inadequate knowledge was available about the process used by women making decisions about seeking care when experiencing an MI (Aalto et al., 2005; Davis et al., 2013; Galdas et al., 2010; Gallagher, Marshall & Murray, 2010; Harralson, 2007; Higginson, 2008; Lockyer, 2005; Moser et al., 2005; Nymark et al., 2009; Rosenfeld, 2004; Rosenfeld, Lindauer & Darney, 2005; Schoenberg, Peters & Drew, 2003; Thuresson et al., 2007). Knowledge about the facilitators and barriers women experienced when making decisions about seeking healthcare was especially limited. Researchers rarely used a theory to guide their studies regarding women experiencing a myocardial infarction, with the exceptions of (Cohen, 2005; Lefler, 2006; Roe, 2006; Sutherland, 1997). The information gained from this research study may lead to the creation of a teaching tool for healthcare providers and all women regarding the high risk factors and symptoms of female MIs. The study was designed to address these two gaps by exploring the facilitators and barriers experienced by women seeking care for the MI symptoms using a theory framework.

### **Summary**

In summary, heart disease is the number one killer of women and yet many women are unaware of what occurs when a female experiences an MI. The exploration of events women encountered when having an MI may help create teaching tools for healthcare providers and women themselves. Such a tool may help women detect the MI and promote prompt appropriate reactions to seek timely care in the prevention of further cardiac muscle damage during an MI. This research study helped expand the use of the stress and coping theory with women experiencing an MI. The use of a phenomenological qualitative research approach helped identify essential clues women encountered when having an MI. The identification of key concepts may assist in the prevention of long-term heart disease in women.

## Chapter 3

### Methods and Procedures

In this chapter the philosophical perspective and research design are described, the sample size is portrayed with rationale for the number of participants, and the setting is depicted. The data collection method is presented in detail and the study procedure is discussed. Ethical considerations of the study are addressed in the section along with the description of the process of data analysis.

### Research Design

Women's descriptions of experiencing MIs were elicited using qualitative methods. Phenomenological research is one method that may be used to study and understand the lived experience of human beings (Munhall, 2012; Van Manen, 1990). Phenomenological research may be used when questions related to the meaning of a phenomenon are proposed (Cohen, Kahn, & Steeves, 2000). An essential aspect of phenomenological research is the consideration of the participant's perspective regarding her phenomenon or experience (Van Manen, 1990). The benefits of phenomenological research include capturing the perspective of the participants, including their emotions from all of their senses, body language and thought processes while their values and backgrounds are taken into consideration.

The research method is based upon six underpinning beliefs (Munhall, 2012). *Intentionality* is a consciousness of always being aware of one's self and their surroundings. *Essences* are ideals that provide a common understanding of phenomena and *intuiting* is an accurate description of a phenomenon. *Reduction* reflects the original thoughts the participant experiences regarding a phenomenon. *Bracketing* is the act of the researcher suspending

pre-conceived beliefs pertaining to a phenomenon. *Embodiment* is experienced by the participant when there is full sensory and *being-in-the world* is a consciousness by the participant (Speziale & Carpenter, 2007).

During the phenomenological research encounter, a three-phase shared perceptual space of intersubjectivity occurs (Munhall, 2012). In the first phase, the interviewer and the participant have their own personal views of reality. In the second phase, the researcher and the participant realize the other person also has a different perspective of the phenomenon. In the third and final phase, both the researcher and the participant have a portion of a shared subjectivity of a phenomenon and each realizes and understands the other's perception (Munhall, 2012).

Munhall's (2012) seven step process for conducting phenomenological research was used to implement the research process. With Munhall's initiation of a stepped process, the approach becomes a research method and is more acceptable as a scientific method of research. Munhall's seven step method was implemented with flexibility, was holistic in nature, and was conducted circularly in that the steps are not linear.

#### Method for Phenomenological Inquiry (Munhall, 2012)

1. Immersion
2. Aim of the study
3. Existential considerations
4. Contextual and processing steps (occurs in tandem)
5. Analysis and interpretation
6. Narrative writing
7. Narrative on the meaning of the study

## Sample

To meet inclusion criteria, the female participants had to be 18 years of age or older, and currently hospitalized with their first or second MI event. Women of all races, ethnicities, and ages were recruited as long as they met the inclusion criteria. The sample was limited to English speaking women to allow the researcher to collect the data. The exclusion criteria were women who were pregnant since pregnancy may change the woman's ability to differentiate between discomforts related to the pregnancy and cardiac discomfort. For example, indigestion is a symptom of both acute coronary symptoms and pregnancy.

Definitions of the terms were provided for clarity. A registered nurse (a Texas board certified registered nurse via the Board of Nurse Examiners) was the researcher for this study. An AMI was identified by an ST elevation MI (STEMI) or a non-Q wave MI, which was diagnosed by the physician or a nurse practitioner. A telemetry nurse is a registered nurse who works with patients that have continuous cardiac monitoring. In the study, telemetry nurses were educated about the research study and were aware of the inclusion and exclusion criteria. The trained telemetry charge nurse reviewed the daily census to identify women that were admitted with a diagnosis of AMI, STEMI or non-STEMI. The researcher was granted permission to confer with the charge nurse to identify potentially eligible women for the study. The researcher met with each candidate to assess her interest in the study. If the woman was interested, the researcher assessed the patient for inclusion and exclusion criteria.

For this phenomenological study, a minimum of eight participants was required to complete the study. Twenty women were interviewed, at which time the responses were saturated with similar findings (Speziale & Carpenter, 2003).

### **Setting**

Three acute care hospitals in a major metropolitan area in the North Texas region were the setting for the study. Two of the hospitals are for profit and one is not for profit. All three hospitals admit cardiac patients and have immediate access to interventional cardiac facilities and cardiac surgery programs. The tertiary acute care hospitals attract high acuity cardiac patients from the North Texas region. The hospitals ranged from 100 beds to 1100 beds. Although women with MIs in all three hospitals were eligible to participate, the majority of patients experiencing an MI are admitted to the hospital that specializes in cardiac care. As a result, all the subjects were recruited from the cardiac care hospital.

### **Data Collection Method**

The interview was the primary data collection method. For the interview process, the researcher consciously decentered her perceptions and bracketed assumptions and any ideas taken for granted (Munhall, 2012; Holloway & Wheeler, 2010; Parse, 2001). The interview was composed of in-depth questions, seeking specific details about the topic and the participant's experience and perception of the event. During the interview, the researcher was attentive and provided constant reflection and clarification throughout the interview to ensure the participant's perspective was accurate (Munhall, 2012). The researcher ensured that the participant's responses remained in the meaning reflective of the participant's social, historical, cultural, and contextual background. An important issue for the researcher was to recognize that participants shared their understandings and meanings of the experience in the stories they told the researcher (Cohen et al., 2000).

It was essential for the researcher to realize not every response from the participant may be precise, but the researcher learned something from the context or background in which the



information by the participant was presented (Cohen et al., 2000). During the interviews, the researcher began to organize the data into themes that emerged during the interaction with the participant (Speziale & Carpenter, 2007).

The data collection process was implemented using a semi-structured interview. A semi-structured interview process was used to identify aspects of a phenomenon (Grove, Burns & Gray 2012). The interview started with the grand tour question for the study, “Please describe your discomforts and or other symptoms related to your heart prior to being admitted.” The last question of the interview was, “Given an opportunity, what would you advise other women to do when they are having heart symptoms?”

Few additional probes and questions followed. The specific questions may have changed during the interview process as themes began to emerge among participants. Questions and prompts included:

### **Interview Schedule**

#### **Stimuli/Symptoms**

1. Please describe your discomforts and or other symptoms related to your heart prior to being admitted.

#### **Primary Appraisal**

2. Can you tell me about your heart attack?
3. Had you experienced these symptoms before? What was different this time that prompted a hospital visit?
4. How long did it take you to figure out something was wrong? A few hours or days?

#### **Secondary Appraisal**

5. Can you please tell me if there was something that helped to alleviate the symptoms?

6. Did you have any idea what was going on when you decided to seek medical help?
7. What made it difficult to come to the hospital? Did you experience any barriers seeking health care?
8. What motivated or helped you to seek health care?
9. Were there people in the house with you during your heart symptoms? Can you tell me about this time period?
10. What were some of the issues you encountered when seeking help?

### **Coping**

11. When you first realized you were having heart symptoms, what did you do first?
12. Did you have a neighbor or a friend close by?
13. How did you get to the hospital?
14. How are you coping with this diagnosis of heart disease right now? Please talk to me about your family support.
15. Can you please share any prayer/meditation, any types of medications, or any relaxation techniques used during this time?

### **Outcomes**

16. Given an opportunity, what would you advise other women to do when they are having heart symptoms?

### **Procedure**

The telemetry charge nurses, who had been educated for the research study, initiated the procedure for identifying and recruiting women for the study. The nurses reviewed the admitting diagnoses on the daily census sheets to identify potential participants for the study. The women with a diagnosis of AMI, STEMI or non-Q wave MI (non-STEMI) were assessed for potential

inclusion criteria for possible participation in the study. The women had an AMI or non-Q wave MI diagnosis. The researcher called the telemetry charge nurse every morning. The charge nurse identified potential candidates. The researcher approached the women for their interest in participating in the research study. The researcher provided a flyer (Appendix C) to the women with generic information about the study. The researcher then asked the women if they would be interested in participating in the study. The women were given the over-arching question and asked if they would be willing to share their thoughts and information pertaining to the questions. The researcher gave a copy of the study flyer and the consent form to the women. The researcher offered to read the documents to them. Some women had a family member that was present read the flyer and consent form to them. The consent form (Appendix B) follows a standard format (Grove et al., 2012). The women were informed that they could withdraw from the study at any time. None of the women withdrew after beginning the interview. The researcher answered any questions the women had. If the women agreed to participate, the researcher requested the interview proceed at the time the consent form was signed. If the women requested, the researcher would return at a later date or time to conduct the interview. Interviews lasted 25-60 minutes. When interruptions occurred during the interview the researcher waited for delays of up to one hour. To be included in the study, the interviews had to be completed prior to discharges from the hospital.

Participant description information was collected via a brief questionnaire (see Appendix A). The researcher recorded the woman's answers to the demographic questions. This method was used to ensure the questions were understood by the woman and within the appropriate context. After completion of the demographic questionnaire, the researcher began the interview.

The women were interviewed after they transferred from an intensive care unit. The interviews took place in the woman's private patient room on a telemetry room or floor. Women in the intensive care unit were not eligible for the study until transfer or their status changed to cardiac telemetry. All interviews were conducted privately in the women's rooms, but 18 women requested someone remain in their rooms during the interview process. The interviews were conducted by the researcher. The researcher asked the women for their permission to use a hand held audio recorder for recording the interviews. The women were told they may choose to stop participation at any time during the interview process.

During the data collection process, rigor and credibility was maintained using a variety of methods. Interviews were conducted and audio recorded using a hand held audio recorder throughout the interview process. During the interview process, the researcher attempted to clarify any woman's responses that were not clear prior to the end of the interview. The women were asked if they could be contacted for additional clarification as needed. When a woman agreed, the researcher obtained accurate contact information, a phone number or email address, through which to contact the woman.

### **Study Protocol**

1. The telemetry charge nurses reviewed the daily census sheets for women with a diagnosis of AMI, STEMI or non-Q wave MI.
2. The researcher was granted approval to call the telemetry charge nurse every day to obtain a list of women who were admitted with a diagnosis of AMI and were in telemetry status.
3. The researcher approached each charge nurse to assess whether the women met the inclusion criteria.

4. When the researcher determined the woman was eligible to participate, she approached the woman to assess their interest in participating in the study. The researcher gave the woman the flyer (Appendix C) regarding the study.
5. The researcher shared the over-arching question with the woman.
6. When the inclusion criteria was met and the woman agreed to the study, the researcher provided a consent form.
7. The researcher described the study to the woman to answer any questions they may have had. The woman was told the interview would take 30-60 minutes. Because of possible fatigue due to their recent MI, the interviews were stopped at 60 minutes. When a woman did not show signs of fatigue and had more information to share, she was given the option to request up to 30 additional minutes to respond and clarify questions from the interview.
8. The woman was also told she could stop the interview at any time. For interruptions during the interview, the researcher waited up to one hour to continue the interview. For delays longer than one hour, another meeting time was requested to complete the interview.
9. The woman signed the consent form after reading it. The researcher offered to read the consent form to each woman. The researcher explained that the study was strictly voluntary; there was no financial gain for participating.
10. The woman was asked if the interview could be conducted at the time the consent form was signed. If the woman declined, an agreed time was requested

for the following day. Interviews were conducted while the woman was in the hospital.

