

## Older Rural Women Moving Up and Moving on in Cardiac Rehabilitation

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### Abstract

**Purpose:** Cardiac disease often strikes without warning. Its sudden nature interrupts the lives of individuals and families. Recovery from cardiac events may take months or even years. Cardiac rehabilitation (CR) is an essential step in the recovery process. CR improves physical fitness and provides education for the reduction of risk factors for future cardiac events. Women are known to be under-referred to cardiac rehabilitation. Women are also under-represented in CR research, are less likely to attend CR than men, and may have worse outcomes than men. Little is known about the experiences of older rural women in CR. The purpose of this study was to describe and interpret the experiences of older women who lived in rural communities and attended CR.

**Sample:** A purposive sample of 10 women (ages 60-83) was recruited from three CR centers in Pennsylvania and New York. All women were residents of rural communities and had been discharged from CR.

**Method:** Participants were enrolled in a phenomenological study to identify the meaning of CR for older rural women. Interviews were audio-recorded, transcribed, and analyzed using van Manen's methodology.

**Findings:** Three themes emerged from the study: (a) companionship, (b) hospitality, and (c) accomplishment.

**Conclusions:** The women described CR as a program offering companionship in an atmosphere of hospitality to assist women in accomplishing their personal goals. The study has implications for nursing practice, education, policy, and theory development in rural nursing.

**Keywords:** Older rural women, Cardiac rehabilitation, Phenomenology, Companionship, Hospitality, Accomplishment

### **Older Rural Women Moving Up and Moving on in Cardiac Rehabilitation**

Cardiac rehabilitation (CR) is a program of exercise and education designed to (a) enhance physical and psychosocial health, (b) reduce risk factors for cardiovascular disease and its complications, and (c) promote healthier lifestyles (United States Department of Health and Human Services, 1995). The Centers for Disease Control and Prevention called for improved access to CR programs for those who live in rural and isolated counties (Barnett, Braham, & Halverson, 1998); improved physician guidelines and tracking of CR attendance; reminders for CR compliance, education, counseling; and research to identify those factors that may enhance the lifestyle modifications recommended in CR programs (Ayala et al., 2003). Women are less likely to be referred to, or attend, cardiac rehabilitation than men and are more likely to have their first myocardial infarction (MI) 10 years later in life than men (Barber, Stommel, Kroll, Holmes-Rovner, & McIntosh (2001). Women and older adults are under-referred to CR despite the fact that they are known to have a higher risk of subsequent complications and further disease (Spencer et al., 2001). Women are also underrepresented in CR research (Moore, Dolansky, Ruland, Pashkow, & Blackburn, 2003). The American Association of Cardiovascular and Pulmonary Rehabilitation (American Association of Cardiovascular and Pulmonary

Rehabilitation [AACVPR], 1999) recognized the need to learn more about the “risk-reduction regimens most likely to benefit women, and in particular, elderly women” (p. 6).

Factors that affect women differently than men include the presentation of cardiac symptomatology; cardiac risk factors such as age at onset, obesity and diabetes; mood, social isolation, physical fitness, level of disability, and physician referral, which tends to be lower in women (AACVPR, 2004). Quality of life (Gulanick, Gavic, Kramer, & Rey, 2002) and depressive symptomatology (Josephson, Casey, Waechter, Rosneck, & Hughes, 2006; Todaro, Shen, Niaura, & Tikemeier, 2005) may be worse for women than for men. Arthur, Wright, and Smith (2001) found that women were reluctant to share their stories and pain with others. Women may also perceive that their roles in the home are a higher priority than completing CR (Schou, Jensen, Zwisler, & Wagner, 2008). Rural women in Appalachia have had higher coronary heart disease (CHD) death rates than women elsewhere in the US (Barnett, Braham, & Halverson, 1998).

Rural dwellers encounter multiple issues that affect their attitudes about illness and health care as well as their ability to access health care (Lee, 1998; Lee & Winters, 2006). Women who live in rural places face time and distance issues when they must travel to CR programs (De Angelis, Bunker, & Schoo, 2008; King, Thomlinson, Sanguins, & LeBlanc, 2006; Harrison, & Wardle, 2005) while balancing responsibilities at home. The purpose of this research was to study the lived experience of CR in older women who live in rural areas. Developing an understanding of the lived experiences of older rural women who have completed cardiac rehabilitation will enhance the ability of nurses to assess, plan, implement, and evaluate individualized care for future patients.

## **Methodology**

Phenomenological study uncovers and defines the essence of an experience (Merleau-Ponty, 1956). We perceive the world because we live through the world (Merleau-Ponty, 1945/2006). Through phenomenological research, we identify lived experiences, describe them, and are not concerned with causal explanations or analysis. Phenomenological researchers understand that personal experience is absolute for each individual and may not be the same experience of another person. We give meaning to human experiences through activities such as remembering them, writing of them, discussing them and relating them to others (van Manen, 1990). Phenomenology is compatible with the nursing focus on the holistic care of the individual including “mind, body, and spirit....Just as caring for only part of the client is inconsistent with nursing practice, so, too, is the study of humans by breaking them down into parts” (Speziale & Carpenter, 2003, p. 65).

