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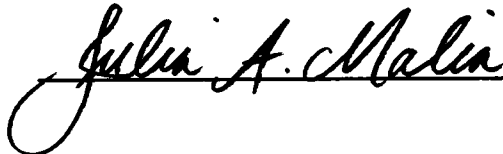
I am submitting herewith a dissertation written by James Gregory McGuire entitled "Self-disclosure and Coping Styles among Breast Cancer Patients and their Partners: An Exploratory and Descriptive Study." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Education.


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SELF-DISCLOSURE AND COPING STYLES AMONG
BREAST CANCER PATIENTS AND THEIR PARTNERS:
AN EXPLORATORY AND DESCRIPTIVE STUDY

A Dissertation
Presented for the
Doctor of Philosophy
Degree
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James Gregory McGuire

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DEDICATION

This dissertation is dedicated to my parents,
J.C. and Shirley McGuire,
for their lifelong love, support, and guidance.

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ABSTRACT

The purpose of this exploratory and descriptive study was to delineate the process of investigating the effects of breast cancer on self-disclosure and coping styles among couples. By delineating such a process and developing an instrument to measure self-disclosure among couples, this study provides the necessary protocol and instrumentation for future prospective studies. Information presented is based on a one year investigation and includes the following: 1) an overview of instrument construction and pilot testing, 2) facility selection and incorporation, 3) interactions between investigator, couples facing breast cancer, and medical and clerical personnel, 4) patterns of self-disclosure and coping styles among couples, 5) study obstacles and adjustments, and 6) an overview of the cognitive theory of stress and coping, which serves as the theoretical framework.

TABLE OF CONTENTS

CHAPTER	PAGE
1. INTRODUCTION	1
Statement of Purpose	4
Need for the Study	5
Definition of Terms	9
Summary	10
2. REVIEW OF RELATED LITERATURE	11
Breast Cancer: An Overview	11
Incidence and Detection	11
Treatment Options	17
Coping with Breast Cancer	23
Initial Impact	23
Effects on the Marriage and Spouse Support .	26
Coping Strategies	41
Self-Disclosure	52
Summary	56
3. METHODOLOGY	58
Sample Selection	58
Instrumentation	61
Medical Coping Modes Questionnaire	61
Self-disclosure Questionnaire	63
Data Collection	64
Statistical Procedures	67
Summary	68
4. INTERPRETATION OF DATA	69
Study Protocol	70
Facility and Personnel	70
Sample Selection	74
Data Collection	79
Interactions	85
Investigator and Personnel	85
Investigator and Subjects	89
Instrument Construction	91
Patterns of Self-disclosure and Coping	93
Demographics	93
Female Concerns	94
Male Concerns	97
Female Self-disclosure	99
Male Self-disclosure	100
Coping Styles	100
Correlation Between Variables	104

Suggested Research Questions and Statistical Procedures	104
Theoretical Model	109
Cognitive Theory of Stress and Coping	110
Cognitive Appraisal	111
Coping	119
Summary	122
5. SUMMARY, FINDINGS, DISCUSSION AND RECOMMENDATIONS	123
Summary	123
Findings	126
Discussion	127
Recommendations	130
6. EPILOGUE	132
REFERENCES	137
APPENDIXES	146
A. Consent Form from Knoxville Breast Center	147
B. Subject Demographics and Concerns	149
C. Medical Coping Modes Questionnaire	153
D. Self-disclosure Questionnaire	156
E. Surgeon Approval Statement	159
F. Consent Form for Patient	161
G. Consent Form for Partner	163
H. Approval Letter from KBC to Investigator	165
I. Daily List Form from KBC	167
J. Approval Letter from KBC to Surgeon	169
K. Overview of Study	171
L. Letter to Confirm Patient Participation	173
M. Cover Letter for Mail Administration	175
N. Patient Participation Form	177
VITA	179

LIST OF TABLES

TABLE	PAGE
4.1. Subject Demographics	95
4.2. Female and Male Concerns by Percent	98
4.3. Female and Male Self-disclosure by Percent	101
4.4. Male and Female Self-disclosure Mean and Standard Deviation (SD) Scores	102
4.5. Means and Standard Deviations (SD) for Coping Styles Among Couples	105
4.6. Correlations Between Variables for Males	106
4.7. Correlations Between VArriables for Females	107

CHAPTER 1

INTRODUCTION

Approximately one out of nine women in the United States will develop breast cancer (Cancer Facts and Figures, 1991). The detection of such a cancer is usually a traumatic experience for a woman (Barber, 1980; Baum, 1981; Love, 1991; Weitzman, Kuter, & Pizer, 1987) and can create difficulties within even the strongest marital relationship (Andersen & Jochimsen, 1985; Boyd, 1984; Derogatis, Abeloff, & Melisaratos, 1979; Gotay, 1984). Problems which arise are sometimes personally destructive and may force couples through times of marital disruption (Andersen & Jochimsen, 1985).

To be informed of the cancer, anticipate the enduring treatment, and confront the possibility of disfigurement or death will undoubtedly create trying times not only for the patient, but also for anyone closely involved with her (Glucksberg & Singer, 1980). Simply the mention of the word cancer often triggers fears and worries, thus setting in action a process that can have an overwhelming psychosocial impact (Boyd, 1984; Gotay, 1984). Fears related to the initial diagnosis of the cancer typically becomes a primary concern for the woman and her husband. This initial fear often develops into additional concerns regarding the

progression of the disease and the impending treatment (Gotay, 1984). According to Andersen and associates (1984), the increased anxiety will, in most cases, cause some type of adjustment problems for the woman and her partner. The desire for sexual intimacy, emotional closeness, and verbal communication is likely to fluctuate during bouts with cancer (Leiber, Plumb, Gerstenzang, & Holland, 1976).

The effects of breast cancer on couples will usually vary throughout the entire ordeal. The stressful effects recognized at initial diagnosis are very likely to differ from those created by the beginning of treatment (Boyd, 1984; Friedman, Baer, Nelson, et al., 1988; Funch & Mettlin, 1982; Northouse & Swain, 1987). Although the demand cancer places on a relationship is often centered around sexuality, it includes much more. Couples frequently experience changes in their desire to give and accept affection (Andersen & Johimensen, 1985; Leiber et al., 1976; Weisman, 1979), offering support and acknowledgement (Funch & Mettlin, 1982; Northouse & Swain, 1987), listening (Baum, 1981; Boyd, 1984; Leiber et al., 1976; Schover, 1988), or verbalizing feelings (Boyd, 1984, Leiber et al., 1976; Northouse & Swain). Women often feel they are misunderstood, feared, avoided, and pitied by acquaintances and relatives (Peters-Golden, 1982). In turn, a large percentage of women diagnosed with breast cancer will rely more heavily on their husband's support since it is, or at

least is expected to be, unconditional (Northouse & Swain, 1987). Regarding personal impact, women are repeatedly tormented by thoughts of a sense of mutilation and having less femininity (Jamison, Wellisch, & Pasnau, 1978). However, a strong marriage seems to have a buffering effect on such a pessimistic outlook (Wellisch, Jamison, & Pasnau, 1978).

Couples facing breast cancer will demonstrate various methods of dealing with this crisis. Common to all couples are attempts to develop a sense of control. To verbalize feelings and concerns (Andersen & Jochimsen, 1985; Baum, 1981; Leiber et al., 1976; Lichtman, Taylor, & Wood, 1987; Northouse & Northouse, 1987; Weisman, 1979) redefine roles within the family (Giacquinta, 1977), offer and accept affection (Boyd, 1984; Leiber et al., 1976; Northouse & Swain, 1987), seek information (Lewis, Ellison, & Woods, 1985; Meyerowitz, 1983) and take firm action (Glucksberg & Singer, 1980; Gotay, 1984; Jamison et al., 1978; Meyerowitz, 1983; Weisman, 1979) are productive efforts to eliminate this feeling of helplessness. Typically the one person who is able to relate to the concerns of the woman best is the husband. His offering an understanding viewpoint or reassurance of attractiveness can provide the necessary strength and motivation to effectively deal with the situation (Boyd, 1984; Gotay, 1984).