11. The interview took place in the woman's private room.
12. The researcher asked the woman what she would like to be called and the name was placed on the top of the consent and the Participant Description Form with the date and time.
13. The researcher asked the woman the questions on the Participant Description Information sheet and the researcher completed the document.
14. Upon completion of the Participant Description Form, if agreed to by the woman, the audio recorder was started and the interview by the researcher was conducted.
15. The recorder was stopped and the woman was asked if the researcher could contact them within the next month to clarify any questions. If the woman agreed, the researcher obtained contact information such as a telephone number or email address.
16. The woman was thanked for her time.

### **Ethical Considerations**

The study was approved by the hospital systems Institutional Review Board, which approves research studies conducted in any of the hospitals within the healthcare system. Upon Institutional Review Board approval from the hospital, the application was submitted to the University of Texas at Arlington (UTA) Institutional Review Board. The risks for the subjects participating in the study were potential emotional issues and fatigue. The women were told they were welcome to have someone in the room with them during the interview process if they desired to do so. The women could have become anxious related to the memory of their

myocardial event. If their event was traumatic, the recollection could frighten the women. Arrangements were made prior to the study to contact the bedside nurse, a chaplain or social worker for assistance immediately if the women became anxious or frightened. None of the women became visibly anxious or frightened during their interviews. The researcher asked open ended broad questions that encouraged the women to share information they would like to share or refrain from sharing information they did not desire to share.

Heart function changes due to their recent MIs could have made the women tire more easily, which is why the interview was limited to 60 minutes. During the interview process if the women became too tired and needed rest, they could have requested to discontinue the interview. The interviews lasted 25 to 60 minutes. At any time during the interview, the women may have withdrawn from the study for any reason. None of the women asked to discontinue the study. During the interview, the researcher who is experienced in cardiovascular care observed for any signs of cardiac distress and would have stopped the interview process should such signs have been noted.

After the interviews, the women were thanked for their voluntary participation. No monetary agreement or promises of any kind were offered to the women. The benefit of the subject's participation was the knowledge that the information could potentially guide the development of an educational tool to help prevent the delay of health care when experiencing an MI.

### **Preparation of the Data**

In the study, interviews were audio recorded using an Olympus digital voice recorder VN-7200. After the interview process, the researcher manually transcribed the interviews. The researcher compared the interviews on the recorder to the typed document to ensure accuracy of

the transcription. When the technology failed (technical issues), the researcher typed the interviews from hand written notes. Two women's interviews had to be written by notes taken during the interviews. One woman declined the audio recording and the other woman's interview had technical difficulties.

The recordings and transcripts were identified by a pseudonym selected by the participants in order to maintain privacy. Interviews were saved on encrypted flash drives. The flash drives, scanned consent forms, interview transcriptions, and Participant Description Forms with the women's chosen names, are locked in a cabinet in room 512 in the nursing building. Interview flash drives and scanned consent forms will remain in that location for three years after the study completion. The women's contact information was discarded after the completion of the study using a paper shredder.

### **Analysis of data**

The Participant Description Form was used to collect quantitative data, which included: name, age, ethnicity, family living in the home with the woman, which MI this hospitalization was for the woman, and when the women had the MI. The quantitative data was analyzed using frequencies and percentages for each question to describe the sample using the Microsoft Excel® program.

In the analysis of data phase, the researcher reviewed each transcribed interview to categorize the data into themes (Carpenter, 2011; Holloway & Wheeler, 2010). The collapsed data were expressions of meaning. These expressions were highlighted through responses when participants expressed their emotions, desires, thoughts, and questions during the interviews (Van Manen, 1990). These themes became the essence of meaning for the women. An audit



trail was created by saving the copies of each transcript, the researcher's journal, and memos on the University of Texas at Arlington server.

The researcher wrote a detailed description of the interview within the context and also the emotion presented during the interview process (Madjar & Walton, 1999). The researcher then developed a summary of all of the interviews to describe the findings of the study. These processes were used to reveal the meaning of the findings of the individual interviews. A summary of the findings of the culmination of the interviews was produced after analyzing the data. The analysis process included initiatives to ensure rigor and credibility of the study. Individual interview results were compared to the previous women's findings for consistency.

The products of the research study were the transcripts for each of the women and a summary of the findings from all of the interviews. The researcher created a summary with the goal of the contextual meaning of the interpretation of the women and the social, cultural and political climate that the women shared.

### **Delimitations**

The sample for this study was English-speaking women who were in a telemetry status after experiencing an MI. The sample was recruited from three hospitals in a large metropolitan area.

### **Summary**

The use of phenomenology as a qualitative research method facilitating the description of the in-depth experience women lived when having an MI and seeking healthcare, using the framework of the stress and coping theory (Lazarus & Folkman, 1984b). With the use of a phenomenological research design, semi-structured interviews helped identify the themes that emerged as women described their experiences during their myocardial event.

In this chapter, the method and procedure for the qualitative research design was presented. The sampling plan and research setting were described. The data collection method including data management was explained in detail. The procedure for the recruitment of women and their consent process was presented. Ethical considerations of the study were addressed. The method and process of data analyses, including narrative summaries, were described in detail.

## Chapter 4

### Findings

A phenomenological study was conducted in three hospitals of a large metropolitan area in a North Texas hospital system. The purpose of the study was to describe the lived experience of women having an MI and seeking healthcare, using the framework of the stress and coping theory (Lazarus & Folkman, 1984b). In this chapter, the sample characteristics will be described. The resulting concepts gained from interviews will be presented using the concepts and structure of the stress and coping theory. Unique findings will also be described. Each participant will be identified using her own selected pseudonym for the study.

### Description of the Participants

The study consisted of 20 adult women who experienced an AMI as the admitting diagnosis of their hospital stay. The women ranged in age from 30 to 81 years (Table 2) and none were pregnant. With regard to race and ethnicity, 15 (75%) of the women were White, two (10%) were African American or Black, and three (15%) were Hispanic (See Table 3). Most of the women were interviewed on day two of their hospital stay. This was the first MI for 17 (85%) of the women. Seventeen (85%) of the women lived with at least one other person. Procedural outcomes include that 7 (35%) women had had at least one coronary stent inserted and 2 (10%) women were scheduled for coronary bypass surgery (See Table 3).

**Table 2. Ages of Women and Data Collection**

Characteristic	<i>M (SD), Range</i>
Age	62.85 (15.09), 30-81 years
Interview on which hospital day	2.6 (1.63), 1-6 days

**Table 3. Description of Participants (N = 20)**

Characteristic	Label	F (%)
MI History	1 <sup>st</sup> MI	17 (85%)
	2 <sup>nd</sup> MI	3 (15%)
Race/ Ethnicity	White	15 (75%)
	Black	2 (10%)
	Hispanic	3 (15%)
Relationship Status	Never married	1 (5%)
	Married	8 (40%)
	Divorced	5 (25%)
	Widowed	5 (25%)
	Long-term relationship	1 (5%)
Living Arrangements	Living alone	3 (15%)
	Living with at least one other person	17 (85%)
Members of Household (n=17)	Spouse	7 (41%)
	Partner	4 (23.5%)
	Children	4 (23.5%)
	Others (assistant, roommate)	2 (12%)
Intervention Outcomes		
Cardiac Catheterization	Medically treated	7 (35%)
Cardiac Catheterization	Scheduled- pending	4 (20%)
Cardiac Catheterization	At least one stent placed	7(35%)
Coronary Bypass Surgery	Scheduled	2(10%)

The focus of the study was the interviews with women regarding their experiences when having a recent MI. Their experiences were described using the stress and coping theory concepts (Lazarus & Folkman, 1984a). Table 4 provides an overview of the findings that will be explained in greater detail in the next sections.

**Table 4. Overview of the Study Findings**

<b>Acute Myocardial Infarction Stress and Coping Findings</b>
Stimuli “Pain and other symptoms” Fatigue, shortness of breath, sweating/hot, chest pain, radiating in some form, nausea, back pain, non-cardiac pain, vomiting, jaw pain, and progressive intensity

<b>Acute Myocardial Infarction Stress and Coping Findings</b>
<p>Primary Appraisal “Something is wrong, but what?”</p> <ul style="list-style-type: none"> <li>I can’t believe this (Disbelief)</li> <li>I thought it would be different (Preconceived ideas)</li> <li>I didn’t know (Unaware)</li> <li>I think it is... (Intuition)</li> <li>I wonder if this is really something else (Second Guessing)</li> </ul>
<p>Secondary Appraisal</p> <ul style="list-style-type: none"> <li>Facilitators- Personal agency <ul style="list-style-type: none"> <li>I got this (Maintain Control)</li> <li>Let’s talk (Communication)</li> </ul> </li> <li>Barriers-Things get in the way... <ul style="list-style-type: none"> <li>It is a secret (Non-communication)</li> <li>Oh, wait... (Delay)</li> <li>How am I going to pay? (Lack of Insurance)</li> <li>There is something in the air.... (Failed Communication)</li> <li>Be nice to me, please! (Taken Seriously)</li> <li>Things to do and people to see...(Commitments/Priorities)</li> </ul> </li> </ul>
<p>Coping – I am not alone (Family/Prayer)</p> <ul style="list-style-type: none"> <li>Someone has my back (Family/Friend Support)</li> <li>Do something (Attempt to Alleviate/Seeking Help)</li> <li>It is nothing...(Rationalizing/Denial)</li> <li>Please God, help me... (Prayer/Faith)</li> <li>This could kill me... (Facing Mortality)</li> <li>I need to hurry up (Urgency)</li> <li>I can do this (Control of Situation)</li> </ul>
<p>Outcomes</p> <ul style="list-style-type: none"> <li>Emotional responses</li> <li>I am so scared... (fear)</li> <li>Everything will be ok (positivity/hope)</li> <li>I did not think it would come to this...(reluctant reality)</li> </ul>
<p>Other Issues</p> <ul style="list-style-type: none"> <li>If I had to do to it all again... (regrets)</li> <li>I want to help you (advice)</li> <li>You gotta know your body (know your body)</li> <li>Breaking points</li> </ul>
<p>Additional Findings</p> <ul style="list-style-type: none"> <li>Misdirected self-diagnosis</li> <li>Misdiagnosis</li> <li>No Illness Appearance</li> </ul>

### **Stimuli- Pain and Other Symptoms**

The stimuli concept in the theory describes the physical symptoms women experience while having a heart attack. Each woman had a unique set of symptoms during her cardiac event. Women were unable to identify the MI with a single symptom. Women experienced multiple symptoms before they realized something was not right with their bodies. At times, the women were not able to identify that the symptoms were cardiac in nature. The symptoms women experienced were fatigue, shortness of breath, sweating/being hot, and chest pain. The women experienced some form of radiating pain, not necessarily involving the chest area.

#### **Location of Pain**

**Chest sensations.** Women had sensations in their chests that alerted them that something was not right, described by women as a pain in their chests. They described their pain in different ways.

**Hurt/pain.** Kim developed severe chest pain that she described as someone “taking a gun at close range and shooting into [her] chest.” The pain was across her chest and radiated into her left hand, then into both hands. She developed numbness in her left arm, before both arms started hurting. Kim also had shoulder pain so severe that she would try to rotate her shoulders attempting to alleviate the pain. She was nauseated and vomiting and then became dizzy. Kim was short of breath and thought if she breathed heavier the pain would go away. She would squat down on the sidewalk while walking her dogs and take deep breaths to try to relieve the pain in her chest. With the deep breathing, she started to hyperventilate, which caused her to have spasms in her arms and tingling in her lips. Kim’s husband drove her to the hospital when she let him know of her pain. As Kim told her story, she got up out of her hospital bed and started pacing at her bedside. When she described the pain, she began to get tearful.

Dena woke up one morning and prepared to go to church when her pain started across her chest, a constant pain, which was burning/sharp/stabbing. At one point, the pain felt as though someone was sitting on her chest. In the two weeks prior to her myocardial event, Dena experienced chest pains, shortness of breath, neck pain, fatigue, nausea and vomiting, and left jaw pain. The discomfort was usually gone by lunch. During her myocardial event, the pain was worse than before and started to escalate and intensify. As Dena shared her story, she was holding the corner of her bed sheet, twisting it and untwisting it. It was as though she was wringing her sheets. She was calm, but occasionally she would become tearful when talking about her pain.