### **Design**

Hermeneutic phenomenology was the process used to explore the lived experiences of the women in the study. Hermeneutic phenomenology “links understanding with interpretation” (Plager, 1994, p. 72) that is critical to the practice of nursing. Van Manen’s (1990) method of research was employed to guide the process.

Van Manen (1990) described phenomenology as reflective. We cannot have an understanding of a lived experience if we are living in the midst of the experience. Through our reflection and description of the experience, we attempt to search for the essence of the experience and to have a more complete and in-depth understanding of the experience and its meaning in our lives. We “become more fully who we are” (van Manen, 1990, p. 12). In order to

capture the reflective experience, participants were interviewed a minimum of two weeks after they were discharged from CR. Interview transcripts became the data that were used for analysis.

Van Manen described his research methodology with six essential steps that are dynamically intertwined. Briefly, the six steps are:

- (1) turning to a phenomenon which seriously interests us and commits us to the world;
- (2) investigating experience as we live it rather than as we conceptualize it;
- (3) reflecting on the essential themes which characterize the phenomenon;
- (4) describing the phenomenon through the art of writing and rewriting;
- (5) maintaining a strong pedagogical relation to the phenomenon;
- (6) balancing the research context by considering parts and whole. (Van Manen,1990, pp. 30-31)

### **Setting and Recruitment**

Recruitment began in June, 2008 and continued through January 2009. Women were invited to participate if they had completed at least six weeks of Phase Two CR and had been discharged from their programs. Phase Two is an outpatient program that involves structured exercise electrocardiogram monitoring. All patients undergo a pre-exercise assessment that includes risk stratification based upon factors such as complications during and after the cardiac event, ejection fraction, congestive heart failure, and depression. Outpatient CR may last only a few weeks or sessions for clients who have a low cardiac risk, or it may last for as long as three months for clients who have high risk (AACVPR, 2004). All CR programs in this study were conducted by registered nurses. Participation in the study required an individual interview with the principal investigator (PI).

The study was conducted through three CR programs that served rural populations in Pennsylvania and New York. All programs participated in a local network of CR programs. Each of the program sites was supportive of the research process and provided space for interviews with study participants. The PI contacted the women in the last week of the program to discuss the study and interview requirements. Interviews were scheduled with women who were interested in the study.

Participants were given their choice of interview locations in order to overcome some of the barriers to participation in rural research, such as travel expense (Morgan, Fahs, & Klesh, 2007). Five interviews were held in the CR facilities where the women had been patients. Four interviews were conducted in the homes of participants. One was conducted at a coffee shop that was convenient for that participant.

## **Sample**

The purposive sample included 10 female participants, age range 60-83. All women lived independently. Three women lived alone. Two women were employed full-time and a third was employed but did not specify if she worked full-time or part-time. Seven women were married and living with their spouses. The women resided in rural towns in Bradford and Sullivan Counties in Pennsylvania, and Tompkins County, NY. The definition of rural was a population density of <500 people per square mile (United States Census Bureau, 2002). Diagnoses for the women included coronary stent placement, myocardial infarction, angina, coronary artery bypass graft surgery, and aortic valve replacement. One woman was unaware of her diagnosis. Two women had MIs and stents during their CR and were re-enrolled in the program. Both of those women had CABG surgery prior to having the MI. One woman had also received CR many years ago. Medical records were not reviewed and all data were self-reported.

## **Protection of Human Subjects**

Approval for the study was obtained from the Binghamton University Human Subjects Research Review Board (Protocol Number 777-08) and the Guthrie Health Institutional Review Board (IRB Number 0802-03). All women selected a fictitious name for the study. The names of all participants, nurses, hospitals, and towns were changed in the collection, analysis, and reporting of data.

## **Data Collection**

Whitehead (2004) suggested having one question to start each interview. The primary question for this study was, “Would you please tell me about your experience in cardiac rehabilitation?” Other questions followed, as needed, for clarification or to stimulate discussion. Reflective questions were asked in order to clarify meaning. All interviews were tape-recorded and conducted by the PI. Having one investigator for a study with multiple sites reduced the complexity of the study (Marshall & Rossman, 2006) and facilitated the opportunity for the investigator to establish rapport and trust with the participants (Truglio-Londrigan, Gallagher, Sosanya, & Hendrickson-Slack, 2006).

## **Data Analysis**

Recordings were transcribed and entered into the Atlas.ti (Atlas.ti 5.2 Scientific Software, 1993-2009) data base. Initial coding was completed, reviewed, and analyzed for meaning. Transcripts and recordings were reviewed on multiple occasions in order to facilitate understanding the experiences of the women. The process of listening, writing, reading, listening to the language, and theorizing about experiences is essential to van Manen’s (1990) methodology. The researcher attempts to describe a phenomenon with “a certain transparency, so

to speak: it permits us to ‘see’ the deeper significance, or meaning structures, of the lived experience it describes” (p. 122). Three themes emerged from the common experiences of the women: (a) companionship-we did it together, (b) hospitality-warm, friendly, fun, and safe, and (c) accomplishment-I did it!