Because breast cancer is a multidimensional threat to a

woman, it may foster attitudes and prompt behaviors totally unknown to the marital relationship. Therefore, it is crucial for the couple to maintain open lines of communication and understanding (Schain, 1985). The couple must be tolerant and sensitive to each other's needs if they are to reestablish the level of functioning known prior to the detection of the cancer (Heinrich & Schag, 1987).

Statement of Purpose

The purpose of this exploratory and descriptive study was to delineate the process of investigating the effects of breast cancer on self-disclosure and coping styles among couples. The following issues and tasks were addressed:

1. A protocol for investigating the effects of breast cancer on self-disclosure and coping styles among couples.
2. The nature and characteristics of various interactions between investigator, subjects, and medical and clerical personnel.
3. The construction of an instrument that will determine levels of self-disclosure among couples.
4. Patterns of self-disclosure and coping styles which occur over time.
5. Appropriate statistical procedures for analyzing

the data.

6. Appropriate theoretical model to serve as a framework.
7. Study obstacles and adjustments.

Need for the Study

The initial diagnosis of cancer can create a state of alarm among all involved. The initial trepidation may persist for a prolonged period of time and often reveals many psychosocial considerations that must be explored to completely understand the difficulties of dealing with cancer. By becoming aware of the emotional instability often associated with the onset of cancer, health care professionals (HCP) can anticipate problems which may be experienced by cancer patients (Gotay, 1984).

According to Funch and Mettlin (1982), the information regarding multiple support systems and the relationship to the outcome of diseases is very limited. An understanding of this relationship would contribute to the health care field by assisting cancer patients in becoming more involved with social, professional, and financial support systems. Informing the patient of the support available and offering guidance into involvement would serve as a valuable aid to recovery.

Too often emphasis has been placed on the cancer

patient as the only one requiring help with distress and adjustment. According to Northouse and Swain (1987), both patients and their spouses could benefit greatly by receiving support from health care professionals who understand the complications caused by the cancer. Therefore, by examining the distress and other concerns of the husband in conjunction with the wife, health care professionals could understand the difficulties more completely, and then address the situation appropriately. In addition, according to Graydon (1988), a social support group which focused on the cognitive aspects of recovery would diminish the sense of hopelessness and estrangement often experienced by a cancer patient.

Health care professionals and married couples also need to realize how other cancer patients react in similar circumstances regarding post-treatment behavior. This would be beneficial in establishing a clinical intervention program to stabilize behavior once treatment began (Andersen & Jochimsen, 1985). According to Leiber and associates (1976), many couples facing cancer will have new desires for physical and emotional closeness. Therefore, becoming better acquainted with the impact of cancer would assist couples in addressing problems in the area of intimacy. Further, according to Derogatis, Abeloff, and Melisaratos (1979), studies to obtain knowledge regarding emotional reactions are necessary because the increased awareness

could lead to the design of psychological interventions. Such interventions would focus on emotions which are likely to be experienced due to the cancer, thus preparing the patient and concerned others for the impact.

In reviewing literature concerning communication and cancer patients, Northouse and Northouse (1987) cite feeling a loss of control as the major consideration for most cancer patients. This refers to the perceptions of the patient that they have no influence on the outcome of the cancer, thereby creating a sense of hopelessness. The reviewers suggest that the patient would maintain a greater sense of control if health care professionals understood these effects more completely. They could then offer intervention strategies, such as interpersonal communication skills and information programs, designed to minimize uncertainty and increase awareness of the potential effects of cancer.

There are many researchers who recognize the valuable contributions a study which is descriptive in nature can provide. According to Good (1954), descriptive studies are of great value in providing information on which professional judgments are made. This refers to establishing the foundations from which others may work. Descriptive research helps to develop the necessary instruments (Good, 1954) and offer "clues" for subsequent research (Simon, 1978). In essence, descriptive investigations are those studies which purport to present

the facts regarding the nature and status of anything. This may refer to a group of individuals, a set of conditions, a system of thought, or various types of phenomena which one may chose to study (Good, 1954).

According to Simon (1978), the descriptive study investigator will develop his own procedure as he goes along. He does not work within any specific limitations or set classifications. Simon (1978) admonishes, "Work objectively" when conducting descriptive research. This implies that the researcher should describe what is really out in the world and what could be observed by another. One should avoid filtering aspects of the study through personally subjective lenses. As Bogdan (1982) mentions, this is the process of finding out what becomes "common sense."

According to Babbie (1983), both exploration and description are two major purposes of research. These refer to providing a familiarity with a new topic. To explore an issue unstudied is to pave the road for future research. Exploratory studies are usually undertaken for four reasons: 1) to satisfy curiosity of the researcher and to develop a more complete understanding, 2) to determine the feasibility of conducting a more detailed study, 3) to establish the methods for a future study, and 4) hypothesis formulation. Exploration, therefore, is basically breaking the ground for future research. It provides answers to many complex

questions and reduces uncertainties for the next investigator. Description, being very related to exploration, refers more to the specific findings.

In summation, this study is both exploratory and descriptive. It is exploratory in that it will provide an outline of the process required to investigate the effects of breast cancer on self-disclosure and coping styles among couples. It is descriptive in that it will report on demographics, interactions, and patterns of self-disclosure and coping styles among couples.

Definition of Terms

For the purpose of clarification, the following definition of terms were established for use in this study:

1. Self-disclosure: the stating or displaying of attitudes, opinions, desires, or feelings representative of the true self to another individual (Jourard, 1971, 1974)
2. Coping Styles: the manner in which individuals deal with the problems, concerns, or fears associated with the development of a major life change.

Three types of coping responses are:

(A) Confrontation: when the patient deals with the medical condition in a direct manner.

This refers to asking specific questions regarding

advice, active involvement with decisions, talking with friends or relatives, and seeking knowledge.

(B) Avoidance: when the patient attempts to keep the medical condition away from conscious thought. This refers to involving oneself in activities or conversation to reduce or eliminate thoughts of the illness.

(C) Acceptance/Resignation: when the patient develops a sense that there is little or nothing more which can be done to improve or alter the situation (Feifel, Strack, & Nagy, 1987).

Summary

This chapter offers an introduction concerning the effects breast cancer may have on a marital relationship. Aspects such as fears, desires, treatment outcome, affection, support, and communication are discussed. Also included are the statement of purpose, need for the study, and definition of terms.

CHAPTER 2

REVIEW OF RELATED LITERATURE

This chapter will address various issues of breast cancer, including incidence and detection, treatment options, effects on the marriage, and spouse support. It will also provide a review and critique of the related literature regarding coping and self-disclosure.

Breast Cancer: An Overview

Incidence and Detection

Breast cancer will develop in one out of every nine women in the United States. There were approximately 175,000 new cases diagnosed during 1991 and the incidence continues to increase at about 3 percent each year. In 1980 the incidence rate was 84.8 per 100,000 women, and by 1987 it had risen to 119 per 100,000 (Cancer Facts and Figures, 1991).

Breast cancer is by far the leading type of cancer by incidence in women in the United States. However, it is not the leading cause of cancer mortality. Breast cancer, although it has over twice the number of cases, is actually second to lung cancer in total number of deaths caused by a specific type of cancer. Of the 175,000 new cases of breast

cancer diagnosed in 1991 there were 44,000 deaths, a number which has declined steadily over the past decade. A primary contributing factor in reducing the mortality rate of breast cancer is screening and early detection (American Cancer Society, 1986; Cancer Facts and Figures, 1991). Currently there are three primary ways to screen for breast cancer:

- 1) breast self-exam; 2) breast exam by a physician; and
- 3) mammography. The breast self-exam is a procedure which the woman follows to personally detect abnormalities such as a lump, swelling, dimpling, unusual discharge, or thick mass in her breast. This procedure should be performed each month by any woman over the age of 20 (American Cancer Society, 1986; Love, 1991; Weitzman, Kuter, & Pizer, 1987).