***Rubber band (squeezing sensation).*** Women described a tight rubber band around their chest area. The rubber band sensation felt like a tight squeeze that caused them chest pain. Tinkerbelle had just completed a meeting with her team at work when she developed the recurring tightness in her chest. She described her pain as someone placing a tight rubber band around her chest, which was “way too small.” She had a lot of drainage and thought her chest discomfort and tightness were related to her recently diagnosed sinus infection. Tinkerbelle had not been participating in any strenuous physical activity. The pain became worse and would not subside. Other symptoms Tinkerbelle experienced were tightness in her right and center chest, a feeling of heaviness, pain and heaviness in her left arm and shoulder, radiating pain to her left hand and fingers, and tingling to the fingers of her left hand. She mentioned that she slept a lot in the previous three months. Tinkerbelle found herself at the time of the MI short of breath, hot, and sweaty. The more she spoke about her pain, the more obvious the stress lines in her forehead became. She appeared concerned and, at times, tearful.

Ann woke up from her sleep at 2:00 a.m. “with bells and whistles.” The tightness in her chest felt like a squeezing sensation in the center of her chest. The pain evolved into a feeling as though a “piercing hot metal [was] in her chest.” The pain was constant with a burning and stabbing sensation. Three or four days prior to her MI, she was diagnosed with bronchitis. She believed perhaps the burning and squeezing sensation was related to her bronchitis diagnosis. When she talked about her MI pain, she had moisture in her eyes and shook her head as she relayed her painful experience.

***Middle/center of chest.*** Women had MI sensations in different areas of their chest. Some of the women had a sensation in the middle/center part of their chests, such as Betty who, in preparation for hip replacement surgery, had been placed on blood thinners a week before her infarction. She had been to the doctor’s office for her last follow up appointment that morning. Around 8:30 that night, she started having severe burning pain in the middle of her chest. The pain did not go away. Other symptoms Betty experienced were pain radiating to her back, both arms, and jaw, heaviness in both arms, heartburn, vomiting, and fatigue. The pain was progressive and she “felt real bad.” As Betty talked about her painful experience, she had a blank stare and would gently shake her head.

Marlene had been moving furniture around the inside of her house during the morning. That afternoon her chest pain started in the middle to the upper left side of her chest. The pain radiated to her left arm and hand. She was not able to relieve the pain sensation. As Marlene talked about her pain, she was rubbing her left arm and opening and closing her left fist.

***Across the chest.*** Women experienced their chest pain across the chest. A month before her actual MI, Carmen experienced a pain in the middle of her chest that moved across her chest and lasted three minutes. The pain felt as though “a heavy puppy had jumped on [her] chest.”



The pain went into her neck and then went away. Four days before she experienced the MI, Carmen had a burning sensation in the middle of her chest, moving across her chest. The pain felt like a constant “spasm.” Her chest was heavy and she had pain in the underside (chin) area of her jaw. Carmen was nauseated and fatigued, to the point that she felt as though she “could not move.” The pain progressed in intensity across her chest. Eventually, this pain subsided. When she spoke about her pain, she became tearful and would lightly touch her chest as she described the pain.

BV was sweeping the floor of her home when she developed pain in the middle of her chest and then across to the left side of her chest. She had not experienced this pain before. BV’s pain was a constant sharp/stabbing sensation. The pain went into her left shoulder and into her back. She immediately called the doctor’s office for help. They told her the doctor was busy and to call 911. Instead, she called her daughter who picked her up and took her to the hospital. BV had a nervous smile as she spoke about her pain. She was confident but she shared her concern about her pain.

**Back pain.** Women had some type of pain in their backs when having an MI. Women described their pain as radiating to their back or the pain was initially located in their back. Carmen described her back pain as spasms, which came in waves. Donna was lying in bed and felt as though someone was sitting on her chest. She had back pain, a severe headache, and she was hot and sweaty. She had multiple symptoms that continued to build in intensity. Donna would wrap her arm around her back to rub it when she talked about her back pain.

**Non-cardiac pain.** Women experiencing an MI described the excruciating pain they endured during their event. The pain was agony for each of them. Carmen believed she could

not take the pain any longer. It “felt like literally my chest was being pulled apart.” As Carmen recalled the event, she rubbed her chest and was tearful as she described the pain.

As Betty shared her story, her eyes were wide and her voice was higher as she talked about needing pain medication. She endured excruciating pain with vomiting on the ambulance drive to the hospital. The paramedic said if he gave her morphine the vomiting would be worse. He finally relented and gave her morphine but it did not relieve her chest pain.

**Jaw pain.** Women described some form of jaw pain when they experienced their MI. Dena had jaw pain for three or four days prior to her MI. She wears braces on her teeth and thought her teeth were shifting, causing the pain in her jaw. She would wake up in the morning with jaw pain and other symptoms but by noon her pains were gone so she did not pay attention to the jaw discomfort. As Dena was talking about her jaw pain she put her hand on her jaw and gently rubbed it. Another woman, Carmen, had jaw pain but the pain was located in the middle of her jaw under her chin. She did not realize the pain under her chin was a symptom of an MI. As Carmen mentioned the location of her pain she rubbed her chin with the back of her hand. Other women mentioned having jaw pain in general.

### **Type of Pain**

**Constant pain.** Women had constant pain, which would not subside. The pain was excruciating, with the women describing it as “some of the worst pain” they had ever experienced. Marion recalls her chest pain was dull and constant. The pain was also in her neck and shoulder blades. She remembers being “exhausted.” Marion felt stressed, with an upset stomach of nausea and diarrhea. She was very dizzy. Her symptoms would not subside until the healthcare team administered her medication. Throughout the interview she was tearful and frightened and would ask her daughters what they thought about the event.

**Sharp/stabbing pain.** Women that experienced a heart attack had a sharp or stabbing type of pain. Faith started having a sharp pain in her chest when she woke up in the morning. It had been years since her last MI. With this MI, the pain was sharp and stabbing. She also experienced back pain and jaw pain that would not subside. She did not tell her partner because she did not want him to worry about her. She called her daughter for help. As Faith talked about her MI event, she started to pace by her bedside. She was anxious and worried. Faith's daughter told her mother everything would be all right. Some women in the study had sharp pain, but each had a different intensity, pressure and abrupt presentation.

**Radiating pain.** The women experienced some type of pain radiating when having their MI. The radiating pain did not always start or involve the chest area. Carla awoke from sleep in the middle of the night to use the bathroom. She started to feel a pain in her chest, which radiated to her back and both arms. She described feeling as though someone was sitting on her chest causing severe back pain. Carla was hot and sweating with a headache, which developed into temporary blindness. She had fatigue and sleeping problems in the weeks leading up to her MI. As Carla shared her experience, she was tearful and a few times had to stop to catch her breath, holding back the tears.

Debbie and her friends were driving to a major metropolitan area in North Texas for a day of shopping when she became nauseated and then developed a severe sharp pain across her chest that radiated into her upper left arm. She experienced heartburn, vomiting, and profuse sweating. Although her friends remained calm, they were afraid for her. This was Debbie's first MI. She was calm and confident when she talked about her pain. In general, women experienced radiating pain describing it as being in the middle sternum area, radiating to the left chest and around to the back. Women experienced pain that radiated to their left hand and left

fingers. Other women experienced pain only in the left hand or both hands. Women had pain in their right upper arm, or pain in both arms that radiated into their hands.

### **Other Symptoms**

**Shortness of breath.** Another symptom women experienced was shortness of breath. As previously mentioned, women experienced multiple symptoms before realizing something was wrong. Pam had problems with recall but remembered being short of breath and her arms hurting. Her son-in-law said she had not been feeling well the day before she had her MI. Pam was found unresponsive on the front porch at 3:00 in the morning. It is assumed by the family that she called 911. Pam also had jaw pain and numbness in both arms.

Nancy had trouble breathing and had chest pain when she went to bed the night she had her MI. Her chest pain and shortness of breath would come and go. She continued to have a hard time breathing. She also experienced fatigue, left arm and back pain, and she was hot and sweaty. Nancy was struggling to breath and was tiring out. As Nancy talked about her shortness of breath, she would bring her hand to her chest. In general, other women described their symptoms as shortness of breath, difficulty breathing and panting for breath. Each woman experienced symptoms other than shortness of breath. Sometimes the women would begin with a particular symptom and then progress to other symptoms.

**Fatigue/exhaustion.** Another symptom women experienced was some form of fatigue or exhaustion. The women described being exhausted or tired when they had their MI. Many had been tired for months and did not know why they were so tired. They did not have the energy they were used to having. Dee had been singing at a funeral when she began to experience heartburn and became hot, sweaty, nauseated, weak, and tired. Dee did not have chest pain. She had been tired for several months but this was different. She was so weak that when she went

into the convenience store to purchase antacids, she asked the sales clerk to “please open the package and place the [antacid] in [my] mouth.” Dee was so weak she had to lean on the counter to remain upright. When she talked about being tired she would take deep breaths and shake her head. Robin had symptoms for 12 days prior to her MI event. She did not know these symptoms were heart related. Robin had chest pain that radiated down both arms, into her back, and in between both shoulder blades. She was nauseated and exhausted. Initially, she believed she had the flu. Approximately 10 years earlier she experienced a similar pain and was told she had diabetic neuropathy. Robin was very talkative and talked fast when she described her cardiac event.

**Nausea.** The women described nausea as part of their myocardial infarction symptoms. Carmen described her nausea as having an abundance of saliva in her mouth or that it was “watering” too much. As she spoke about the nausea she had a scowl on her face. She shivered when she was talking about the watering mouth. Other women described being nauseated in general.

**Vomiting.** Women acknowledged vomiting as part of their MI presentation. Women also had nausea (included above) accompanied with their vomiting. When Ruth Ann had her first MI, she was putting dishes in the dishwasher when she realized she had chest pain that was tight like a rubber band. She had pain in her back that radiated to both shoulder blades. When Ruth Ann’s chest was hurting she started vomiting. As she recalled her vomiting, she put her hand gently across her mouth as if remembering the event.

**Sweating/hot.** The women mentioned sweating or being hot when having their MIs. Lynette woke up around 7:30 a.m. one morning and went to take her medicine. About five minutes later she began to “feel weird,” started sweating profusely, and had tightness in her

chest. Lynette felt “real bad.” As she spoke about her MI she would wipe her face with her hand. Earlene woke up and walked to the foot of her bed. She broke out in a cold sweat and began to hurt severely in her chest. As Earlene shared her story she would lean back and pull the top of her hospital gown as though she were trying to fan herself.

**Progressive intensity.** Women experiencing an MI had progressive symptoms, which intensified with time. Betty described her pain and symptoms as starting out “not as bad and it gradually got worse.” Carmen’s pain progressed over two days, so much that she felt her “stomach was turning into her lungs.” As Carmen shared her story she would sigh deeply, close her eyes and gently shake her head.

### **Primary Appraisal - Something is Wrong, but What?**

In the primary appraisal phase, the women assess whether the stimuli (stressful event) will impact them. They use their beliefs and goals to determine if the stimuli is a harm, a threat, or a challenge for them (Lazarus & Folkman, 1984b).

**I can’t believe this!! (Disbelief).** Women experienced disbelief when having their cardiac event. Ruth Ann had a history of heart disease in her family. Her father and sisters all had experienced MIs. Even thinking about her family history, she still did not believe she was having an MI until that night “when the pain got really bad” and she started thinking maybe she was having one. Ruth Ann would raise her eyebrows very expressively when she was talking about her surprise that she had an MI. A surprised Carla mentioned she “would never have thought” she had an MI. Carla experienced an episode of temporary blindness and could not believe this was related to her heart. Carla sat up on the side of the bed and blinked her eyes quickly as she spoke about her temporary blindness.

### **I thought it would be different (Pre-conceived Ideas)**

The women had pre-conceived ideas about what an MI should feel like. Dee mentioned thinking about “the little things you normally do” and that she had not done the day she had a heart attack. I had “nothing in my arms. That’s why I never thought...I mean you know (*giggles*) I always heard your arm would get numb. I know my sister and even my father, he is gone, he had it and those were the symptoms that they knew to go to the doctor, whatever. But ah...No that was it. Wasn’t no pain.” Dee was calm and confident as she shared her pre-conceived ideas she gained from her loved ones’ experiences.