### **Companionship - We Did it Together**

Companionship was described as a nurturing relationship between each woman and one or more persons during the CR class. All women described situations where other people were present and helped them with some aspect of CR. Women met others who supported and challenged their perceptions of health and encouraged recovery. For some women, the stories of families and friends added to the sense that the women were supported, or surrounded, by their companions in life. In some cases, the companions required home care for which the women were responsible. The nurses also provided companionship in the midst of other nursing activities. Interestingly, none of the women reported continuing relationships with other CR clients after graduation.

Jean completed CR twice. Companionship was a central theme in Jean’s story. She enjoyed all the people she met and able to exercise while she socialized with her classmates. Jean’s husband was a companion who played a crucial role in Jean’s CR experience by driving her to class.

I did enjoy it. I missed it when I wasn’t coming. And, uh, everybody was great. And it was fun on the machines when you had somebody next to you. You visited and you still worked away and I, I really liked it....‘Cause you got to know them all. I knew people from, met people from Smallville that I never even knew.... Everybody just seemed to have a good time.



Isabelle came to CR in very poor physical condition after a long and arduous recovery from surgery. She did not want to come to CR and wept at the thought. She was further dismayed to learn that she had to go three times a week. It took Isabelle a full five weeks to feel in control of her experience. Isabelle describes her experience on the first day with the nurse who stood by her as she began her exhausting CR sessions.

The first day was indescribable. I could hardly do anything, let alone just walk around the room. And then, when she [the nurse] wanted me to pedal a bicycle, I said, "I can't even crawl up on it." And she said, "I'll stand here with you." And she stood there.... It was very, very exhausting for me; the whole one hour. And, so, uh, then I thought, "Oh my gosh, I've gotta come back in a day and do this again. And I just really didn't think I could do it. I really didn't."

Being in CR with other people also gave Sammy an opportunity to look at CR and appreciate the experiences of other people.

Well, a lot of other people did it. And, if they can do it, I can do it...a lot of them are in a lot worse shape. You know, and they just do it, they just do it at their pace.

### **Hospitality-Warm, Friendly, Fun, and Safe**

The women spoke very positively of the CR nurses and the environments they created. Each woman came to CR with a different need. Some were in better physical condition than others. Some had never used exercise equipment and one was a skilled athlete. The nurses had the knowledge that provided a safety net for exercise and the positive attitudes to foster an environment that was conducive to an enjoyable experience. Hospitality was an enjoyable atmosphere that fostered mutual learning, respect, recovery, safety, and healing for the women.

Women felt that the nurses were able to answer any questions they may have. The women were also impressed when they watched the nurses care for other clients who had different problems. The nurses were credited with having positive attitudes that helped the women do their best while maintaining a home-like atmosphere. The nurses were encouraging and motivating. Each woman came to CR after an unexpected cardiac event. They had fears related to exercising, falling, having another cardiac event or even dying. CR was a safe environment to learn and exercise in an effort to maintain optimal physical and mental condition.

Sammy described the atmosphere that was set by her nurses. “The nurses, of course, they’re very, very good. They answer all your questions” and they create a program where people “were friendly and warm and so fun. So you enjoy, I enjoyed the people very much.”

Annette spoke of the benefits of exercise, exercise education, and the positive qualities of CR.

I liked going to the exercise classes....I really enjoyed the way they started one machine. And, then they actually teach you how to use the machines, because not everybody’s been to exercise classes....I’ve never even used a treadmill.

Helen provided an example for hospitality that reflects the atmosphere of hospitality that the women observed. Helen’s example is especially noteworthy as she was in better physical condition than most CR clients. CR for Helen was

certainly very nice and encouraging. People [would say], “Oh hi, how you doing,” or they would know a bit of each other’s health or family issues....You had a sense that people walking in with a smile and were greeted with a smile. So, it was nice.... And then, just once I got to know Sarah [the nurse], I really felt very confident there. And she, there was, you know, a substitute if she was away who was also, very mindful of everybody and keeping

track of us....I can do what she says and know that I'm safe.... one of the people we know... was having a lot of health issues other than just cardiac rehab. It was just kind of neat watching how she questioned him and worked with him and made suggestions, "Well, let's just back this off today" or something and, you know, just seemed to be totally tuned in to people, and uh. You know, even though I didn't think I had any of those kinds of things, it just made me feel like she was tuned in to me, too, to see what she was watching.

### **Accomplishment-I did it!**

Accomplishment refers to the achievement each woman realized after completing CR. The theme of accomplishment was echoed by the women regardless of how much physical progress had attained. Some women did not realize how far they had slipped into poor health. All women had a sense of accomplishment. The nurses were instrumental in helping each woman to identify her path to recovery. Nurses were providing direction, flexibility, and support. The women reported overcoming fear and persevering despite their hardships.