The breast exam by a physician is an examination by a medical professional familiar with breast cancer signs and symptoms. This procedure should be performed every three years from age 20 to 40, and every year after age 40 (American Cancer Society, 1986).

The mammogram is a breast X-ray. It uses low dose radiation to detect cancer in its earliest stages. Mammograms examine the soft tissue of the breast, which allows the radiologist to see anything unusual or suspicious (Weitzman, Kuter & Pizer, 1987; Love, 1991). This procedure can detect very small abnormalities. Lesions as small as one-half of a centimeter can be detected by a mammogram, whereas even the most experienced examiner usually cannot

feel a lump until it reaches at least one centimeter (Love, 1991). This is important because it may take a malignant breast lump two years to enlarge from one-half to one centimeter. If undetected at the one-half centimeter size, the cancerous cells have a greater probability of spreading to other areas of the body. Therefore, by detecting the abnormality prior to it reaching a size detectable by palpation, treatment can begin and significantly reduce the chances of metastasis (Love, 1991; Weitzman, Kuter, & Pizer, 1987).

The American Cancer Society (1986) recommends that a woman receive a mammogram once between the ages of 35 and 39 to serve as a "baseline", which is then used to compare with future mammograms as the woman ages and the breasts naturally change. Women age 40 to 49 should have a mammogram every one or two years, and women over age 50 should have one each year.

The mammogram is used to determine variations inside the breast. Although a trained radiologist will interpret the mammogram, all that is actually determined by this procedure is how much breast tissue there is, how much fat tissue there is, and if there are any abnormal areas of density (Love, 1991; Weitzman et al., 1987). Fat tissue, which is not very dense, will show up as gray on the mammogram, while breast tissue, which is very dense, will show up as white, or shadows. In addition, both cancerous

and benign lumps have the same density as breast tissue. So if there is a small white cancerous lump in the middle of dense breast tissue it will not show up on the mammogram because it will be hidden. However, if the same cancer is in the middle of fat tissue it will be very obvious as a white spot surrounded by an area of gray (Weitzman et al., 1987).

The breast of a woman in her teens and early 20's is comprised primarily of dense breast tissue and minimal fat tissue. By the time the woman reaches her mid 30's and 40's the breast is about half dense breast tissue and half fat tissue. After menopause, the breast tissue diminishes considerably and usually only a few strands of it remain. Therefore, the mammography is used primarily, and considered most useful, after the woman has reached her mid 30's because of the higher levels of fat tissue. There simply is not as much dense breast tissue to conceal any abnormality (Love, 1991; Oktay & Walter, 1991).

If a woman detects an abnormality through self-palpation, then a mammogram will usually be used to further determine the status of the abnormality. However, the mammogram may be the first means to detect an abnormality, as in a routine exam. In either of these cases, after the mammogram an additional assessment is necessary to accurately determine if the abnormality is malignant or benign. The second assessment is a biopsy (Love, 1991).

There are four different types of biopsies. Two are done with needles and two by surgically cutting open the breast. The first type using a needle is called a "fine-needle" biopsy, which is similar to a needle used for drawing blood. It is inserted into a suspicious area to draw a few cells which are then pathologically examined to determine the nature of the lump. The second type using a needle is called a "tru-cut" biopsy. This is a needle with a harpoon-like tip which is inserted into the suspicious area to cut out a very small piece for examination. Although still used, this type of biopsy is not performed as often as the fine-needle procedure (Weitzman et al., 1987; Love, 1991).

The first type of open biopsy is called the "incisional" biopsy. This procedure requires a surgical incision to remove a larger sample of a suspicious area for evaluation. This allows a more complete analysis of the area in question, as compared to the needle biopsy. The second type of open biopsy is the "excisional" biopsy and is the complete removal of a lump through minor surgery (Love, 1991). In regard to all of the biopsies performed on suspicious lumps, it has been determined that at least 70% are found to be benign. In women under the age of thirty over 90% are non-cancerous, and the chance of a lump being malignant in a postmenopausal woman is approximately 50% (Love, 1991; Weitzman et al., 1987).

Usually if a woman has a suspicious lump, a fine-needle biopsy is used to confirm the diagnosis. A lump is considered suspicious by such factors as the shape of the lump as seen on the mammogram, size and consistency determined by palpation, age of the woman, family history, and past experience with breast lumps (Weitzman et al., 1987). If the lump is diagnosed as cancerous through the fine-needle procedure, then an operation is scheduled to remove any of the surrounding area which may have been affected. On the other hand, even if the fine-needle biopsy is found to be non-cancerous, it is common practice to further confirm the negative finding by means of an open biopsy. This second confirmation is done because the fine-needle biopsy is, unfortunately, only considered very accurate when the diagnosis is positive. It is not unusual for women to be diagnosed with cancer from the open biopsy after being told the fine-needle biopsy is benign. Therefore, the open biopsy performed after the negative fine-needle results is strictly precautionary.

Currently when an open biopsy reveals a malignancy, thus implying surgery, it is usual procedure for the woman to go home prior to the actual surgery (mastectomy). This allows the woman a chance to prepare herself emotionally and also grants an opportunity to better understand treatment options. In the recent past it was common practice to do the biopsy, determine the malignancy, and then do a

mastectomy - all without the woman gaining consciousness. This was finally determined to be rather traumatic because the woman would go in for a biopsy and have little idea if she would wake up without the diagnosis of cancer or without a breast (Weitzman et al., 1987).

Following the biopsy, whether a "needle" or an "open" procedure, any cells or samples of a lump which were removed are examined at the pathology laboratory. The diagnosis as being malignant or benign is determined by the pathologists and reported back to the surgeon, usually within a few days. Regardless of whether the diagnosis of a lump is benign or malignant, the woman must make the final decision of what course of action to take. Of course, if the diagnosis is benign, the woman will have longer to decide and will not have to worry as much regarding her treatment. However, the woman with a malignancy will need to make a quick decision.

Treatment Options

Following the diagnosis that a lump is in fact cancerous and further treatment is necessary, there are crucial decisions which must be made. The woman, with the assistance of many others, must develop a plan of action to alleviate this ominous medical condition. According to Valanis and Rumpler (1985) the woman diagnosed with breast cancer has in the past typically followed all treatment recommendations of the attending physician. However, today

the woman is encouraged to obtain a second opinion and take time to consider all options, rather than act spontaneously while under the extreme pressure of receiving the news of the malignancy. In addition, women sometimes regret their treatment decision when made under high levels of stress, thus increasing the difficulty of post-surgical adjustment.

Usually the decision-making regarding the treatment begins with the physician discussing the results of the biopsy. Therefore, the physician will exercise a strong, but not exclusive, influence in the treatment option chosen by the woman. The influence of the media, the family and friends, and the personal resources of the woman as defined by her previous coping methods and her feminine identification will also play important roles in the decision made (Valanis & Rumpler, 1985).

Prior to treatment beginning it must be determined how well the body of the patient has taken care of whatever cells might have metastasized from the breast. This is considered the first step in treatment because cancer metastasizes through the bloodstream or the lymphatic system and it is very possible that the cancer has spread to other areas of the body. Although cancer in general can spread to practically any area of the body, breast cancer most often spreads to the lungs, liver, or bones. Therefore, tests are conducted to determine if the cancer has in fact reached any of these potential receptor sites. The tests consist of

chest X-rays, a blood test, and a bone scan. However, while these tests are effective in detecting large masses of cancer in these secondary areas, they cannot determine if cancer is in the initial stage in the lungs, liver, or bones (Weitzman et al., 1987).