Another woman, Donna, learned about chest pain and infarctions first hand from her own mother. When she was younger, Donna’s mother had chest pain episodes and she told Donna shaking her arms above her head, walking the floor, and taking aspirin were the ways to alleviate the discomfort. According to Donna, her mother’s doctor told her these efforts saved her mother’s life. Donna said she took aspirin and walked the floors. She thought the “arms shaking was crap.” When Donna talked about her mother’s experience she was shaking her head and rolled her eyes. She did not agree with the shaking of the arms.

### **I didn’t know. (Unaware)**

The women experiencing an MI experienced some type of unawareness. Women were unaware they were having cardiac signs that needed attention. Carmen’s brow was knit and she would wring her hands as she talked about her event one month prior to her MI. She had “anxiety” pain that traveled from her chest and into her neck to the point that she was not able to move due to the pain. She believed this was anxiety and not any type of cardiac event. Lynette would shake her head as she thought about what she would share regarding her MI experience. When she had her event, she was sweating profusely and didn’t know what was wrong.

Unaware that she was having MI symptoms, she lay down under a ceiling fan believing she would cool off.

### **I think it is... (Intuition/Awareness)**

Women having an MI had some type of awareness or intuition about the incident. Dena felt something was wrong due to her symptoms. She had an intuition about taking a BC powder, which has a high dose of aspirin. She was not able to explain how she knew to take the aspirin. A smiling and confident Dena said, "Something just said take it." Earlene had a strong and confident personality as she described her experience with her first MI. She was immediately aware that something was wrong and she knew she had to get to the doctor or the hospital. When asked if she tried to sit down to alleviate the pain and symptoms, she said, "No, I knew it wasn't going to" go away. Earlene knew what needed to be done.

### **I wonder if this is really something else (Second Guessing)**

Women experienced second guessing themselves when having an MI. Ruth Ann sat on the side of the bed, looked down and shook her head as she shared that she should have gone to the hospital earlier. "You know what we should do, but you don't always do what you should do." She experienced a tight band around her chest thinking it was indigestion. The nurse at the hospital encouraged her to seek care next time even if she thought it was only indigestion. Marlene had chest pain for three days, worried about calling for help and nothing being wrong. She was having an MI. As she shared her story she would place her hands together under her chin as if she was praying.



## Secondary Appraisal

During the secondary appraisal a person will assess the stressful event to evaluate the demands of the situation. Then they determine the resources they have to overcome the harm, challenge or the threat that has been presented to them (Lazarus & Folkman, 1984b).

### Facilitators of Personal Agency

Facilitators are possible actions or thoughts that may assist people in reaching a resolution to a threat, harm or challenged presented to them (Lazarus & Folkman, 1984b).

Women having an MI may be able to process through the stressful event when there are effective facilitators to assist them.

**I got this! (Maintain control).** Women experienced a form of maintaining control of a situation while having their MIs. Kim was a confident lady that knew what she wanted. She paced the floor next to her bed as she was being interviewed. During her cardiac event, Kim was having severe chest pain and nausea and knew she needed help. She decided not to call the ambulance for assistance because they would take her to a small rural hospital located near her home, not the hospital she preferred. By not calling an ambulance she was able to go to the major urban hospital in the North Texas area where she wanted to be treated. A stoic but confident BV was alone at home when she started having chest and back pains. She realized something was wrong. BV “did what [she] had to” and called the doctor’s office. She then called her daughter for help to get the urgent care she needed. BV had a nervous giggle but was determined to get the care she needed. Each of these women realized they had to do something to have a successful outcome. They may have been frightened, but they did what they had to do to survive the situation.

**Let's talk. (Positive communication).** Women experiencing an MI had a form of positive communication. They communicated with different family members when having an MI. Betty, concerned about notifying her son, called to let him know she was in the ambulance going to the hospital because she was having a heart attack. She held up a finger and said, "I was calling my son to let him know." A calm and confident Marlene called her daughter who lived next door to let her know she was having a heart attack and needed her help. Within a few minutes, in the middle of the night, Marlene had her family in her home to help her. Marlene was smiling as she shared her story of her children coming to help her when she called them. Communication also existed between healthcare personnel and patients. These are examples of the positive communications with healthcare workers. When sharing her story, Ann looked the researcher directly in the eye and nodded her head when talking about going to see her doctor in the office. Ann was having chest pains and could not get her symptoms to subside. When she went to see her family doctor she was able to describe the symptoms accurately and concisely. The doctor immediately called 911 for Ann's needed urgent care.

### **Barriers to Personal Agency (Things Get in the Way)**

Barriers people experience during stressful situations may delay or prevent them from reaching a successful resolution to the threat, harm or challenge they are presented (Lazarus & Folkman, 1984b). Women having an MI may be delayed seeking care due to the barriers presented to them.

**It is a secret. (Non-communication)** Women experiencing an MI failed to communicate with others during their event. Women had neighbors who they could have contacted for help but did not call during the urgent situation. At times people did not want to disturb or worry their family and friends, so they did not tell them they were having painful

symptoms. Pam would sit quietly and look at her hands when she was deciding what to share. She previously experienced heart surgery in 1995. Pam had been experiencing chest pain and shortness of breath for a couple of days prior to her most recent cardiac event. Her family was not aware of her pain until an ambulance arrived at her home in the middle of the night. She did not want to bother anyone.

Communication issues between healthcare personnel and patients also occurred. Marion waited on a stretcher in the emergency room for over four hours before she was told she had a heart attack. According to Marion, the physician gave her the “last rites” when he told her about the MI. He told her the statistics, which were not in her favor, for survival. She explained to him that she wanted everything thing done to help her survive. The physician continued to tell her she had a low chance of survival. Marion’s daughters stepped in to tell the doctor to do his part and “let God do the rest.” Marion was very tearful throughout the interview. She would cry because she was afraid and she was upset with the way that she was treated by the emergency room physician.

**Oh, wait! (Delay).** Women having an MI encountered some type of delay when getting health care. For a variety of reasons women delayed between 45 minutes to three days to seek health care. These were the times when the women realized they were having health issues that needed attention. Donna shared her story confidently and did not appear afraid. She waited for hours anticipating her husband to return home from night shift work when she was having chest pains because she did not want to disturb him at work. She did not call her adult children to notify them she was hurting because she did not believe her children would answer the phone in the middle of the night. Donna shared that she had pain frequently and her children encouraged her to go to the doctor but she did not take the initiative to do that.

Ann, a cosmetologist, worked in a high school work program preparing students to challenge the cosmetology boards for their licensure. She was the only teacher that could prepare the students for the exam. Ann sat up during the night with her husband hoping her severe chest pain would go away. She knew she needed help but was buying time and hoping the pain would resolve soon. At 7:00 a.m. she realized the pain was not going away so she called her doctor's office for a morning appointment, explaining she was having chest pain. She was determined to see her own physician first. Ann did not want to wait in what she perceived as long lines in the emergency room. She thought if her physician told the emergency room physician she was having chest pain symptoms she would not have to wait for care.

Women were afraid or felt they did not have access to health care because they did not have insurance or money. Faith was tearful and anxious. She was a young woman with a history of MI who was having chest pains when she was preparing to go to work that morning. She knew this MI could have been fatal for her. Although she worked full time, she made less than \$15.00 per hour and had no insurance benefits. Faith intentionally waited for several hours because she did not have insurance or money to pay for care and she was afraid the hospital would not provide care to her. Throughout the interview she mentioned several times her concern about how she would pay for the hospital bill. She later would share that she did not know what she was going to do if she was prescribed medications since she had no way to buy them. She was afraid of what would happen to her.

Robin was tearful and frightened. She was a nurse who lost her job three months prior to having an MI and did not have insurance. She was not able to get medical care or medications. She was a diabetic and had not been taking her insulin. Robin had been going to the same doctor for 20 years for medical care. Because she was unable to pay for her office visit and did not

have insurance, the doctor's office would not refill her prescriptions or set up an appointment for her. One night Robin was hurting so much that before going to bed she removed her jewelry, anticipating that she would not wake up in the morning. She wanted to make sure that her jewelry would be safe for her family. Robin knew what care she needed but she did not have the resources to access the health care.

**Logistic challenges.** Other delays women experienced when having an MI were logistic challenges. Debbie and her friends were lost on the highway in a detour route trying to find the exit to the hospital. The women were on the freeway and could see the hospital in view but they were unable to reach the hospital until they figured out the confusing detour to the hospital. Another woman, Tinkerbelle, was driven to the hospital by her daughter. They came to the emergency room entrance for ambulances and were not able to locate a general entrance. They were upset about the lack of directions to get into the emergency room. The daughter finally walked her mother inside the ambulance entrance door and then moved the car out of the ambulance driveway.

In this study, logistical challenges also included the communication between a fire department and ambulance services. Smaller rural towns do not have their own dedicated ambulance service. These towns rely on the larger cities to contract out emergency services for them. When the ambulance arrives, they deliver patients to the closest hospital in the town, whether the patients want to go to them or not. Women described not wanting to call the ambulance service because they wanted to be treated at a major hospital in the North Texas area. One of these women experienced a unique situation. In her rural town, the ambulance is called in through the volunteer fire department. The fire department then calls the ambulance service. This communication triage may cause a delay in care. In this particular case, a train was

crossing the small town, which caused a 20 minute delay in the ambulance picking up the woman having an MI. After one woman went to the catheterization laboratory she was told she had extensive cardiac muscle damage and that if she would have arrived sooner she may not have had as much longer term cardiac damage. The woman was tearful and gently rocking back and forth as she shared her concerns about the delay and the cardiac damage because of an extended timeframe getting to the hospital.

**Commitments and priorities.** Women having an MI had another reason to delay seeking care. They had commitments or priorities for which they were responsible. Women had responsibilities for caring for others, such as family and friends, or for themselves. Carmen was reserved and appeared a little intimidated when she talked about taking care of her husband. She did not appear afraid but cautious. Carmen had severe pains throughout the night but woke up the next morning and made breakfast for her husband. Soon after, she went to the grocery store. Her husband wanted to go to the three mile flea market so she went with him, knowing she had been hurting earlier. Within an hour of arriving home, her MI started. Marion took care of her elderly husband who had dementia and was temporarily in a rehabilitation facility. She stayed with him to prevent him from falling out of his chair and to help keep him calm. Other women had priorities related to their own needs. Nancy wanted to get dressed, put on make-up, and fix her hair to go to the hospital when she was having an MI. Her assistant insisted she go to the hospital the way she was dressed so she could get the urgent care that she needed. Nancy was upset because she did not want to be seen disheveled.

**Be nice to me, please! (Taken seriously)** An upset and tearful Marion, mentioned that an EKG was performed on her and the emergency room nurse turned around and told the woman, “Your EKG looks better than mine.” Women mentioned not being connected to a heart

monitor immediately upon admittance to the trauma room. A woman described feeling as though when her pain subsided, the personnel “probably” thought she had stomach issues rather than a heart attack. Women and their families mentioned they thought if their female loved one did not arrive in an ambulance she would have to wait in the waiting room and she would not be treated as an emergency case.

Women were embarrassed to go to the hospital. Betty shuddered remembering the way she struggled with going to the hospital. She felt that if the situation was not bad that she was going “to look like a fool.” In another example, Ann was relieved to know she did have a confirmed heart issue. She recalled, “The ER doctor verified that yes, I was not faking. I had a heart attack.” Ann was proud when she shared her confirmed heart attack.

### **Coping**

During the coping phase people identify whether the stressful event is problem- focused or emotion-focused. An action may resolve the problem-focused issue but additional work may be required to resolve the emotion-focused issue. During the coping phase people are action oriented in their attempts to resolve the stressful event (Lazarus & Folkman, 1986b).

#### **Someone Has My Back. (Family/Friend Support)**

Women having an MI had some form of support from a friend or a family member. Women had daughters who sometimes were their neighbors that drove them to the hospital or insisted they call for an ambulance. Other women had boyfriends or spouses that took the women to the hospital for cardiac care. Dena, was confident and not afraid because she knew her family that lived in Mississippi was on the way to see her in the hospital. She also had her college friend staying with her in the hospital. An elderly 80- year-old mother drove herself

from Tennessee to be with her daughter, Lynette, when she found out she had had an MI. Women had family members who spent the night with them during their hospital stay.