The women felt a sense of personal responsibility for taking care of themselves. They knew they needed to exercise in order to remain independent. The women overcame significant obstacles in order to attend CR. Mary needed to arrange for her daughter to care for her husband. Isabelle needed someone to drive her for a few weeks. Jean needed her husband to help her with the driving. Some realized that they had not been exercising as much as they should. Helen came to CR with a desire to know more about how to exercise safely.

Liz provided an excellent description for accomplishment. She had been told that she needed coronary artery bypass surgery but that she could not safely have surgery. She had to learn to manage her disease and symptoms with medication, lifestyle modification, and CR. Liz did not think she could complete CR.

Cardiac rehab - I thought I was going to die when I first went... Yes, because when I saw all those machines, and there was no way. I think it's called a treadmill, there is no way that I thought I could ever live to get on that because with that thing going and my feet trying to move that fast, and the one lady told me, she says, you have got to walk faster. So, you know, I'm \_\_\_ years old and I've always walked at this speed and I don't think I can pick it up much faster than what I'm doing right now. So, I told her [the nurse] so. But, you know something, at the end of my 12 weeks, I went on that machine all by myself, plugged it in, tilted it, and sped it up so that I could go a little faster, and by golly I did it. And I think Cardiac Rehab is a wonderful thing for anybody.... Don't complain if you're older, you CAN do it. It takes a couple weeks to get used to riding a bicycle again, but believe me, it all comes back to you, you don't forget those things.

### **Phenomenological Description of Cardiac Rehabilitation**

Phenomenological description allows an experience to be recognized, understood and tangible. Merleau-Ponty (1945/2006). When writing the stories of the women in this study, it was most crucial to capture and name the essence of the experiences in order to understand the experience (Gadamer, 1975/2004). The essence of cardiac rehabilitation was described as companionship in an atmosphere of hospitality that allowed the women to accomplish their goals.

### **Trustworthiness**

Final member checking of the themes of companionship, hospitality, and accomplishment was accomplished with all ten women. All of the women agreed that the themes and essence of CR correctly described their experiences. Isabelle, who had a very complicated recovery from a horrific experience, was silent at first as each theme was read. After moments of reflection, her

response was, “Yes, yes, that’s it, very much so! Oh yes!” Rather than being sad at a reminder of her experience and the many obstacles she needed to overcome in order to simply survive, Isabelle thought that the themes put “a face on what I was going through.”

The title of this paper was selected by one of the women. All other women agreed that the title “moving up and moving on” accurately described how they felt about their experience in CR.

### **Rural Concepts**

The participants discussed a variety of issues that are related to concepts of rural nursing practice (Lee & Winters, 2006). All women had the characteristic of being old-timers in their communities. There did not appear to be insider-outsider, participant anonymity, or professional anonymity issues.

### **Work and Health Beliefs**

Sammy, Annette, and Helen remained employed during their time in CR. Each wanted to keep working and needed to arrange CR around work requirements. Liz, Cinderella, and Mary saw their work as related to caring for spouses and family members or home and property. Cinderella perceived a difference between rural women and urban people, specifically women, and the amount of work that needed to be done as a normal part of living. “I think rural women have more to do than city people.”

### **Distance**

Distance from the CR center presented the most problems for Annette. Annette was working full time and lived the farthest from her CR facility. She needed to rise at 5:30 in the morning for the long ride to CR and then return to her job. She had to stay late at her job to make

up the hours. Annette felt a tremendous pressure to keep working as she was the only one in the family who was employed.

For Liz, the drive was just part of everyday reality and was a reason to stay active and independent. As a long-time resident of her community, she drove to her job for 13 years at Hospital T and never encountered any difficulty. Liz was adamant about refusing the public transportation that was available.

But, then, if I come on [the bus] what does that look like? It looks like they sent the bus out for me....And, you know, I have to be honest with you. When I was younger, I used to call that the elder bus.

Cinderella indicated that she would not have travelled any farther than she did to CR. Her home was just under 10 miles from the CR program.

Mary discussed distance issues as they related to CR and other neighbors. The distance from other people contributed to a feeling of isolation. The distance from the CR program made attendance complicated as it required her daughter to take more time from work to be at home when Mary needed to drive to CR and exercise.

Jean lived about 10 miles from CR. She was not fond of driving and refused to drive in any amount of snow. Her husband helped and drove her to some of her sessions. She would have loved to stay in CR, but felt the driving in the winter was problematic.

Distance issues were complicated by the rise in gasoline prices. Gasoline during the initial recruitment of the study was around \$4.00 per gallon. The cost of commuting to CR could easily be seen as a burden for rural populations. During the early months of the study only two women were found between four CR centers in Pennsylvania and New York. It is conceivable that the cost of travel and winter weather were barriers to attendance and, therefore, recruitment.