In conjunction with the chest X-rays, blood tests, and bone scan, there are additional methods to determine if the cancer has spread. They include looking for conditions that usually occur when a cancer has spread. If these conditions exist it is assumed the cancer has spread; if they do not, it is assumed the cancer has not spread. The conditions which offer the best evidence that breast cancer has begun to spread include the following: a) a lump which is larger than 5 centimeters; b) swollen skin around a lump; c) a dimpled appearance in the skin around a lump; d) ulceration of the tumor through the skin; e) red and infected skin around the lump; and f) abnormally large lymph nodes in the armpit or above the collarbone. All of these conditions are called "grave signs" and strongly suggest that the cancer has metastasized (Lohr, 1990; Weitzman et al., 1987).

These tests are combined into a formal system called "staging". Using this system, people are grouped according to the extent of their disease. The most commonly used staging system is called the TNM system - initials for tumor, nodes, and metastasis. Basically it refers to how large the actual tumor is, how the lymph nodes in the armpit

feel, and the obvious visual signs. The following is a description of the four stages of the TNM system as presented by Lohr (1990):

Stage I	Tumor less than 2 centimeters (cm) in diameter and negative axillary lymph nodes.
Stage II	Tumor less than 2 cm in diameter and positive axillary nodes, or tumor greater than 2 cm but less than 5 cm in diameter with positive or negative axillary nodes, or tumor greater than 5 cm in diameter and negative axillary nodes.
Stage III	Tumor greater than 5 cm in diameter with positive axillary nodes, or tumor of any size with chest wall or skin involvement, or inflammatory carcinoma, or tumor of any size with fixed axillary nodes.
Stage IV	Presence of metastases to distant sites or organs.

The majority of women with breast cancer were diagnosed with stage I or stage II, which basically means they are responsive to treatment. Stage III will sometimes be responsive to treatment, while stage IV is usually incurable (Love, 1991; Lohr, 1990; Weitzman et al., 1987). According to Weitzman and his associates (1987), when breast cancer is discovered in its earliest stages approximately 90 percent of women can be cured; if the cancer has spread to the axillary lymph nodes this figure falls below 50 percent. In addition, the five year survival rate is 80 percent for stage I, 65 percent for stage II, 40 percent for stage III,

and 10 percent for stage IV (Love, 1991).

Treatment for breast cancer is divided into two categories: 1) local - which is treatment of the breast exclusively, and 2) systemic - which is treatment of the whole body. The local treatment consists of surgery and/or radiation, while the systemic consists of chemotherapy and hormone therapy. Common treatment options include such procedures as a mastectomy, with or without reconstruction, a wide excision combined with radiation, or chemotherapy and other treatments (Love, 1991).

Factors such as age, self concept, sexuality, and femininity will influence what the woman decides to do. For instance, an older woman may feel losing a breast, or perhaps both, is something she can tolerate, whereas a younger woman may choose long enduring drug treatments to avoid the loss of her breasts. Such an example is not to suggest that an older woman is necessarily more comfortable with breast removal, rather it is to show that each woman will have her own outlook as an individual and reasons for choosing a particular option. Another young woman may feel quite comfortable with the surgical removal of the breast, simply because she believes it is the surest way to eliminate the cancer. Such a woman is basically unconcerned with how men, or any other societal elements, perceive her outward appearance (Love, 1991).

Because this study is focused exclusively on the

effects of the diagnosis and the local treatment, only these options will be discussed. The local treatments include, from simplest to most complex, the following as discussed by Love (1991):

1. Partial Mastectomy and Axillary Dissection - this operation removes the lump and part of the surrounding tissue, and possibly some of the armpit lymph nodes, combined with postoperative radiation. Names that are used synonymously with this procedure are partial mastectomy, lumpectomy, wide excision, segmental mastectomy, and quadrantectomy.

2. Total Mastectomy - this operation removes the entire breast only; the pectoralis muscle and lymph nodes are not removed. The modified radical mastectomy is a variation which includes the removal of some of the lymph nodes.

3. Radical Mastectomy - this operation is the removal of the entire breast, pectoralis major and pectoralis minor muscles, and all of the axillary lymph nodes. Although this procedure is rarely done, there are situations where the malignancy has progressed to such a point that there is no alternative.

Although each local treatment option is frightening, each woman must deal with it in her own way. Using resources available to her, she will adapt to the best of her abilities. In addition, while each patient will react

differently to breast cancer diagnosis and treatment, there are many coping styles which are commonly recognized (Love, 1991; Weitzman et al., 1987).

Coping with Breast Cancer

Initial Impact

The detection of breast cancer is usually a traumatic experience for a woman (Barber, 1980; Baum, 1981; Love, 1991; Weitzman et al., 1987). The diagnosis and treatment can present major problems within even the strongest marital relationship (Andersen & Jochimsen, 1985; Derogatis, Abeloff, & Melisaratos, 1979; Gotay, 1984; Wabrek & Wabrek 1976), and difficulties which may have been totally inconceivable prior to detection of such a cancer can suddenly begin (Gotay, 1984). Problems which arise are sometimes personally destructive and often force couples through extended periods of marital disruption (Andersen & Jochimsen, 1985).

There are studies (Levine, Silberfarb, & Lipowski, 1978; Louhivuori & Hakama, 1979) which have reported that breast cancer is a highly distressing and emotionally threatening type of cancer, having a greater psychosocial impact than most other types. To be informed of the cancer, face the initial impact, anticipate enduring treatment and social rejection, and confront the possibility of death is

trying for everyone involved (Glucksberg & Singer, 1980). The diagnosis alone has an overwhelming psychosocial impact on the patient and her spouse (Boyd, 1984). Simple mention of the word cancer presents an antagonizing stigma which can distort fears and, consequently, perceptions of recovery (Gotay, 1984).

The fears related to the initial diagnosis of breast cancer are a primary concern for the woman and her husband. This initial fear often develops into additional worries regarding the progression of the disease and susceptibility to other types of cancer (Gotay, 1984). According to Andersen and associates (1984), the increased anxiety will usually cause some type of adjustment problems for both partners. The desire for sexual relations, physical closeness, and talking are all variables which are likely to fluctuate during bouts with breast cancer (Leiber, Plumb, Gerstenzang, & Holland, 1976).

With the diagnosis and thought of treatment, the desire to give and accept affection can also be adversely affected. The support and acknowledgment, which should be obvious, is vaguely present (Northouse & Swain, 1987), and coping styles can deviate from mutual concern to accommodating only individual interest and needs (Funch & Mettlin, 1982; Wellisch, Jamison, & Pasnau, 1978). In addition, because many partners fail to communicate openly, they only manage to increase the level of tension (Funch & Mettlin, 1982;

Northouse & Swain, 1987). Some women believe men become fearful of the cancer and its potential life-threatening course, therefore refusing to confront the issue with a mature and positive role (Andersen & Jochimsen, 1985).

According to Schover (1988), a man who is willing to offer an understanding and supportive viewpoint and a reassurance of sexual attractiveness can be considered the most important factor during the treatment phase. This also contributes to the successful return of the woman to activities she considers important, such as an active role in sexual relations (Andersen & Jochimsen, 1985), comfortably discussing any lingering fears, and interacting with others (Schover, 1988). However, Schover (1988) points out that men are not always as skilled in nurturing as they should be, and are sometimes unaware of how to react to the display of emotions that may appear following the diagnosis of breast cancer.

Because American society values youthfulness, optimism, courage, and independence, many women lose touch with their positive perceptions on life following diagnosis of breast cancer (Glucksberg & Singer, 1980). The breast serves a role in sexual attraction, maintaining self-esteem, and positive body image (Baum, 1981). Therefore, due to this powerful societal role of the breast, the occurrence of breast cancer will undoubtedly cause noticeable social, psychological, and emotional effects on the woman (Baum,

1981; Boyd, 1984; Glucksberg & Singer, 1980; Weisman, 1979). In addition, according to Gotay (1984) and Peters-Golden (1982), any variation to this part of the body is likely to cause personal discontentment as well as marital disruption, if not confronted properly.