**Do Something. (Attempt to Alleviate/Seeking help)**

Women experiencing an MI intervened in some way to attempt to alleviate the symptoms they were experiencing. Women tried physical and mental approaches to relieve themselves of their pain. Women tried to lie down and go to bed, sit in a chair, and pace the floors attempting to relieve the pain. Women had unique experiences trying to relieve their discomforts including falling asleep, alternating standing and sitting, reading their Bibles, and drinking hot teas. Women tried mental approaches to relieve their pain, such as self-hypnosis, relaxation techniques, deep breathing exercises, and meditation.

Dee experienced being very hot. She removed her bra trying to get relief and her friend fanned her to cool her down. Eventually, though it was winter, she sat in front of the car air conditioner to cool herself. Another woman experienced a “nightmare” of temporary blindness. She kept blinking her eyes trying to get her sight to return. After a period of time, her sight did return.

The women took medications to relieve their pain and discomfort. Women took antacids for indigestion such as Roloids, Pepto-Bismol, and TUMS. Women took multiple antacids. Ann “ate TUMs like candy.” Women only took aspirin. Dena took a BC Powder, which has the highest dose of aspirin. Women took one of each of the medications Ibuprofen, Advil, Tylenol, Aleve, and hydrocodone. Women alternated taking Tylenol and Aleve and this combination seemed to help ease their pain. Pam had a previous MI and took five nitroglycerine pills at timed intervals. Carla rubbed herself with Ben Gay in an attempt to alleviate her pain and discomfort.



As previously mentioned, the women having an MI did eventually seek some type of help from others. Women called their daughters for help first. Other women called their husbands, boyfriends, an assistant, a roommate, or they called the doctor's office directly for an urgent appointment. Usually, if the woman did not call 911 herself, her support person would call the ambulance for her. Nancy called her friend who encouraged her to call 911. Instead, she waited for her friend to come to her home to take her to the hospital. Another woman had pain throughout the night and her husband encouraged her to call 911. The woman refused. The following morning her husband insisted she go to the hospital and he called 911. Another woman in the study was experiencing chest pain. The daughter told her elderly mom to get into the cab because the daughter needed to go to the hospital.

### **It Is Nothing! (Rationalizing/Denial)**

Women used rationalizing to cope with the symptoms of an MI. Women found a unique reason they were experiencing these painful symptoms. Betty thought her indigestion was due to the pizza she ate for dinner. She paced the floor and lay in bed after taking TUMS to alleviate her severe discomfort. Betty would sigh and shake her head saying, "I'll never eat pizza again." Ruth Ann had been tired for six months. She attributed her severe fatigue due to her 72 years of age. Ruth Ann swatted the air when she talked about getting older and tired. She believed the older she became the more tired she would become.

Women having an MI experienced an episode of denial, but in different ways. Betty's father had heart disease and had several cardiac catheterizations and procedures throughout his life. She thought the procedures were "hokey." When the catheterization team picked up Betty to take her to the catheterization laboratory she asked what they were doing. They explained the process and she told them, "I don't believe in doing that." Her daughter had to convince Betty

she needed the heart catheterization and a possible intervention. Betty ended up with a coronary stent. When interviewed, Betty laughed about the event and said she definitely believes in the procedure now.

### **Please, God, Help Me... (Prayer/Faith)**

Women practiced praying or had some form of faith when they were having their MIs. Women described their most vulnerable times to be when they were praying. Women prayed not only for themselves but for others, too. The women described being spiritual and praying every day. Marion tearfully described being ill and it not really bothering her because she “believed in the healing power.” She trusted Jesus. She shared she was praying but not vain prayers, “Just help me.” As she spoke, she was tearful but determined to survive and maintain her faith. As she shared her story, she would take deep breaths to suppress sobs. Other women also said they prayed a lot. Dee recalled, “I took that aspirin...that wasn’t nobody but Him” and pointed to the ceiling. “That wasn’t nobody but the Lord.” While Dee spoke it felt as though she were preaching when she told her story.

### **This Could Kill Me! (Facing Mortality)**

The women experiencing an MI realized they were facing mortality. As the women spoke about this realization, their voices would break and tears would fill their eyes. Women trembled as they shared their story. They were strong but the realization was devastating to each of them. Donna shared she “just wanted to live. [She] wasn’t ready to die. [She] was not ready to shrivel up...and give up.” She was tearful as she spoke. The more she talked the louder her voice became. Another woman, Debbie, remembered thinking, “Dear God, if this is the end please let all my friends and family know how much I loved them.” She realized she “may have

not made it.” Debbie would look at her sons and nod her head as she spoke about loving her family. Comments such as these during the interview process were heart wrenching.

### **I Need to Hurry Up. (Urgency)**

The women experienced a situation pertaining to urgency when they were in the middle of having their MI event. Women described the urgency of the healthcare team when they arrived at the hospital. These women were taken straight back into a trauma room as soon as they arrived in the emergency room. Descriptions used to describe the urgency were “zoom,” “whoosh,” “didn’t have to wait on nothing,” and “Slam bam thank you ma’am.” A woman described being flown in a helicopter and the speed of the ride to the major North Texas area. Women mentioned how the catheterization laboratory teams were waiting for them when they arrived in the helicopter and how quickly their coronary stents were placed. A woman mentioned she was already finished with her procedure when her husband, who had been with her at home, made it to the hospital. All of these ladies described how quickly their urgent care was provided once they made it into the trauma rooms within the emergency rooms. A woman said she heard the word “STEMI” and a team of people were around her bed and everything was happening fast. These are examples of the healthcare team working quickly to provide urgent care to the women.

Women also experienced situations where people needed to pick up their pace to provide more urgent care for the women infarcting. These were critical situations that required rapid care. Kim’s husband became frustrated when he took her to the hospital while she was having chest pain and profuse sweating. The couple was asked to complete insurance paperwork before she went back inside of the emergency room. After about five minutes of paperwork the husband said, “Look! We need help quickly.”

Tinkerbelle went to the emergency room for care. She was pale and so weak she could hardly sit up in the wheelchair. The emergency room triage personnel wanted her to wait for the five other people in front of her before she received care. Tinkerbelle knew she needed urgent attention. Tinkerbelle's daughter, who is a nurse, took her mother to another hospital where they brought her into a trauma room immediately.

At times the women themselves had some form of a lack of urgency. Women did not realize the urgent situation of their symptoms. Friends or loved ones would drive them to the hospital in a car. At times the women experiencing the pain would drive themselves to get the urgent care they needed. These drives could have been fatal for the woman having the MI.

**I can do this. (Control of Situation)**

During their process of having an MI, women participated in controlling a situation pertaining to themselves or their care. Women directed others to help them or call for help. BV told her daughter to take her to the emergency room. Carla told her boyfriend he needed to call 911 on her behalf. Nancy insisted her friend take her to the emergency room when he tried to convince her to call an ambulance. Women decided they were going to do whatever they had to do to heal from their MIs. Ann said, "I'm going to do whatever it takes." Debbie commented, "I'm going to cardiac rehabilitation and I'm going to try to do everything they tell me to do." Donna was aware of the benefits of taking aspirin. After her MI she mentioned she did not "know what the doctors would think or not but [she was] going to start taking aspirin at night." Donna was confident and determined in her decision.

## Outcomes

### Emotional Reaction

The category emotional reaction has been subcategorized and will be presented here as such. Women having an MI experienced some type of emotional reaction during their event. Pam did not have an emotional reaction. She was found unconscious on her front porch. She had been alone in her house and no one knows who called 911 in the middle of the night. Pam had been on a ventilator for several days and her memory was “foggy.” Her interview took place on her first day on telemetry status. She was unable to recall some information, but her children were present during the interview and were able to help as much as possible. Pam’s affect was flat and she would say, “I have no idea” for several answers.

**I’m so scared. (Fear/anguish).** Women experiencing an MI mentioned or described fear as part of their experience. Kim used the word scared four times during her interview. She recalled “It scared me and it scares me what could have happened and what can still happen ‘cause I still have another stent I have to have.” As each of the women shared their stories their fear was visible. Women held their hands clasped together as though praying. They would wring their hands as they spoke about their fears.

Women having an MI had some episode of anguish. Carmen’s discomfort was so severe “the only thing [she] wanted to do was just go home and ball up and sleep.” Marion tearfully described her anguish when she was dealing with her husband who had dementia in the nursing home. She was in the middle of having her MI and both she and her husband needed help. The nurses left her alone in the bathroom with uncontrollable diarrhea and vomiting. Her husband was in the other room in a chair alone and Marion was afraid he would fall. Marion was tearful as she shared her story.

**Everything will be ok. (Positivity/hope)** Women experienced a time of positivity or hope when having their MIs. The women had a variety of ways they experienced a positive outlook. Earlene was positive because she had excellent doctors and her hospital access and cardiac catheterization “went smooth.” Dena was trying to “keep [her] mind on positive things.” She was able to get the care that she needed and her family was on the way to see her from Mississippi.

**I did not think it would come to this... (Reluctant Reality).** Women having an MI experienced an event, which produced some type of reluctant reality. With a knit brow and a raised voice, Dena shared her reluctant reality, which was that she had a lot of health issues over the years and during the previous year she made changes in her lifestyle. She had weight loss surgery, lost a lot of weight, was eating healthy and exercising, and she still had an MI. She questioned why this would happen to her after all the healthy changes she made. Kim experienced her reluctant reality after doctors visited her the morning following her coronary stents being placed. Doctors talked to her about the significant damage in her heart, and the parts of her heart that no longer worked. They also informed her of the need for an additional coronary stent. “And so...today... reality set in ... and it upset me today.” As Kim shared her story she was wringing her hands and was tearful. The fear for herself and her family was evident by her facial reactions.

### **Others Issues**

#### **If I Had to Do It All Again... (Regrets)**

Women who had an MI had some type of regret. Women wished they would have called for help earlier. Tinkerbelle felt invincible because she had never been sick before. She regretted not calling an ambulance to take her to the hospital. She realized driving herself to the hospital

“wasn’t a wise thing to do.” She also wished she had not stopped taking her baby aspirin against the doctor’s wishes. Tinkerbelle discontinued the medication because it had a side effect of making her skin thin. She says she was “vain about [her] skin.” Robin regretted the night that she kept putting off going to the hospital because she wasn’t “quite sure if [she] would wake up the next morning.”

### **I Want to Help You. (Advice)**

Women were asked what advice they would give other women when they were experiencing an MI. Women recommended that other women should listen to their bodies. Each woman will know their own body best. Women need to pay attention to their bodies and if something is not usual for them, they need to seek care quickly. Also, women should go to the hospital for any new negative feelings or symptoms. Another suggestion, women experiencing cardiac symptoms should not wait to seek care. They should go to the hospital immediately. The final suggestion, women should call 911 as soon as a woman realizes something is wrong.

### **Breaking Point: You Gotta Know Your Body.**

Women experiencing an MI identified a breaking point when they decided to seek health care. Women determined that unbearable pain was the reason they decided to seek care. They were no longer able to tolerate their discomfort. Additional breaking points women experienced were uncontrollable extreme heat sensations, severe indigestion, and temporary blindness. All of these women realized their bodies were changing and they needed help.

## **Additional Findings**

### **Misdirected Self-Diagnosis**

Tinkerbelle went to her family physician eight days prior to her MI. She had a cough and “spew” symptoms and was diagnosed with sinusitis. A few days later Tinkerbelle’s chest started

hurting and she believed she had pulled a muscle. She thought her chest pain and discomfort were related to her illness. When the pain became unbearable she went to the emergency room where she was told she had an MI. The heart damage was the cause of her chest pain.

Women were diagnosed with illnesses prior to having their MIs. The women were confused about the benign symptoms of the initial diagnoses of sinusitis, asthma, and a cold. These symptoms started to evolve into potentially fatal situations. Women tended to rationalize the new symptoms as part of the benign diagnosis. They did not realize the danger they were drifting into when having MI symptoms.

### **Misdiagnosis**

Carmen was a woman who had chest pain that radiated into her back, and jaw pain under her chin. Her pain felt like “waves of spasms.” She went to the doctor who told her she had a respiratory infection. No EKG was performed at the time. After three days of intolerable pain, she went to the emergency room where she was told she had an MI.

Since an EKG was not performed on this woman when she went to the physician for care, it is unknown whether she was infarcting initially and it was not diagnosed. Women tend to trust their physicians when they are given a diagnosis and instructions. Carmen did not return to the physician and did not seek health care until she could no longer tolerate the excruciating pain. It is imperative that healthcare providers keep an open mind when young women present with chest pain or irregular symptoms. Women may present with non-traditional cardiac symptoms that require urgent care.