## **Isolation**

Mary discussed isolation as an unfortunate aspect of her current life. She acknowledged that she and her husband moved to their home “30 years ago we were young and spry, like you, you know, we thought, oh boy, nothing would stop us.” But now, she found that she felt alone and isolated with the added burden of caring for her husband. When she had her MI, she was forced to leave him alone in the house for several hours until a daughter could get there. CR provided an outlet for Mary. “I enjoyed it. It got me out and got me moving; which I think is good. Especially when you’re like me and you’re tied down at home.”

## **Self-reliance**

All women in the study lived independently and maintained all their responsibilities. CR helped them to recover from their events. Mary and Cinderella knew they needed to be self-reliant in order to care for their husbands. Mary lived some distance from neighbors and two daughters. She described how important her physical condition was to self-reliance and the ability to care for her husband. Mary discussed the night that she had to call 911 for herself. The experience was a motivation for Mary to improve her physical condition in the hope that she would never have to experience such a frightening event again.

But it’s very hard, like when I had my heart attack, I couldn’t call her [her daughter] at work because she couldn’t come home. And, I didn’t know who to call, I called 911 and told him he had to stay there by himself until somebody could get to him....They took me away at two in the morning and my daughter didn’t, another daughter didn’t get up there until nine in the morning. It’s kind of a helpless feeling when they’re driving you away in the ambulance and he’s standing there alone, nobody to take care of him. I think he was little panicked. I wouldn’t want that to happen again....It’s kind of hard. I just figure it’s

something you have to do when you're, get down you have to pick yourself up.... I just don't like leaving him alone.

Cinderella also provided care for her husband. She lived in an apartment in the same house as a son and his family. That did help. However, she did report that there were many burdens that often fell to her, especially when the other family members were at work and school. One of her responsibilities was to tend to the woodstove so that she and her husband had heat in the winter. CR helped her to be in better physical condition to address the many issues around the home.

I think once you've had a heart attack or something like that, you need something like this [CR]to strengthen yourself back up. 'Cause, if you don't, you take it and you go home and you sit in a chair and, you just lose everything. I didn't realize I was in such bad shape, until it happened, you know?.... I figured I was in pretty good shape. I was working all time, and moving around. I know I was getting so I was hurting more and more, but, I figured that was old age. The only thing I can tell you is you've got to look after yourself. That's the most important thing....You have lots of people to after yourself, but you have to consider yourself A#1....”

Liz discussed her life in the country and the fact that her children wanted her to move closer to them, perhaps to a senior living facility. Living rurally has made her “tougher,” especially in the two years since her husband died. Living on her own in the country was her choice and carried many benefits and responsibilities. The urban areas

have buses that come and pick you up and do everything for you. I wouldn't have my lawn to worry about. I wouldn't have to worry about my furnace. But, you know, it keeps you more on your toes to have a little something to worry about. So, I would recommend, you know, if you can, just keep going, watch yourself at all times.



## **Informal Networks**

The women in the study were fortunate to have informal networks of care outside of CR. These people were family and friends. The relationships with these people were crucial to their ability to get to CR and their motivation for completing the program. For example, Isabelle's perception of her recovery before CR was different than that of her family. Isabelle felt that climbing the steps and having access to her whole house was fine. Isabelle's son was instrumental in taking the next step.

I felt that I went upstairs on my own; that my daughter and granddaughter could leave me. And that was the beginning of my rehab. But, little did I realize, my son and, uh, daughter-in-law wanted me to go to rehab....But I said, "Oh, I don't need this." And, uh, they said, "Well, OK, we'll take it from here one step at a time." And one day Tim, my son, came in and said "Mom we're going to rehab." I cried. He did. He took me down. And he more or less told my story. And I said, "Oh, I can't come three times a week." I said, "I'm not even driving yet." I said, "I can't expect my family to bring me down here three times a week." And, he said, "You let us worry about that." So, very reluctantly, I started my three days a week and one of my grandchildren brought me down.

During CR, Isabelle resumed driving. She was able to do all home tasks with the exception of unloading groceries and carrying them up stairs. In order to accomplish that task, she left the trunk of her car open to signal to her family that she needed their help with the food. The family lived within sight of Isabelle's home and was able to come and assist.

## Meaning and Relevance

### Companionship: We Did It Together!

The theme of companionship was relevant and important to all the women in the present study. The women described the various companions in their CR experience in a way that is similar to the concept of socialization that has been discussed in the literature (Dolansky, Moore, & Visovsky, 2006; McSweeney & Coon, 2004; Visram Crosland, Unsworth, & Long, 2007; White, Hunter, & Holttum, 2007). Women tend to want individualized attention for their emotional concerns and the socialization aspect of CR. Dolansky et al. (2006) made an interesting suggestion that CR nurses try to pair women at the end of their CR programs with women who were new to the program. Isabelle described this process when she met a woman who had also received an aortic valve replacement. She felt a special bond with the woman and started an informal mentoring for that woman advising her to not be as “stubborn” as Isabelle perceived she had been. When I mentioned to Isabelle that she had become the teacher, she seemed surprised and reflected on her accomplishment,

Well, I think was hoping that maybe somehow, I encouraged her. Because, I too, did not feel like it was going to happen. That I would never, ever get out of this situation. And here I am, I drove down here to see you!