Effects on the Marriage and Spouse Support

The effects of breast cancer on couples will often fluctuate from the time of the initial diagnosis until several months post-treatment (Boyd, 1984; Funch & Mettlin, 1982; Northouse & Swain, 1987; Friedman, Baer, Nelson, et al., 1988). Patients who may appear happy and content to the public, often have subclinical problems and emotional distress that persist long after the cancer has come under control. The breast cancer patient is facing the world, in her mind, against the odds of survival and acceptance. An image of a broken home, disintegrating friendships, stifled career goals, and lack of spouse support are just a few of the mounting concerns of a cancer patient (Weisman, 1979).

Regarding social support, Cobb (1976) suggests that it is the mediating variable to facilitate the self-esteem necessary to master a problem. This is considered crucial to the woman because her esteem, along with self-image, is often adversely affected following breast surgery (Burish & Lyles, 1983). This is especially true for those whom appearance and shapeliness have always been of great

importance (Bard & Sutherland, 1955). In essence, then, social support is any information leading the patient to believe that she is being cared for and loved, esteemed, and a member of a network of mutual concerns (Cobb, 1976). According to Vachon (1986), maintaining positive self-esteem is important because the breast cancer diagnosis is already a powerful blow to a woman's feelings of self-regard.

According to Holland and Mastrovito (1980) there are many factors which contribute to the adjustment of the breast cancer patient. The factors considered to be paramount are centered around the sociocultural and interpersonal environment of the patient. This involves primarily the partner of the woman. Accepting and positive responses from a partner after diagnosis of breast cancer is crucial in providing the woman with the security of being loved and esteemed. If such a response is absent, then the woman is likely to feel alone and deprived of a sense of security. In addition, other studies (Baider & De-Nour, 1988; Bloom, 1982; Revenson, Wollman, & Felton, 1983) show that the husband who is empathetic will play a pivotal role in the overall recovery of his partner.

According to Northouse and Swain (1987), the most significant other in regard to breast cancer is usually, or at least expected to be, the husband. The husband is essential to the effective style of coping for the woman because additional social support may be conditional. Many

friends or co-workers may accept the cancer patient provided none of their normal functions are placed in jeopardy. Therefore, due to the variance in levels of acceptance, many cancer patients continue to work or socialize without displaying true feelings. They are aware of the fear cancer symbolizes and how people can manifest reluctance to be in close proximity to the disease (Weisman, 1979) or engage in open and honest communication concerning it (Northouse & Northouse, 1988). In studies by Jamison, Wellisch, & Pasnau (1978) and Lindsey (1981), marriage was determined to be a strong predictor of adjustment because there was believed to be at least a measurable amount of support. Further, even if the support from the partner was lacking, it was considered better than facing the situation alone.

According to Vachon (1986), it is difficult to predict how significant others and the breast cancer patient will act toward each other. They may draw close in an attempt to provide support, or they may withdraw due to fear or uncertainty. In addition, not everyone requires or seeks equal amounts of social support during times of heightened stress. It is likely that each person associated with the cancer will go through periods in which they desire to be alone. Further, it is also not uncommon for emotional levels, for both patient and partner, to deviate within a short period of time.

In a study of 100 breast cancer patients regarding

perceptions of social support, Peters-Golden (1982) found that the patients often felt misunderstood (72%), avoided or feared (52%), and pitied (14%) by acquaintances and relatives. They explained that "being misunderstood" referred to inappropriate comments by others. The most prominent of comments were related to misjudged priorities. This refers to others directing their concern for loss of the breast, rather than the cancer treatment, recurrence, or general recovery. Patients (60%) also reported that, when they were visited by family or friends or met out in public, they experienced interactions that were sometimes falsely cheerful. Such a reaction provided only unauthentic optimism, which led the patient to feel separated and alone. Regarding the social support which was received, 33 percent of the patients in this study stated that they relied on no one, 22 percent said they relied on their husbands, 18 percent on a combination of family and professionals, 10 percent on religion, 8 percent on themselves, 5 percent on other cancer patients, and 4 percent on their doctors. Only 50 percent of patients assessed the overall support as adequate to fill their needs; 26 percent said their support was inadequate and 9 percent felt it was inconsistent. Another finding which is noteworthy is that the near unanimous (99%) primary concern of the patients was recurrence of the disease.

Although the Peters-Golden study does report worthy

findings, there are a few limitations which must be noted. Foremost is the combining of patients. Patients receiving breast surgery for the first time ($n = 43$) were compared to those receiving breast surgery for a recurrence ($n = 53$). Some women were facing breast surgery for the second time after having received additional treatment (chemotherapy, hormone therapy, and radiation) for an extended period of time (mean = 5 years). Such comparisons could offer a disparity of findings regarding social support and primary concerns if some women had been through surgical treatment and some had not. A second limitation is the fact that a considerable number of the women were unmarried. Of the 100 breast cancer participants, only 63 were married. This is certainly a factor influencing the reported low support from the husband.

According to Barber (1980), it is very important to develop motivation and help achieve an emotional stability for the patient in regard to everyday problems of living. The better adjusted the woman is within the familial system, the easier it will be to accomplish this motivation and stability. The primary person assisting the woman in establishing the emotional stability, if she is married, is the husband. If the husband does not actively participate, then the immediate family is usually cited as the most beneficial in the necessary assistance. Glucksberg and Singer (1980) concur with Barber (1980) that since emotional

stability is especially tested at the initial diagnosis, it is crucial that the couple retain the closeness of the marriage prior to the detection of the cancer. The couple is frequently unaware of how to properly confront the situation due to the degree of uncertainty which seems to be the foundation of all their concerns. Not sure of the immediate danger, the prognosis, and the effects on the marriage are only a few of the many worries for the couple. The couple has probably never faced anything as personally threatening and, to exacerbate matters, the impact experienced at the initial diagnosis will usually be influenced to a large degree by the state of shock which exists, thus disrupting rational thinking (Baum, 1981, Boyd, 1984; Glucksberg & Singer, 1980). According to Love (1991), this state of initial shock will usually last a few days before it subsides enough to where logical decisions can be made. Then the couple can begin coping with the situation in a more productive manner.

A study by Northouse and Swain (1987) revealed that both patient and husband experience high levels of distress during a cancer ordeal. Husbands often reported on the exhaustion they were experiencing. They also mentioned the added home responsibilities, spending time visiting their wife, and giving support to their wife as very distressful. In addition, although there was added distress, the duration and strength of the marriage prior to the diagnosis were

major predictors of a couples adjustment during the time of breast cancer. A strong marriage seemed to buffer initial reactions to the cancer, and ease the transition into treatment.

In a study by Wellisch (1985), the effects of breast cancer on the marital relationship were investigated. This study also reported that the status of the relationship prior to the cancer was a major factor in determining the effects on that relationship. If the couple had a strong history of coping well with highly stressful life-events, such as death and financial difficulty, then the effects of breast cancer on the relationship would be minimal, and not necessarily negative. Many couples actually develop an emotional rebirth and grow closer as a result of the cancer. They seem to enmesh in this time of urgency. Additional factors that were reported to determine the effects of cancer on the marital relationship were the following:

- 1) longevity of the marriage; 2) stage of the cancer and treatment required; 3) course of the cancer (that is, progressive or not); and 4) interpersonal skills available to the partners, especially the ability to empathize and communicate.

In a study which reported on the woman's perspective on the psychosocial aspects of mastectomy, Jamison, Wellisch, and Pasnau (1978) reported that women's coping skills are tested repeatedly by the thoughts of a sense of mutilation,

loss of femininity, and fear of death. The study consisted of 41 women who had previously had a mastectomy. The focus was on various aspects of the mastectomy procedure, emotional responses before and after the surgery, and perceptions of effects of the mastectomy on their relationship with their spouse. Used to assess these areas were the Locke-Wallace Marital Adjustment Test, the Rotter Locus of Control Scale (I-E), and the Eysenck Personality Inventory (EPI). In addition, each participant completed an eight page questionnaire of open and closed ended questions regarding the entire cancer experience.