### **No Illness Appearance**

BV had a stoic personality with a high tolerance for pain. According to her daughters, she did not appear to be ill even when she was very ill. When BV went to the emergency room



she sat for an hour in the waiting area “even with the pain.” The healthcare team thought she had something else because she was not “the usual heart attack patient.” They started monitoring her heart when she was taken into the trauma room for assessment of her symptoms. The initial EKG was negative but her blood findings returned with a positive cardiac enzyme. BV was confirmed to have had an MI. Some women may be stoic and suffer in silence when experiencing excruciating pain. They do not want to be embarrassed or call attention to themselves. Healthcare providers must ask women their pain levels and take action quickly to prevent further cardiac damage.

### **Isolation**

Carmen was a married woman with no children. When she was asked about her support system she shared it was only she and her husband. When Carmen started having recurring chest, back and jaw pain she asked her husband if “he would be mad” if she went to the hospital. He told her “no and to go ahead and go.” He drove her to the hospital and dropped her off at the emergency room entrance. He would return to pick her up when she was ready to leave. The day Carmen was being interviewed she was alone in the room and she was waiting for the catheterization laboratory team to pick her up for her catheterization procedure. She had no family or friends with her during her cardiac catheterization. All women need to have some form of support with them during their hospitalization and their cardiac procedures. A social worker, chaplain, or trained volunteer may need to visit these isolated women.

### **Summary**

A phenomenological study was conducted through three major hospitals in one hospital system in the North Texas area. All interviews were conducted in one of the hospitals. The purpose of the study was to describe the lived experience of women having an MI and seeking

healthcare, using the framework of the stress and coping theory (Lazarus & Folkman, 1984b). The findings in the chapter described women experiencing an MI in the phases of the stress and coping theory (Lazarus & Folkman, 1984a). The results were presented in the categories of stimuli, primary and secondary appraisals, coping, and outcomes. Additional findings were also presented describing unique results. Advice from the women investigated pertaining to experiencing an MI was also included.

## **Chapter 5**

### **Discussion**

The purpose of this phenomenological study was to describe the lived experience of women having an MI and seeking healthcare, using the framework of the stress and coping theory. The study included 20 women from the North Texas area admitted to three hospitals within a single healthcare system. The phenomenon of women experiencing an MI was captured by semi-structured interviews. The findings of the study were organized and presented in the concepts from the stress and coping theory: stimuli, primary and secondary appraisals, coping, and outcomes (Lazarus & Folkman, 1984a). The presented findings will be organized in the theory's structural format and limitations of the study will be presented. The conclusions, including relevance to practice, and recommendations for future education, research, and system issues, will be described.

### **Stress and Coping Theory**

#### **Stimuli.**

In the stimuli concept, the physical prompts women experienced when having an MI are presented. The findings from the study are fatigue/exhaustion, shortness of breath, sweating/hot, chest pain, and radiating pain.

These findings do not coincide with the World Health Organization's (WHO, 2011) list of symptoms when having an MI. The WHO lists chest discomfort, pain in the jaw/arm, and shortness of breath as the symptoms when having an MI. The WHO's findings are generic for either gender. As shown in Table 5, the results from the current study are similar to the findings other researchers found when studying women (McSweeney et al., 2003; McSweeney & Crane, 2000; McSweeney et al., 2010). In the McSweeney et al. (2003) study, women described the most common MI symptoms as shortness of breath, weakness, unusual fatigue, cold sweats, and

discomfort in their chests. There were no reported data for the frequency or intensity of the radiating pain or discomfort. McSweeney & Crane (2000) interviewed 40 women who experienced an MI, and found the top four symptoms they experienced. Their findings are similar to the current study: chest sensation, shortness of breath, hot/flushed, and unusual fatigue. McSweeney et al. (2010) concluded that up to 42% of women from different ethnic groups did not experience chest pain or discomfort during their MI experience.

In this study, women usually experienced multiple symptoms before they realized they were having some type of health related event. The women did not always realize they were having a cardiac event and needed to attempt to alleviate the sensations or seek care. Nymark, Mattiason, Henriksson, and Kiessling (2009) conducted focus groups of eight men and seven women, who had experienced their first or second MI. The groups were conducted on the third to fifth day of hospitalization and the researchers found that many women perceived the symptoms during the MI to be vague. Nymark, Mattiason, Henriksson, and Kiessling (2009) found that women and men would usually describe initial symptoms when having their yet unknown MI. Some of the symptoms they experienced were dizziness, feeling faint, nausea, weakness, sweating, choking, shortness of breath, and pain.

**Table 5. Comparison of Symptoms Reported by Women in this Study and the McSweeney Studies**

<b>Authors</b>	<b>Sample (n=)</b>	<b>Data Collection-Timing</b>	<b>Findings related to Symptoms</b>
Allen (2016)	Hospitalized women, interviewed on <i>M</i> 2.65 days post MI (n=20), in telemetry status	Single interviews in private patient rooms, during hospitalization	Fatigue/exhaustion, shortness of breath, sweating/being hot, and chest pain. More than half of the women had some form of radiating pain.
McSweeney (2003)	Discharged women, four to six months post MI (n= 515)	Telephone survey, after discharge	Shortness of breath (57.9%), weakness (54.8%), unusual fatigue (42.9%), and cold sweats (39%). The symptom high/center chest pain/discomfort was present in (30.5%) of the women.
McSweeney & Crane (2000)	Discharged women, 1.75 months to 13 months post MI (n=40)	Telephone survey, after discharge	Chest sensation (65%), shortness of breath (55%), hot/flushed (52%), and unusual fatigue (45%).
McSweeney et al. (2010)	Discharged women, four to six months (n= 1270)	Telephone survey, after discharge	Shortness of breath, weakness, unusual fatigue, and dizziness.

### **Primary Appraisal**

When experiencing an MI, women considered the new symptoms to determine whether the sensations would impact them. Women in the study were aware they had new sensations.

These findings are similar to what Lockyer (2005) found. In semi-structured interviews (n=29), the researcher found that women struggled to correctly interpret their MI symptoms. In this study, some of the women had preconceived ideas of symptoms to expect when having an MI. They anticipated excruciating chest pain, radiating symptoms in their arms, and someone sitting on their chest. These findings support other research findings of symptoms women anticipated. In Schoenberg et al. (2003), the researchers interviewed 40 women that were older than middle-aged. Women anticipated the “standard” symptoms of stabbing in the chest and left arm pain when having an MI. In this study, women had an intuition that something was not right. These findings are similar to what Rosenfeld et al. (2005) revealed. Rosenfeld et al. (2005) collected data through semi-structured interviews with 52 women who experienced an MI and explored their decision-making process. When the women in the Rosenfeld et al. (2005) study realized they were having symptoms they “just knew” they were having an MI. In the current study, women could not believe (disbelief) they had an MI. The women were unaware they were having a heart attack. This was particularly challenging when the symptoms were intermittent.

### **Secondary Appraisal**

When having an MI, women experienced facilitators that helped them navigate their cardiac event. In this study, women maintained control in a variety of ways. Some called 911 for themselves, while others requested friends or family to call for them. The findings coincide with what other researchers have found. In the Rosenfeld et al. (2005) study, the qualitative study included 52 women who investigated the experience between MI symptom onset and the decision to seek health care. Researchers found that women and men would call others for help in seeking care. In the current study, the women used a form of positive communication. Women called their children, spouses and boyfriends to let them know they were sick and

needed help with care. These findings coincide with the results from other studies where some women contacted family members and friends when having an MI (Rosenfeld et al., 2005; Schoenberg et al., 2003).

Women may experience barriers to accessing health care efficiently when having an MI, which may cause delays in the urgent care they need. One barrier some of the women experienced was delaying seeking health care. A woman intentionally delayed her care because she did not have insurance, nor money for care, and she was worried the ambulance personnel and the hospital would not provide care to her. This finding was similar to the findings of Schoenberg et al. (2003), who found that women felt insecure because they did not have insurance to pay for the emergency room visit. Another barrier some of the women in the study experienced was failed communication. Women had opportunities to ask neighbors for help when having an MI, but they did not contact them. These results are similar to the findings Thuresson et al. (2007) revealed. The researchers found that only 18.9% of women experiencing an MI approached or contacted someone after the initial onset of MI symptoms. Another reason women delayed seeking care was due to commitments for other family members or loved ones. The responsibility for providing care for their families was more important to them than their own care. Women also delayed seeking care due to their own priorities. Women wanted to bathe, fix their hair and put on make-up prior to leaving for the hospital to get health care.

Additional barriers some of the women in the current study experienced were logistic challenges. An example pertains to the ambulance service in rural counties. As previously mentioned, women shared that the ambulance services in their counties have third party contracts, which may cause delays getting urgent health care. Also, the ambulances will take the women to the closest hospital, regardless of whether the women have physicians in a major city

in the North Texas area or prefer larger hospitals. The ambulance service may not honor their requests.

In some rural counties, another logistic challenge is the need to call the fire department, which then contacts the ambulance services for emergency care. This can cause a long delay in care. As previously described, a woman experienced a delay in urgent care due to an ambulance that was blocked by a train crossing the small town. The delay could have had a long-term negative cardiac outcome for the woman having the MI. These issues must be resolved to provide safe and quality care not only to women having MIs, but to anyone with trauma, surgical, or medical needs.

### **Coping**

Women used a variety of types of coping when experiencing an MI. In the study, women rationalized a reason for the symptoms they were experiencing. The findings were similar to the outcomes Higginson (2008) found. Women were inclined to attribute the symptoms to a general discomfort that was not cardiac in nature. In this study, women also self-medicated, attempting to alleviate their symptoms. Other researchers found similar outcomes in their studies. Thuresson et al. (2007) found that women took medication to attempt to relieve their pain prior to going to the hospital. During the coping phase, women in the study experienced facing mortality when having their MIs. The finding was consistent with Rosenfeld et al. (2005), who found that some women were afraid for themselves. Women in this study were praying and relying on faith when experiencing their MIs. Schoenberg et al. (2003) found that women had symptoms of uncertainty when having their MIs and were praying, among other activities, while determining actions to take.



Women in this study eventually asked for or sought help (seeking help) for health care. Other researchers found that women called a loved one, not emergency services such as 911, as a first level of care (Nymark et al., 2009). In the current study, women experiencing an MI were non-compliant and had stopped taking prescribed medications on their own accord. In this study, women having an MI took some form of control of the situation. The finding is similar to the outcomes Lockyer (2005) found. In a qualitative study using semi-structured interviews of 29 women, Lockyer found that women took control of when they planned to call for urgent care.

Women having an MI had some family member or friend (family/friend support) available to help them during the cardiac event. These findings are similar to a previous study indicating women contacted others for assistance or to talk to them when having an MI (Schoenberg et al., 2003). In the current study, women had a commitment or cared for others. The findings are similar to the outcomes from another study, Lockyer (2004). As previously noted, the researcher revealed that women would prioritize a family member or other loved one's care before their own, causing a delay in seeking their own urgent care.

Women experiencing an MI experienced some form of urgency during the cardiac event. In this study, women described the rapid and efficient care they received from healthcare teams, a doctor's office calling 911, and spouses. This included calling emergency services or even driving the woman directly to the hospital to expedite care. This finding was not in the reviewed literature and more information is needed to reveal the benefits of healthcare providers urgently accommodating women having an MI. Women may be more comfortable seeking care knowing the urgency and support they would receive when accessing emergency health care.

Women experiencing an MI intervened in some way to try to alleviate their symptoms. Women tried to self-medicate. These findings are similar to the outcomes Higginson (2008)

revealed. Ninety-two percent of the women in Higginson's (2008) study delayed seeking urgent care because they were attempting to self-medicate. In the current study, women experienced some type of a lack of urgency situation. This is similar to findings of Rosenfeld et al. (2005), who found that a woman had her friend take her in a car to the doctor's office. The women who were driven to healthcare facilities by their friends when having their MIs could have had a cardiac arrest in the car. In this study, women experiencing an MI endured some type of confusion during their cardiac event. A nurse performed an EKG and shared with the female patient that she was not having an MI. A few minutes later a physician confirmed the woman did have an MI, which he shared with the patient and her family. A confusing event such as this was not found in the previous research. In the current study, women having an MI experienced an episode of denial. This finding coincides with the outcomes of other researchers who found that women tried to rationalize their illness as a minor clinical issue when having a cardiac event (Nymark et al., 2009).