Day and Batten (2006) reported the perception of a woman who felt isolation amidst other CR clients because she did not feel that she had a similar experience as other clients. Dolansky et al. (2006) reported that a client did not like exercising next to someone who was outperforming him. Visram et al. (2007) suggest that women may want to have their own exercise groups. These comments serve as reminders that nurses need to know and understand each individual. There may be opportunities to connect people in CR better by utilizing schedules of classes or

equipment. Interestingly, none of the women reported a desire to maintain personal contact with the other women in the CR classes.

### **Hospitality: Warm, Friendly, Fun and Safe**

Hospitality is the “creation of free and friendly space where we can reach out to strangers and invite them to be our friends...on many levels and in many relationships” (Nouwen, 1975, p. 79-80). CR presents a unique opportunity for nurses to engage clients in open and friendly settings over a period of months. Positive attitudes and creating a home-like atmosphere was very important for the women in the present study. The theme of hospitality very aptly describes the experience of the women.

White et al. (2007) described the need for “shared experience and understanding” (p. 282) for women who had been to CR. Their work described a profound need for interpersonal communication that can be fostered by nurses and other CR participants in an atmosphere of hospitality. Day and Batten (2006) made an observation that women thought they received more individualized attention in CR than they received in the hospital.

Both Mary and Cinderella remarked that coming to CR was a time for them to enter a different environment that did not have the pressures of their stressed home lives. Nurses in this study excelled at providing the atmosphere of hospitality described by Nouwen (1975). The women talked about the safety they felt to progress at their own rates while feeling safe. Liz also told us how her emotions changed from being angry with her CR nurse to finally understanding why the nurse was emphasizing increased exercise levels. The hospitality of the environment allowed her the time and freedom to make that connection.

### **Accomplishment: I Did It!**

Fleury and Sedikides (2007) made an important observation about the growth of self as CR participants moved forward in the program and away from the immediacy of their cardiac event. Participants grew in confidence that they were progressing and their level of understanding of themselves increased. The theme of accomplishment echoes this observation. Liz captured this change in attitude and self-efficacy when she described her transition from her start in CR where she was motivated by guilt to stay in the program.

The nurses were wonderful to me, and um, they were all trying so hard to help me and I was the one that was resisting. I mean, the machines were there, I was there, and I talked to other people. I met a lady that was, um, had just been 80, she had just turned 80, and she was there. And I thought to myself, what would people think if I don't keep this up. I mean, I can do it, it's gonna take me awhile, but I *can* [emphasis added] do this. And so I drove back and forth, 20 miles each way, and got to the point where, I just couldn't miss a class because it was very important. It was like when I was a kid going to school, I didn't want to miss anything so I was always out there in time for the bus.

Pâquet, Bolduc, Xhignesse, & Vanasse (2005) reinforced the importance of time in the recovery from an MI. When analyzing the stories of the women in this study, it was especially important to note the various accomplishments that they were able to make over a period of time and how meaningful those accomplishments became.

### **Van Manen's Existential Concepts**

The stories of the women in this study bring to life van Manen's (1990) discussion of the four existential concepts that ground human existence: (a) lived space, (b) lived body, (c) lived time, and (d) lived relationships (p. 101). Nurses, clients, and family members become part of

these concepts as they interact with each other through CR and the recovery of the women from the insults of cardiac disease. The goal of nurses must be to understand the complexities of the “human issues and concerns” (Benner & Wrubel, 1989)

**Lived space.** Space is a concept that can be described mathematically, measured, experienced, and felt (van Manen, 1990). We enter spaces, live in spaces, and are affected by the space that surrounds us. Consider how we might feel in a large outdoor space or the confines of a hospital room. The large outdoor space may invoke a feeling of wonder and freedom if it is associated with natural beauty. We each have perceptions of the space that are influenced by our past experiences. The confines of a hospital room may invoke fear of illness and suffering. Jean and Isabelle both described these feelings when they described experiences in the cardiac catheterization laboratory, for Jean, and the intensive care unit and helicopter, for Isabelle. For Liz, on the other hand, the hospital was a place where she was surrounded and supported by friends. She had worked in the hospital for many years. She knew, and handpicked her physician. She spoke fondly of her experience.

Dr. X. came in and visited with me and she said, you always said that um, if anything happened you wanted me to do the surgery, well, here I am. That was what she said when she came into the room. And everybody was just wonderful. The whole team came in to visit me. As I said I had worked at the hospital, so, they just figured they had me now, you know.

CR is conducted in rooms filled with different types of exercise equipment. The space may be overwhelming from the moment women enter the space. Sammy described her experience of the space. “It’s you know, like overwhelming when you first walk in.” Liz was equally emphatic with her description when she thought she was going to die” on CR machines.