The emotional adjustment after the mastectomy was reported by the women as excellent (60%), good (23%), adequate (7%), and not very good (10%). The primary sources of perceived emotional support were spouses and friends, with surgeons and staff reported as least supportive. More than 42 percent of the women reported that the worst time from an emotional standpoint was immediately after the lump was discovered. Other times mentioned as emotionally difficult were the postoperative period (15.8%) and the first two or three months after surgery (15.8%).

Also considered in the study were the levels of talking which occurred between the patient and spouse or significant other. The verbal exchange was rated as "little or none" by 89 percent prior to surgery, 87 percent while in the hospital, and 50 percent after returning home. This

reflects that discussion of emotional repercussions did not occur during the times mentioned by the women as emotionally stressful (that is, after finding the lump and immediately after surgery while in the hospital), rather it took place when the woman returned home. Finally, regarding overall coping, 71 percent of the women did indicate that their husbands reactions to the mastectomy were very understanding.

In another study, using the same sources for the population, Wellisch, Jamison, and Pasnau (1978) studied the man's perspective of the psychological aspects of mastectomy. The men in this study were the husbands of the women in the previous study (Jamison et al., 1978). The same procedures and psychological measures were used in both studies. Major findings from the male perspective revealed that the men viewed themselves as involved "to a very considerable extent" (56.6%) or "only very little" (43%). In retrospect, 23 percent of the men wished they had been more involved, while 73 percent said they would react the same. Generally the men indicated that sexuality and intimacy were areas responsible for considerable levels of stress. Regarding the influences of the mastectomy on the sexual relationship, 14.3 percent of the men rated it as "bad", 21.4 percent as "somewhat bad", and 57.1 percent as "no influence at all". This correlated significantly with the findings that the higher the evaluation of the

relationship, the less negative influence the men attributed to the mastectomy.

In both of the previously cited studies it was concluded that there were aspects to consider which could strengthen similar research efforts. First, a larger random sample with a varied socioeconomic and ethnic background would reduce bias associated with financial stability. Secondly, instead of using a retrospective design, a prospective technique with more sophisticated statistical techniques would serve to identify those individuals at high risk for adverse reactions to the breast surgery.

In similar reports, Peck and Boland (1977) and Andersen and Jochimsen (1985) discuss the initial shock of the diagnosis and how important the support of significant others, especially the husband, is to recovery. In each of these studies it was recognized that the breast cancer patient is confronting a situation which is personally destructive and, at times, embarrassing. However, the true catastrophe of the situation may come from the sense of isolation and rejection felt when friends and relatives maintain their distance. It is at such a time that an understanding and empathetic husband will be very beneficial in maintaining esteem and instilling hope in the woman.

The discomfort which surfaces among friends and relatives is often due to their unfamiliarity with cancer. Many feel they will not know what to say to the patient or

if what they say will be offensive. Others feel reluctant to approach the patient for fear of having to maintain an optimistic, cheerful masquerade. Some even have lingering unfounded fears of contracting the cancer. Such reactions from individuals who are expected to respond in a more supportive and caring role can be personally devastating to the breast cancer patient (Lichtman et al., 1987; Pederson & Valanis, 1988; Peters-Golden, 1982).

In a study by Leiber and associates (1976), the effects cancer had on the communication of affection among couples were investigated. The study included several types of cancer patients (various types of tumors, multiple myeloma, acute leukemia, lymphosarcoma, and others) where one partner had been diagnosed with cancer and was receiving chemotherapy. The instrument used was the Affectional Needs and Behavior Scale (ANBS). This scale focused on the participant's affectional needs and customary modes of expressing them, changes in affectional needs and behaviors since the onset of illness, and current major areas of concern. A total of 36 couples were used in the study.

Major findings revealed that 49 percent of the total sample felt protective of their partner with cancer more often than they had before the onset of the illness, while 42 percent reported no change. Of the patients in the study, 60 percent of the women and 40 percent of the men reported an increase in desire for nonsexual physical

closeness (hugging, sitting close, and holding hands). However, 60 percent of the women and 27 percent of the men reported a decrease in desire for sexual intercourse. In regard to "ease of personal conversations" between spouses, approximately 71 percent said the illness had no effect on the quality of the conversations; 21 percent reported they had become easier, while 8 percent felt conversations had become more difficult. Although this study offers an overview of various effects of cancer on couples, it presents a limitation worth noting. Simply stated, it contains too many diverse groups of cancer types to generalize a pattern of behavior to any one group. Since the study consisted of only 36 couples, the study would have been more credible had there been a larger population for each type of cancer.

For the woman who is diagnosed with breast cancer, it is the husband who is typically closest to her and has the greatest opportunity to have a positive influence throughout the crisis. Although husbands are usually supportive and understanding, the fluctuating emotions of the woman can create a difficult time of adjustment for both partners (Andersen, Karlsson, Andersen, & Tewfik, 1984; Leiber et al., 1976; Lichtman, Taylor, & Wood, 1987). According to Lichtman and colleagues (1987), the husband may respond in a nervous manner and feel to discuss the situation too much would hamper his wife's adjustment. Men often feel

reluctant to physically approach their wife for fear of rejection or hurting her (Meyerowitz, 1983), or simply not knowing how to communicate openly about such a situation (Pederson & Valanis, 1988; Northouse & Northouse, 1987). On the other hand, the woman may feel that the disease is an ongoing threat, therefore creating a need to express her fears frequently to feel comfortable with the situation (Lichtman, Taylor, & Wood, 1987). Although these male and female reactions do not always exist, such a contrast in fears, needs, and feelings are not uncommon (Lichtman, Taylor, & Wood, 1987; Northouse & Northouse, 1987).

According to Schain (1985), the woman facing breast cancer with an available, trusting, and respectful partner usually feels less threatened than the woman who is divorced, widowed, or single. These feelings exist because the woman with an exclusive partner has easier access to expressing her concerns and actually testing her negative or positive sexual feelings. In addition, some women, both married and single, actually will experience a period of hypersexuality. They become almost obsessed with having a partner who will respond to them with the love they crave during this time. If their husband is not responsive they may look elsewhere to receive the attention and comforting they desire, whether sexual or simple acknowledgment. Although not common practice, such behavior is probably a defense mechanism that keeps the woman active and distracted

from her femininity to reduce feelings of anxiety and depression.

Many exclusive partners of women who have lost part or all of a breast are reluctant to caress, or even view, the surgery site of the woman - even after the incision site has healed. This apprehension and uncertainty of how to respond can place unusually tight restrictions on the sexual aspect of the relationship. However, the blame for loss of physical closeness cannot be solely directed to the man. The woman, because she feels vulnerable, unattractive, and awkward may become non-revealing to her partner. She may dress in private or refuse to undress when having sex. Such disinterest in sexual closeness may also be viewed as a coping tactic used by either partner to avoid feelings about her body (Schain, 1985).

In a study by Heinrich and Schag (1987), the psychosocial impact of various types of cancer was investigated. The subjects were evaluated through interviews, questionnaires, and self-monitoring of daily activities. Instruments used to determine psychosocial impact were the Karnofsky Performance Status Scale (KPSS), which measures the patient's ability to carry on normal activities; the Symptom Checklist-90 Revised (SCL-90), a self-report questionnaire used in measuring anxiety and depression; the Physical Ability and Quality of Life Scale (PAQLS), which measures ability to perform physical

activities and quality of life before the illness and at the time the scale is administered; the Locke-Wallace Marital Adjustment Test, which measures satisfaction of marriage; and a Daily Activity Diary, a daily log kept for one week of all activities.