## **Outcomes**

**Emotional reactions** Women experienced emotional reactions to having an MI. The only woman that did not acknowledge any emotional reaction and had difficulty with recall was found unresponsive on her porch during her MI. Women described fear as part of their MI experience. This finding is similar to the findings in the Nymark et al. (2009) study, in which women described the feeling of fear when they felt their health was threatened. Caring for women with MIs needs to include not only physical support, but emotional support. Women with MIs should have a visit by a chaplain or a psychologist to assist them in navigating this challenging time in their lives. In this study, some of the women experiencing an MI had a sensation of panic at some time during their cardiac event. The descriptions of anguish and panic

were not found in other studies. Women having an MI were determined in some way and took the initiative to call for urgent health care for themselves or drove themselves to the hospital. Women had some reason to be grateful. These women were happy and content, grateful for surviving the MI. Emotions including gratitude, determination, and panic were not found in the literature that was reviewed.

In this study, women felt embarrassed sometime during their MI. This is similar to the Rosenfeld et al. (2005) finding. In her study, women were concerned that they would call an ambulance for what turned out to be gas pains and then feel embarrassed. In the current study, women having an MI experienced some challenge with being taken seriously. The finding is consistent with Harralson's (2007) research. In a qualitative and quantitative (mixed method) study of 48 lower income, urban women, Harralson found that 19% of the women in the study did not perceive the physician as being respectful of them. Women need to feel valued and respected in order to feel comfortable seeking health care.

Women having an MI experienced an event that produced some type of reluctant reality. These are the emotional outcomes women were left with after the initial crisis of the MI event. These thoughts usually occurred after the women had been in their hospital room and after the cardiac catheterization procedures.

**Other issues.** In this study, women had regrets from their MI experience. The topic of regrets was not mentioned in the literature that was reviewed. By addressing the regrets with other women, the stigma of each of these factors may dissipate and women will feel comfortable navigating their MI experiences. Women participated in bargaining when having their MI. Women expressed their positivity or hope during their cardiac event. More information is needed to evaluate the experience during the women's myocardial events. If women are able to

experience positivity or hope, it may prevent them from later developing some form of depression or fear. It is essential that women see that surviving an MI is a turning point in their lives, without resorting to living the remainder of their lives scared. As mentioned earlier, women had some type of commitment or priority which interfered with seeking care. The findings are similar to the outcomes of Schoenberg et al. (2003), who found that women prioritized their family and friend's needs over their own needs.

### **Additional Findings**

#### **Advice from the Women**

The women interviewed for this research study provided advice for other women who may also experience an MI in the future. In order of priority, they advised to listen to their bodies, go to the hospital for any changes that are not normal, do not wait to seek care if one is experiencing any type of chest discomfort or unexplained fatigue, and call 911 as soon as one realizes something is wrong. This advice may help prevent delays in seeking care in the future and may minimize heart damage.

#### **Breaking point**

Most of the women were able to identify a breaking point when they made a decision to seek health care. The women decided to seek care when their pain was unbearable. The findings are similar to other research studies. Nymark et al. (2009) identified a "turning point" of women experiencing an MI. The shift occurred when women were no longer able to comprehend or tolerate the changes occurring in their bodies. This information may be helpful for women who experience MIs in the future. By identifying a breaking point for women, the healthcare society may use this information to teach women and healthcare providers. The essential factors identifying the nuances women experience when shifting from a controlled situation to a health

care seeking situation when having a heart attack may assist these women. If women can learn to identify the breaking point quickly, a delay in seeking health care may be prevented. The precious time gained may prevent long-term chronic cardiac conditions or potential fatal outcomes in women experiencing an MI.

### **Misdirected Self-Diagnosis**

Women may not realize an additional new illness is taking place when an initial diagnosis has been declared. Women with respiratory infections sometimes believed their chest pain was associated with their respiratory illness. The women had three to five day delays before going to the emergency room for worsening chest pains. The delay in seeking further health care may have caused the women unnecessary cardiac muscle damage. More information is needed that may assist in identifying ways to prompt women to seek care when having a primary diagnosis evolve into an additional illness.

### **Misdiagnosis**

A young woman may have been misdiagnosed. She had severe chest pain, no flu or cold symptoms and was told she had asthma. Young women also have MI events and a misdiagnosis may cause women to have a chronic heart condition or result in a fatal mistake. Education for women and healthcare providers needs to include information that at any age, a woman is at risk for developing an acute cardiac condition. The rapid diagnosis of an AMI may prevent potential long-term (chronic) heart disease.

### **No Illness Appearance**

Women with stoic personalities may not exhibit excruciating chest pains. They may have a high tolerance for pain or this may be a cultural norm. The exemplar from this study was BV, who sat in the waiting room experiencing chest pain for an extended amount of time. The

nurse commented she did not present as the usual chest pain patient, even though BV was having an MI. Her quiet and calm demeanor may have resulted in a delay in care leading to cardiac damage. Healthcare providers must be educated to realize some women will not complain or voice concerns when infarcting. Women should also be educated that they must voice their pain so they may receive the urgent care they need.

### **Limitations**

Although women with MIs in all three hospitals were eligible to participate, the majority of patients experiencing an MI are admitted to the hospital that specializes in cardiac care. As a result, all the subjects were recruited from the cardiac care hospital. During the interview process, two women declined to be audio recorded. Although the researcher took notes during the interview, some data may have been lost.

Other study limitations included that the sample was comprised of only English speaking women, which was part of the inclusion criteria for the study. A majority of the women were White. The group of women in this study tended to be older, which is consistent with the findings of the American Heart Association (Mozaffarian et al., 2015). The American Heart Association revealed that women have heart attacks at an older age when compared to men. A few of the women did not have insurance, which is similar to the findings from the American Heart Association (Mozaffarina et al., 2015). The researchers found that 15.8% of women with cardiovascular disease risks did not have insurance which is similar with this study's findings of 10% of uninsured women. Another limitation is that the women could have experienced issues with recalling information regarding their MI experience due to physiological changes related to the MI. As mentioned earlier, one woman in the study did have recall problems. She was not able to remember the cardiac event because she became unconscious during her MI.

## **Implications for Female Myocardial Infarction Education and Support**

### **For Healthcare Personnel**

Healthcare providers need additional training in the care of women experiencing an MI. Paramedics, nurses, and physicians who provide care to women with potential cardiac events need education aimed at female MI events, including women's symptom presentations, interpretation of 12-lead EKGs, and long-term side effects of delayed cardiac reperfusion, which may cause chronic heart disease.

Twelve-lead EKG interpretation may be a challenge for some healthcare providers, as indicated by the women in the study whose diagnosis was missed based on EKG interpretation. Healthcare professionals need to recognize an ST elevation MI, but also know that not all MIs cause such an elevation. Women are more prone to having non-ST segmental elevation MIs (Mehta et al., 2016). Education for professionals should include the use of a rapid-interpretation troponin blood test that ensures a correct diagnosis or rule out a diagnosis for women with non-STEMI (MI) symptoms.

### **For Women and their Families and Loved Ones**

The American Heart Association started the Go Red for Women campaign in 2004 (AHA, 2016). The purpose of the initiative was to make women aware of heart disease. The campaign provides education and public service announcements and yet in this study, the women appeared to be unaware of the symptoms or events women experience when having an MI. Women interviewed for this study were unaware of the symptoms women experience when having an MI, indicating a continued need for health education in this area. Education regarding women having MIs should include the unique symptoms, accessing emergency health care, medications, and the importance of essential timely care to prevent chronic heart disease.

Women would also benefit from learning about the events and procedures to expect when seeking urgent health care, and ensuring women realize they need to seek urgent health care when experiencing an MI regardless of insurance status. During the education for women, social stigmas should also be addressed so women will feel comfortable accessing the urgent care they need. Such education can be provided in print and electronic media and made widely available in healthcare settings, such as patient care rooms, waiting rooms, and care areas within the hospital.

### **Implications for Healthcare Services and Systems**

The frustration of some of the women with the ambulance services they received indicates there may be a need to monitor the timing and efficiency of their service. In the study, women who lived in rural areas experienced delays in urgent cardiac care when they called for ambulance services. Smaller communities in rural areas may have ambulance services provided through third party contracts that involve communication triage systems that delay care to tertiary hospitals with advanced cardiac technology. This is unacceptable in light of the Centers for Medicare and Medicaid (CMS) guidelines of a “door to balloon” goal of 90 minutes to prevent permanent cardiac muscle damage (The Joint Commission, 2015). Insurance companies and government entities providing these services could request MI quality outcomes from ambulance services and tie them to reimbursements to the ambulance services.

To address the isolation that some may experience after an MI, a support program should be considered for a woman (or any patient) who is alone, without the support of friends or family when having a procedure or surgery. This program would focus on the patient and offer psychological support before and after surgery or procedures. The psychological and spiritual support could be provided by chaplains and volunteers.



Women without insurance may worry they will not get the urgent care they need when having an MI. There is a need for organizations in hospitals to raise funds to be able to provide cardiac care when a person does not have health care insurance. Part of these initiatives could include public service announcements to increase women's awareness of means of receiving needed care.

Television stations could consider having public service announcements with actual women who experienced an MI. The women should represent all ages and ethnicities and the commercial should be available in different languages.

### **Research Recommendations**

#### **Value of Phenomenology**

Phenomenological research is one method that may be used to study and understand the lived experience of human beings (Munhall, 2012). In this study women were interviewed regarding their experiences when having an MI. Descriptions included symptoms leading up to the MI and through the hospital stay. The women's actions and thoughts while at home contemplating a plan while experiencing the MI, and how they made decisions to seek care, were investigated. The women's interactions and communications with their loved ones were also included in the interviews. Women shared their spiritual thoughts, fears, and regrets during their cardiac events. A quantitative study would not have captured the nuances and the unique experiences of the women in the study. Using phenomenology, each woman's experience was reviewed and no patterns emerged in the study. There were similarities, but each woman presented with a unique situation. Healthcare providers need to keep an open mind when evaluating women who are having unique symptoms.

### **Future Research (all the way to the left)**

Research is essential for improvement in health care and the delivery of efficient cardiac care. Issues were revealed during the study, which would benefit from additional study. One limitation of this study was that the majority of the participants were White and spoke English. The need to include in studies culturally diverse women who speak other languages was supported by Logan (2010) who described the use of language translation lines in a large hospital system in the North Texas area. Her findings revealed the most requested (77.7%) health care translations were for Spanish. The second (15%) most requested translations were for languages from the Asian continent. Recommendations for more studies of additional ethnic groups and cultures are not unique to this study (DeVon et al., 2014; McSweeney, et al., 2003; McSweeney & Crane, 2000; O'Donnell et al., 2012).

In this study, several participants expressed spiritual support consistent with Christian religions. Researchers studying women's experiencing MIs should consider including women from culturally and religiously diverse backgrounds to increase the applicability of the findings. Studies that address the frequency and outcomes of medical interventions such as cardiac catheterizations and surgery across diverse samples could also provide new knowledge that would enhance the evidence in cardiac care for women.

Other possible factors to include in future studies include the effect of insurance coverage, prior weight loss, and geographic location. A recent study (American Heart Association, 2016) indicated an improvement in insurance coverage among persons with cardiac disease risks. Regardless of insurance coverage, women must feel comfortable seeking care when experiencing MI symptoms. The effects of bariatric surgery on cardiac outcomes was another topic raised by one of the women in this study who had an MI despite losing weight and

improving her health habits following bariatric surgery. Geographic location (urban versus rural) may need to be included.

### **Summary**

A phenomenological study was performed using a semi-structured interview process to investigate the lived experience of women having an MI and seeking healthcare, using the framework of the stress and coping theory (Lazarus & Folkman, 1984b). The 20 women were from the North Texas area and were cared for within three hospital settings with advanced cardiac technology. The women in the study also provided advice for other women who may experience an MI in the future.

### **Conclusions**

This study expands the knowledge of women experiencing an MI with regard to symptoms they experienced, support and coping systems, and health care treatment experiences. The study reveals that women have similarities when experiencing an MI, but each of their experiences were unique. No specific patterns were revealed in the study but information was learned about the women's symptoms, facilitators, barriers, and coping mechanisms. The benefits of the study may assist in providing information to improve the efficiency of women seeking urgent cardiac health care.