The theme of hospitality that emerges from the stories describes van Manen's (1990) concept of lived space. Van Manen (1990) described the home as "a very special space experience which has something to do with the fundamental sense of our being....Home is where we can be what we are" (p. 102). The women in this study provided different descriptions of home in relation to CR. Joydan's said that the nurses "make you feel like you are at home, you know, there's to just, just to ah, be here, you know." For Helen, CR was a reunion of sorts that compared with "old home week." For Liz, CR changed from being a space where she was overwhelmed to a place where she felt compelled to go because it was important.

The nurses were wonderful to me, and um, they were all trying so hard to help me and I was the one that was resisting.... I just couldn't miss a class because it was very important.

It was like when I was a kid going to school, I didn't want to miss anything so I was always out there in time for the bus.

**Lived body.** All humans have an experience of the body. Merleau-Ponty (1945/2006) stated that we are "in undivided possession" (p. 112) of our bodies and that we know our bodies through our perception of "body image" (p. 113). We meet others in life through the presentation of our bodies. "In our physical or bodily presence we both reveal something about ourselves and we always conceal something at the same time-not necessarily consciously or deliberately, but rather in spite of ourselves" (van Manen, 1990, p. 103). We may feel differently when we are with others. That feeling may be positive or unpleasant.

The theme of accomplishment describes the change in lived body for the women. For example, the women in the study had to recover from their acute illnesses and adapt to life with bodies that were forever changed in some respect. Some women had intracoronary stents, some experienced myocardial damage, some had surgery, and all described some changes in their

bodies. Subtle change was described by Cinderella when she said, “I figured I was in pretty good shape. I was working all the time, and moving around. I know I was getting so I was hurting more and more, but, I figured that was old age.”

Isabelle made very interesting observations about her body as she learned to adapt to her new artificial valve. Her valve was a porcine, or pig valve. Isabelle referred to the pig and her frustrations with the pig that wasn't working.

I think that I was disillusioned that I didn't jump out of bed the day after surgery, of having that pig put in me. It didn't work.... I felt that the pig was working, you know, wasn't he doing his job?...I thought, you know, I've got this pig, and he'd better start working. 'Cause I went through a lot to get him in there.

Isabelle's perception of the pig changed after her completion of CR. She was able to return home to independent living, drive a car, and live in her home with her cat and the pig. And she described the post-CR pig, “I guess the pig is working.”

**Lived time.** Van Manen (1990) made a distinction between time that is lived and subjective, and time that is measured, or objective. Our perceptions of lived time are affected by our activities. Time includes “dimensions of past, present, and future constitute the horizons of a person's temporal landscape” (van Manen, p. 104). The women in the study experienced an interruption in their lives when they required care for cardiac problems. Participating in CR poses a significant addition to the time required to recover from the cardiac event. The women made references to the time of day they needed to (a) report to CR, (b) the amount of make-up time required at work for Annette; (c) the benefit of time away from care giving responsibilities for Mary and Cinderella; (d) time spent exercising with family or friends, for Sammy, Jean, Helen, and Cinderella, and (e) the time required to be able to see improvements in health and the time

required to re-gain control of one's life as in Isabelle's example. The theme of companionship describes the relational component of transitions from the past to the present and future. The theme of accomplishment provides a sense of finality for the lived time element of CR.

**Lived relations.** An essential theme of the women's experience was companionship: we did it together. The women reinforced this theme repeatedly through the study. All women felt a relationship with someone other than themselves. This is not to say that they made new or lifelong friends. They did, however, share an "interpersonal space" (van Manen, 1990, p. 104) with others that allowed them to be present to others and to experience others. Jean was an exemplar of the importance of relationships with others. She frequently described how being with others positively influenced her exercise habits during and after CR.

The women had significant relationships with their families that took on new meaning during their CR time. While most of these relations were positive, some were more stressed. Jean relied on her husband to drive her to CR. Annette's husband helped her to begin walking by driving her part of the way to or from work. Mary relied on her daughter to care for her husband. Many women exercised with family members during and after CR. Isabelle had two family members who moved in to help her during her recovery.

All women had positive and informative relationships with their nurses during CR. The nurse-client relationships represented key parts to each essential theme in this study. The nurses were instrumental in being with the women as they adjusted to CR and life after the cardiac event.

When we meet others, "we are able to develop a conversational relation which allows us to transcend our *selves*" (van Manen, 1990, p. 105). Liz spoke of her relations with the nurse who was pushing her to accomplish more.



The one that I used to dislike so much because she was always telling me, you gotta walk faster, you gotta take bigger steps, you gotta push, push, push. She was right! Even though I was against her, you know, in the beginning. But, she was right. I used to come home and I'd be mad at her.

Isabelle often spoke in relational terms about “the pig” as if it was a being that had let her down. She was finally able to see that the pig “was working.” Isabelle also spoke of her defining moment when she knew she could speak to another woman about her experience in order to encourage the woman.

And even though she had the mechanical one, she didn't have the setbacks that I did. And, uh, we would compare pains here and pains there. And uh, then we'd laugh at um. I said, “Oh, they'll disappear, you wait and see.” And so, uh, we connected with each other. Well, I think was hoping that maybe somehow, I encouraged her. Because, I too, did not feel like it was going to happen.