Findings revealed that couples currently dealing with cancer were more likely to spend more time at home with their spouses, and in passive, self-care, and maintenance activities as compared to healthy controls. The study also found that because of the age at which the cancer was diagnosed, the husband was the major source of support. This was a time when the couple was living alone, a time when the children were living away from home and retirement had removed them from social contacts at work. However, the vast majority of the patients remained satisfied with their marriage, regardless of the various problems which may have developed. While this study has findings worthy of reporting, there are a few limitations which should be addressed. First, although the focus is on life-threatening cancers (prostate, lung, and colorectal), subjects were approached an average of almost two years after diagnosis to determine the patient's ability to carry on normal activity. This allows more than sufficient time to adjust to a particular problem, even one as serious as cancer. Secondly, the study collected data exclusively from men with cancer. Although this gave results from the male patient

perspective, to include the spouse would have presented a more balanced viewpoint in regard to the effects on the marriage.

Coping Strategies

According to Weisman (1979) coping is "what a person does about a problem to bring about relief, reward, quiescence, and equilibrium". Coping is a process, not a mere set of isolated events. It combines the individual's perception, performance, appraisal, and correction, which is then followed by additional activity and directed motivated behavior.

When dealing with breast cancer, women will often go through psychological stages (Love, 1991). The first stage is shock. Most women cannot believe they have something as life-threatening as cancer, especially if they are fairly young. Together with shock, many women actually feel a sense of anger at their body for betraying them, and may become so alarmed that it creates irrational thinking. According to Kushner (1984), most women will think of saving their breast first, and then begin thinking about their lives.

In addition to shock, the most commonly cited reaction to cancer is denial (Meyerowitz, Heinrich, & Schag, 1983; Moos, 1986; Weisman, 1979). In fact, denial is so common that it is expected in such a crisis situation and actually

regarded as a natural occurrence. Most people who are faced with cancer and its implications will usually react by seeking a truce or use any available means to neutralize the perceived threat. Moreover, although people using denial are basically trying to temporarily mute the impact, it is considered a beneficial phase in the long-term coping process. Denial helps to revise or reinterpret the painful reality, thus assisting the individual to hold onto an image of what has been, rather than what will be (Weisman, 1979).

In a study by Katz and associates (1970), 30 women hospitalized for breast biopsies were interviewed. It was found that over one-third of the women were using denial. This was more than twice the number of any other coping mechanism identified by the researchers. In a similar study (Polivy, 1977), coping methods of breast biopsy patients and mastectomy patients were investigated. Findings in this study, as compared to the previous study (Katz, Weiner, Gallagher, & Hellman, 1970), revealed that only the mastectomy patients were using denial, as compared to the biopsy patients. Also, the mastectomy patients were very likely to maintain the sense of denial for several months following the mastectomy. The discrepancy between the two studies (Katz et al., 1970; Polivy, 1977) was probably due to differences in operational definitions for denial, differences in the aspects of well-being assessed, and/or differences in time intervals for the assessments. In

addition, other studies (Dansak & Cordes, 1979; Mastrovito, 1974) in which different types of cancers were investigated, also found that denial was the most commonly recognized coping mechanism, and determined to be very beneficial in long-term outcome. In a study investigating characteristics of quality of life in operable breast cancer patients, Meyerowitz (1983) reported that denial was the variable most closely related with post-mastectomy distress.

When a breast abnormality is detected, whether by self-exam or physician, a woman may refuse to consult a doctor for months or even years (Baum, 1981). Although 90 percent of all breast cancer is detected by the woman (Barber, 1980; Love, 1991; Weitzman et al., 1987), there remains a high number of women reluctant to confront a physician following the discovery of anything thought to be cancer. Reasons for the delay in seeking medical attention are numerous. Among the most cited reasons are fear of the diagnosis (Baum, 1981; Humphrey, 1978), ignorance about cancer, fear of disfigurement (Burish & Lyles, 1983; Moos, 1986), hospitals in general and surgery in particular, possessing a fatalistic attitude (Humphrey, 1978) and a general sense of uncertainty (Baum, 1981; Northouse & Northouse, 1988; Oktay & Walter, 1991). According to Northouse and Northouse (1987), cancer patients will not view their ailment as do other seriously ill patients, such as heart patients. The cancer patient often perceives the situation to be

progressive and not influenced by his or her physical and/or emotional behaviors. Consequently the cancer patient commonly develops a sense of helplessness and loss of bodily control. In addition, most people who are diagnosed with breast cancer are frightened, anxious, feel what is happening is unreal, and may even envision a slow and painful death (Glucksberg & Singer, 1980).

According to Moos (1986), any life crisis will set forth basic adaptive tasks to which a variety of coping skills can be applied. This begins with a cognitive appraisal of the significance of the crisis, also defined in the cognitive theory of stress and coping (Lazarus & Folkman, 1984). Moos (1986) states that there are five major sets of tasks encountered in managing a life crisis: 1) establishing the meaning and understand the personal significance of the situation, 2) confronting reality and responding to the requirements of the external situation, 3) sustaining relationships with family members and friends, 4) preserving a reasonable emotional balance by managing upsetting feelings, and 5) preserving a satisfactory self-image and maintaining a sense of competency and mastery.

The coping process outlined by Moos (1986) is very similar to that discussed in the theory by Lazarus and Folkman (1984). Moos (1986) organizes coping styles into three domains, each having three coping responses, according to their primary focus. The first domain is appraisal-

focused coping. In this domain the individual attempts to understand and find meaning in the crisis. The coping responses in this domain are: a) logical analysis and mental preparation, b) cognitive redefinition, and c) cognitive avoidance. The second domain is problem-focused coping. This refers to confronting the reality of the crisis by dealing with the tangible consequences and trying to develop a favorable situation. The three coping responses in this domain are: a) seeking information and support, b) taking problem-solving action, and c) identifying alternative rewards. The third domain is emotion-focused coping. In this domain there is an attempt to manage the feelings provoked by the situation and maintain some equilibrium. The coping responses in this domain are: a) affective regulation, b) emotional discharge, and c) resigned acceptance. In essence, these three domains focus on the meaning, the practical aspects, and the emotions involved in a life crisis, all of which are analogous to the focus represented in the cognitive theory of stress and coping (Lazarus & Folkman, 1984).

When considering how women will actually cope with the diagnosis of breast cancer, the immediate family, and the husband in particular, is usually viewed as the primary means of support (Moos, 1986). Actually, when a family member is facing cancer, the entire family is considered in a crisis (Giacquinta, 1977; Moos, 1986; Pederson & Valanis,

1988). Using this perspective, Giacquinta (1977) developed a model which outlines how families are effected when dealing with a cancer crisis. The model discusses the crucial stage of "living with the cancer". In this stage there are five phases: impact, functional disruption, search for meaning, informing others, and engaging emotions. The following is a brief description of each phase, including primary obstacles which create difficulties in the coping process:

1. Impact - is when the family members are initially informed of the cancer diagnosis. This can cause behavior such as withdrawal, anxiety, and agitation and the entire family may become unorganized. The main obstacle to overcome is despair. The family must recognize the effects of the cancer and work together to instill a sense of hope. If family members adjust and pull together with clearly defined role responsibilities, the entire family can dramatically reduce the non-productive behaviors and feelings of frustration.
2. Functional disruption - is after the initial impact and when shock is experienced to the point where commitments to role obligations are weakened. Due to the new demands of the illness and the hospital time, leadership in the family unit may be virtually non-existent. As the family members are forced to assume

new roles, there may be an obvious decrease in stability. The major obstacle to confront in this phase is isolation. This arises when members of the family are pulled away from each other and the normal familial interactions. Individuals often feel they are separated from any type of social support in their interaction, communication, and emotional involvement. The most beneficial way to combat this sense of isolation is to foster cohesion among family members through open communication and social and emotional involvement.

3. Search for meaning - is an intellectual attack against the cancer. Such things as seeking knowledge about the specific cancer and ensuring other members of the family that they are not susceptible to the cancer. Family members may seek explanations for the cancer by harping on the ill persons past lifestyle. The major obstacle to overcome in this phase is vulnerability. Family members must maintain a sense of security and personal identification and reflect this back to the patient.