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**Appendix A**  
**Participant Description Form**

Initials or chosen name (Pseudonym) \_\_\_\_\_

- What is your current age?

\_\_\_\_\_ Years

- Are you pregnant?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

- What race/ethnicity are you?

\_\_\_\_\_ White

\_\_\_\_\_ Black or African American

\_\_\_\_\_ Hispanic

\_\_\_\_\_ American Indian or Alaskan Native

\_\_\_\_\_ Asian

\_\_\_\_\_ Other \_\_\_\_\_

- How long have you been wearing the heart monitor?

\_\_\_\_\_ Days

- Is this your first myocardial infarction?

\_\_\_\_\_ Yes

\_\_\_\_\_ No, If no, how many have you had previously? \_\_\_\_\_

- Relationship status: (Check which one applies best)

\_\_\_\_\_ Never married

\_\_\_\_\_ Married

\_\_\_\_\_ Divorced

\_\_\_\_\_ Widowed

\_\_\_\_\_ In a long-term relationship

- Do you live alone?

\_\_\_\_\_ Yes

\_\_\_\_\_ No, if no, who lives in the same house with you?

(Check all that apply)

\_\_\_\_\_ Spouse

\_\_\_\_\_ Partner

\_\_\_\_\_ Children

\_\_\_\_\_ Other \_\_\_\_\_

*These last questions are optional. Your contact information will only be used if the researcher needs to contact you to clarify anything from your interview.*

- Phone number \_\_\_\_\_

- Email address \_\_\_\_\_

## Appendix B

### BAYLOR RESEARCH INSTITUTE

Baylor University Medical Center (Dallas, Texas)  
Baylor Heart and Vascular Hospital (Dallas, Texas)  
The Heart Hospital Baylor Plano (Plano, Texas)

### PARTICIPATION EXPLANATION AND CONSENT FORM

**PROJECT TITLE:** “Women’s Experiences during an Acute Myocardial Infarction”

**INVESTIGATOR:** Dena Allen, RN, MSN, PhD (candidate), CCRN

**TELEPHONE NUMBER:** xxx-xxx-xxxx (home)  
xxx-xxx-xxxx (cell)

#### **INTRODUCTION:**

Before you say that you will be in this research study you need to read this form. It is important for you to understand all the information in this form. This form will tell you what the study is about and how it will be done. It will tell you about some problems that might happen during the study. It will also tell you about the good things that might happen to you during the study. When you read a paper like this to learn about a research study, it is called “informed consent.” The people who are doing this research study are giving you very important information about the study. When you give your consent for something, it is the same as giving your permission. This consent form may contain words that you do not understand. Please talk with someone from the research staff if you have questions. Do not sign this consent form unless all your questions have been answered and you feel comfortable with the information you have read. You will be given a copy of the form to keep.

You are being asked to take part in this study because you are a female that has been diagnosed with a myocardial infarction (heart attack).

#### **Why Is This Study Being Done?**

The purpose of the study is to learn how women who have had myocardial infarctions made decisions about seeking treatment. A myocardial infarction is the medical term for a heart attack, which may occur due to a lack of or inefficient amount of blood available for the heart muscle. This information will be collected by interviewing you one time.

#### **How Many People Will Take Part In The Study?**

Up to 20 women will take part at this location.



### **What Is Involved In The Study?**

If you agree to take part in the study, the researcher will review your medical record to confirm that you have had a myocardial infarction. No copies of information will be made.

You will be interviewed about your heart attack experience in the privacy of your hospital room. The interview will last about 60 minutes. You may request an extra 30 minutes for the interview if you have more information to share or something that you would like to clarify. You are welcome to have someone in the room during the interview if you would prefer.

The researcher will complete the interview. You will be asked for your permission to audio record the interview for accuracy purposes. Audio recording will be optional. In the case that you do not want the interview recorded, the researcher (or whatever you are calling yourself on the application) will take minimal notes during the interview and more extensive notes following the interview. You will select a name to be called during the interview. The audio recording and information sheet will be secured in a locked cabinet in a locked office in the nursing building at the University of Texas at Arlington. These documents will remain here for three years after the study. They will be destroyed after the three years. The audio recordings will be smashed and the documents will be shredded.

Accurately describing your experience with heart symptoms is very important. With your permission, the researcher would like to contact you later if there are any questions about what you said in the interview. You may also have additional information to add. This contact is optional. If agree to be contacted, the researcher will record your contact information, which may be by telephone or email based on your preference. The researcher may contact you within one month of the interview to clarify any questions. This is optional.

### **How Long Will I Be In The Study?**

You will be in the study for the one day that you are interviewed. If the interview is interrupted, another session will be set up to finish the interview. With your approval, the researcher may call or email you within one month of the interview to clarify any questions.

The researcher may decide to take you off the study if she feels that it is in your best interest, if you are not able to follow the rules of the study, if the study is stopped before it is finished or if new information becomes available that indicates it would be best for you to stop being in the study.

You can stop taking part in this study at any time. If you decide to stop taking part in the study, you should let the researcher or her staff know so that they can make sure you are safely taken out of the study.

### **What Are The Risks of The Study?**

Talking about your experience when you had your heart attack may make you sad or afraid. During the interview you are welcome to share any information you feel comfortable sharing.

There is a potential risk of loss of confidentiality, that you could be identified with your answers. Your made up name will be on the recording so measures are in place to prevent your name from being identified. The recordings will be placed in a locked cabinet in a locked office to prevent the recordings from being identified.

### **What are the Benefits and Options of The Study?**

There are no benefits to you for being in the study. We hope that what we learn in this study will help others with your condition in the future. Your other option is to not be in the study.

### **What If I am Injured While Taking Part in This Study?**

The people doing this research project will do everything they can to make sure you do not get hurt during the project. If you do get hurt, you should tell the researcher or his/her staff and they will help you to get necessary medical care. You or your insurance company may need to pay for the medical care. Baylor Health Care System, Baylor Research Institute, Baylor Heart and Vascular Hospital, The Heart Hospital Baylor Plano and Baylor University Medical Center have not set funds aside to pay you money if you are hurt. You have not given up any of your legal rights by signing this form.

### **What About Confidentiality?**

You have a right to privacy. This means that all the information about you from this study will only be shown to the people working on the study. The results of this study may be published in a scientific book or journal. If this is done, your name will not be used. All information about you from this research project will be kept in a locked office or other locked area. Information that is kept on computers will be kept safe from access by people who should not see it.

The privacy law requires that Baylor Research Institute get your permission before giving any of your health information to other people. There are people who need to review your information to make sure the study is done correctly. These people may look at or copy your information while they are doing this review. When you sign this form you give permission to Baylor Research Institute to give other people information about your health as needed for the research project. These groups include people who work for Baylor Research Institute (including the Institutional Review Board), the US Food and Drug Administration, the Office for Human Research Protections and the Association for the Accreditation of Human Research Protection Programs. This also includes the following groups of people who are working with the sponsor of the study: the researcher is a student at the University of Texas at Arlington. Dr. Jennifer Gray, Dr. Donelle Barnes, and Dr. Barbara Raudonis are professors working with the researcher. They will perform an audit to ensure the study is conducted and analyzed appropriately. Even though we usually remove your name from the information, the people who get this information may be able to figure out who you are. The kinds of health information that might be given to these people include results from the surveys you complete, notes from the doctor doing the research or other similar events.

You do not have to give this permission and it is all right to refuse to sign this form. Your doctor will still treat you and your insurance company will still pay your medical bills (according to their policy) even if you do not give your permission for us to release this information. However, since it is important for the people listed above to have access to your information, if you do not sign this form, you cannot be in the research study.

If you give permission to Baylor Research Institute to give other people information about your health and the other people are not part of the group that must obey this law, your health information will no longer be protected by the privacy law. However, we will take all reasonable measures to protect your information from being misused.

If you change your mind and later want to withdraw your permission, you may do so. You must notify Baylor Research Institute in writing at 3310 Live Oak, Suite 501, Dallas, TX 75204. If you decide to do this, it will not apply to information that was given before you withdrew your permission and you will no longer be able to take part in the study.

You may not be allowed to look at your health information during this study. However, at a later time, you will be able to look at this information. This later time will be sometime after the study is completed.

Unless permission is withdrawn, this permission will not expire at the end of the study.

### **What Are the Costs and Will I be Paid?**

There are no costs to you for being in the study and you will not be paid for being in the study.

### **What are My Rights as a Participant?**

Taking part in this study is voluntary. You may choose not to take part or may leave the study at any time. If you agree to take part and then decide against it, you can withdraw for any reason.

Deciding not to be in the study, or leaving the study early, will not result in any penalty or loss of benefits that you would otherwise receive.

We will tell you about any new information that may affect your health, welfare, or willingness to stay in this study.

All of the people working on the project must be careful not to carelessly harm you. If you are hurt during this project, you have the right to seek legal counsel. Nothing in this consent form takes away that right if you are hurt during this research.

### **Whom Do I Call If I have Questions or Problems?**

If you have concerns, complaints or questions about the study or have a research-related injury, contact the Dena Allen at xxx-xxx-xxxx or xxx-xxx-xxxx.

For concerns, complaints or questions about your rights as a research subject or if you simply wish to speak with someone who is not a part of the research staff, contact Lawrence R. Schiller, M.D., IRB Chair, at xxx-xxx-xxxx.

**Optional Agreement of the Participant to Allow Audio Recording of the Interview (please initial):**

\_\_\_ **I AGREE** to allow audio recording during the interview.

\_\_\_ **I DO NOT** allow audio recording during the interview.

**Optional Agreement of the Participant to Allow the Researcher to Call or Email for any Clarifications in the responses (please initial):**

\_\_\_ **I AGREE** to allow the researcher to call or email for clarifications.

\_\_\_ **I DO NOT** allow the researcher to call or email for clarifications.

**Statement of Person Obtaining Consent:**

As Principal Investigator of this study, I confirm that to the best of my knowledge this subject has voluntarily agreed to take part in this study and has had an opportunity to ask questions and has received answers to these questions. If another individual was responsible for obtaining informed consent, then this individual has signed above.

\_\_\_\_\_  
Signature of Principal Investigator

\_\_\_\_\_  
Date

\_\_\_\_\_  
Time

**Confirmation of Consent by Research Subject:**

You are making a decision about being in this research study. You will be asked to give your written consent if you want to be in the study. Giving consent is like giving permission. You should not give your permission to be in this study until you have read and understood all the pages in this form. If you cannot read, then someone can read the form to you. Make sure that all your questions about this research project have been answered before you sign this form. When you sign this form, you are giving your permission to be in the study. By signing this form, you have not given up any of your legal rights or released anyone from liability for negligence.

\_\_\_\_\_ has explained to me the purpose of the research project, the study procedures that I will have, and the possible risks and discomforts that may happen. I have read (or have been read) this consent form. I have been given a chance to ask questions about the research study and the procedures involved. I believe that I have enough information to make my decision. I have also been told my other options. To the best of my knowledge, I am

not in any other medical research. Therefore, I agree to give my consent to take part as a subject in this research project.

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Signature of Subject

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Date

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Time

**Interested in taking part in a research study?**

**Study Title:** “Women’s Experiences during an Acute Myocardial Infarction”

**Principal Investigator:** Dena Allen, RN, MSN, PhD (candidate), CCRN

My name is Dena Allen and I am a PhD in nursing candidate at the University of Texas at Arlington. My research interest is regarding women and their experience when having a heart attack. Women over the age of 18 that are not pregnant and have had a heart attack as the reason for this admission to the hospital may take part in the study. Women may take part in the study if they have had up to one previous heart attack prior to this hospital stay. My goal is to eventually develop a learning tool for women and healthcare providers that will promote women to seek healthcare in a timely fashion to prevent further heart damage.

The study is a 60-minute interview about your myocardial infarction experience. You are welcome to request 30 additional minutes of interview time if you would like. The interview will take place in the privacy of your room at the hospital and will be conducted by me. You are free to answer any questions you would like to answer or refrain from any you would like.

The study is voluntary (no obligation to take part) and there is no direct benefit to you for your taking part in the study. You may drop out of the study at any time.

If you are interested in taking part in the research study, please let your nurse know and I will meet with you to review the process with you. You are also welcome to call me directly if I can answer any questions for you. Thank you in advance for your consideration.

**Dena Allen, RN, MSN, PhD (candidate), CCRN**

XXX-XXX-XXXX

XXX-XXX-XXXX