### **Limitations**

The study has a number of limitations. The sample included only Caucasian women who were > 59 years of age who lived independently. It would be realistic to expect that younger or urban dwelling women in CR would have different concerns. The study does not include issues or concerns of men, ethnicity, education, socioeconomic status, or women who may live in supported environments such as assisted living communities or nursing homes. The women in this study may also have cultural views and experiences that are not shared by women in other parts of the country. These limitations affect the transferability of the data. The fact that the women voluntarily consented to be in the study presented the possibility of selection bias and the fact that the experiences of the women does not reflect the experience of women who did not

complete CR. All women in the study reported positive outcomes, which may not be a reflection of the experiences of other women. The researcher in this study has had experience in CR and professional associations with all professional staff and sites that were discussed in this study. Every attempt was made to limit the potential influence of these associations.

## **Implications**

### **Future Nursing Research**

Further nursing research is needed to improve the CR experience for older rural women. Qualitative data adds a richness of knowledge and understanding that is needed in the area of cardiac rehabilitation. This is the only nursing study known to the author to utilize the method of phenomenology to examine the meaning of CR in older rural women. The study should be replicated in older men, older women who live in urban areas, and women of ethnic diversity.

Another area of nursing research would be to extend the benefits of CR to rural women who have significant risk factors for cardiovascular disease before they require intervention for events such as MIs. Some women in this study described how their physical health had deteriorated even prior to their cardiac events. Early intervention with CR or other nurse-led interventions to reduce cardiac risk may give women the proper environment and support necessary for effective risk reduction.

### **Nursing Practice**

Future research in the area of nursing practice must address the long term implications of CR and mental health outcomes on older rural women. The member-checking process in this study enabled the researcher to reconnect with the women after their CR discharge. None of the women reported any difficulties but a few did relate that they felt they were losing some of their physical strength because they were no longer exercising at the intensity levels used in their CR

programs. Arthur et al. (2001) found that women felt they needed time exceeding six months to fully “cope with the sequelae” (p. 27) following their cardiac events.

Doerfler, Paraskos, and Piniarski (2005) suggested that patients with a perceived lack of control over their cardiac symptoms had an increased risk for developing symptoms of post traumatic stress disorder (PTSD) months after experiencing an MI. While their study included more men than women, it raises concerns about the possibilities of PTSD in women, particularly those such as Isabelle and Annette who experienced horrific events and Mary, Zoie and Jean who experienced multiple MIs. Helen felt that anyone who had experienced an MI must be “scared witless.” Many of the women in the present study reported being more in control of their lives after CR.

### **Nurse Education**

CR would provide an excellent learning opportunity for nurse education. Nursing students would certainly gain from the insight of the women and their experiences of a cardiac crisis. Nursing students would also gain knowledge of the differences between hospital care in a crisis and the advantages of CR that is exemplified by companionship, hospitality, and the accomplishment of the clients. Graduate nursing students would be ideally positioned to conduct further research into the benefits of CR for older women in all communities.

### **Policy**

Zoie raised an important policy issue that has implications for all older adults who reside in senior living facilities.

I likes the nu-Step. I’ve been thinking about those I could get one into [the residence] here because it is much easier to use than the bike and less stressful than the treadmill....Our problem here is insurance. If you brought a Nu-Step into [the residence], [the residence] is

responsible for it. And, if somebody got hurt on it, or whatever. And, there's no easy way to have supervision. So, I don't know, I suppose it will never work.

Austin, Johnston, and Morgan (2006) reported similar obstacles when working with a community garden project at a senior center. The garden project was to provide an opportunity for exercise, community building, and improved nutrition for the participants. Multiple obstacles related to ground use and liability needed to be overcome before the successful program was initiated. Nurses must be advocates for safe exercise opportunities for older adults living in all circumstances.

### **Nursing Theory**

CR presents an opportunity for older rural women to improve their lives by promoting lifestyle changes to reduce the risk of future cardiac events. Nurses must generate or identify theoretical frameworks that enhance the delivery of CR for all women in culturally competent, accessible, and affordable options. Replicating this study in other populations will help nurse researchers to define characteristics that are unique to rural populations.

### **Conclusion**

Cardiac rehabilitation provides an important bridge for patients who have suffered a cardiac event. The literature supports the need for CR to address physical, emotional, and social needs for both men and women. The literature supports the need for nurses to provide individualized care in atmospheres where clients can recover and gain perspective on their health and self-efficacy and knowledge for health promotion and the reduction of cardiac risk factors. CR can provide essential links, particularly for women, where clients become mentors for other people. The stories of the women in this study and the literature on CR support the themes of companionship, hospitality, and accomplishment that have become the essence of cardiac

rehabilitation for the women. Research CR is needed to explore opportunities to facilitate enrollment and completion of CR for older women who live in rural communities. The women in this study clearly demonstrated that CR was critical to their physical endurance and independent living.

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