4. Informing others - is making the decision to inform others about the cancer. Offering premature information to friends regarding the cancer can cause a "retreat" response from family members. This may occur because family members are unaware of how to answer

questions regarding the treatment or expected outcomes. Therefore, retreating is the obstacle to overcome. To do this it is necessary to reduce uncertainties and enhance cohesion by strengthening communication between patient, family members and physician.

5. Engaging emotions - is referring to the emotions which are revealed in a crisis situation. A fear of losing control is a major concern, and the primary obstacle to overcome is helplessness. Family members fear losing control because they are experiencing many emotions which stem from the cancer. It is important for the family members to realize that losing control occurs due to repressing feelings, not by expressing them. To reduce the sense of helplessness and loss of control, patient and family members must work together to regain values, goals, satisfactions, and positions of security which were disorganized when volatile emotions were allowed to surface.

In a study regarding communication and cancer, Northouse and Northouse (1988) identified major communication issues for patients and family members as a means to coping successfully with cancer. Many of the issues parallel those reported by Giacquinta (1977). The primary communication issues for patients were maintaining a sense of control, seeking information, disclosing feelings, and searching for meaning. The major communication issues

facing family members were related to concealment of feelings, gaining information, and dealing with helplessness.

In a study regarding the types of coping strategies used by families when the wife had a chronic illness, Stetz, Lewis, and Primomo (1986), reported different categories of strategies used to manage the situation. The primary management strategy used was "alterations in household management." This refers to the organization of efforts by the family members to control the crisis. As mentioned by Giacquinta (1977), this is an important first-line of defense in dealing with the cancer because it includes redefining roles within the home and offering support to the patient and other family members. Additional coping strategies reported by Stetz and associates (1986) were seeking assistance from outside the household family (discussing the problem with professionals and seeking spiritual guidance) and mobilizing the household family to take action (consider alternatives in roles, responsibilities and financial support). Additional studies (Lewis, Ellison, & Woods, 1985; Thorne, 1985) focusing on coping strategies of breast cancer patients also revealed that factors such as generating hope, role restructuring, creating support networks, and developing resilience were crucial in effectively combating the crisis situation.

In a study focusing on cancer in general, Gotay (1984)

revealed that more than one coping strategy was common among women dealing with cancer. The most common coping strategy reported in this study was taking firm action. This referred to becoming active in combating the cancer. "To not sit passively" was the attitude adopted by the patient. Although this was not an easy accomplishment, especially in the early stages, it represented that there was a good chance of overcoming the demands of the illness. Such patients had complete and open channels of communication with the family, spouse, and physicians. The patient was also involved in support groups, trying to learn more about the cancer, and was cooperative in all treatment procedures.

Additional coping strategies reported in this study were seeking more information, talking to self, finding something favorable about the situation, talking to others, seek direction from authority, praying or having faith, and denial. This study also examined, and compared, early stage (stage I & II) breast cancer patients to advanced-stage (stage III & IV) breast cancer patients. Results of this comparison were similar to the general findings, however, trying to forget (for early stage women), and living for today (for advanced stage women) were the two major differences in confronting the disease itself. In addition, whereas individuals will take actions to deal with their fears in early stages such as gathering information, taking physicians advice, or other activities, the later stages are

characterized by exhibiting more personal feelings with others and God.

The Gotay study (1984) offers valuable clues regarding the effects of breast cancer on couples. Although the study also investigated other types of cancer, it is comparable to the current study in that it focuses on the patient and her partner. The primary difference is that the current study is focused on the prospective process, rather than retrospective, affording an opportunity to report on the coping which occurs from the time of diagnosis throughout the treatment.

In a longitudinal prospective study of breast cancer patients, Heim and colleagues (1987) reported on the coping which occurred over time, beginning at the time of diagnosis. Using the Bernese Coping Modes instrument, 26 different coping modes were ranked by an observer. Each of the modes were classified as behavioral, cognitive, or emotional. The times for evaluation were: shortly after the diagnosis, preoperative, postoperative, 3 months, 6 months, 9 months, and 12 months. There were 58 women with breast cancer included in the study. Each had recently received the diagnosis of breast cancer and was scheduled for surgical treatment. This report includes only the results of the first six months.

Findings revealed that two coping modes were predominant in most situations throughout the six month

assessment. They were "attention and care", referring to social support received and various personal interactions, and "problem analysis", referring to clarifying the situation and coming to grips with identified problems. Additional coping modes which ranked high during the six months were "tackling", "acceptance", "diversion", and "dissimulation".

This study presented findings which reflected common coping modes over time, and results are worthwhile. However, to have included the partners of the patients would have supplied more insight regarding the two predominant coping modes (attention and care, and problem analysis). In addition, although the current study will be similar in methodology, it will go one step further and discuss the process required for investigating the patient and her partner over time, thus providing clues as to how each of the couple deal with the diagnosis and treatment of breast cancer.

Self-disclosure

Self-disclosure is the process of making the self known to others (Adler, 1980; Jourard, 1971; Jourard, 1974; Jourard & Lasakow, 1958). It is the act of communicating personal experience to others through words or actions (Jourard, 1974), and allowing the true self to be perceived

by others (Adler, 1980; Chelune, 1979; Jourard, 1974). In addition, according to Jourard (1974), in order for an individual to be understood completely, then the self must be represented in total truth. If an individual misrepresents the self through verbal lies and deceptive actions, then that person will be viewed by others in a false and misleading way.

According to Jourard and Lasakow (1958), the amount of personal information that a person is willing to disclose to someone else is considered to be an index of the "closeness" of the relationship. It is representative of the affection, love, and trust that exist between the couple. In other words, self-disclosure and the "cathexis" for the other person are strongly related. If an individual feels trust, confidence, and warmth from their partner, then they are much more likely to disclose in an open and honest manner.

According to Fitzpatrick (1987), many ongoing relationships exist through the illusions one has about their partner. There are exaggerations of similarity and expectations. For many, to disclose oneself fully would place the "self" in a vulnerable position, thus leading to possible rejection (Fitzpatrick, 1987; Jourard, 1974). Therefore, at least in the mind of some individuals, it is best not to disclose information about the self which is perceived as potentially non-acceptable (Jourard, 1974). Such individuals feel safe in not disclosing the true self

because it retains a sense of security. By not disclosing to another person is a way to keep any personal negative perceptions about the self or fears of rejection hidden. According to Cozby (1973), self-disclosure has three parameters: a) breadth or amount of information disclosed, b) depth or intimacy of information disclosed, and c) duration or time spent describing each item of information. Further, according to Chelune (1975), there are two other parameters in addition to those stated by Cozby (1973). They are the emotional or affective manner of presentation and the flexibility of the disclosure pattern.

Although self-disclosure has been investigated quite extensively in many areas, studies have been limited regarding the actual self-disclosure occurring between couples. In addition, since this descriptive study is concerned exclusively with self-disclosure between couples, only studies which are actually designated as self-disclosure will be addressed.

In a classic longitudinal study (Raush, Barry, Hertel, & Swain, 1974) of married couples, the reluctance to communicate openly and honestly was investigated. It was found that a sizable percentage of couples who reported themselves in happy and committed relationships were actually very likely to avoid unpleasant topics, lie about feelings, and disqualify their own or their partner's feelings. From this research, it was suggested that the

exchange of communication which served to maintain the relationship as functional, was not necessarily characterized by high mutual self-disclosure. The couples, then, were apparently doing what was necessary to keep the marriage stable, rather than trying to tap into the deeper concerns of their partner.

There are several self-disclosure instruments which have been created over the past few decades, all targeting different populations. Examples of previous instruments are the Self-disclosure Inventory for Adolescents (West & Zinger, 1969), the Social Accessibility Scale (Rickers-Ovsiankina, 1956), and an instrument designed by Vondracek and Marshall (1971) which targets self-disclosure among best friends. Although these have been designed for specific populations, the most commonly used self-disclosure instrument is the Jourard Self-Disclosure Questionnaire and was designed to assess individual differences in self-disclosure (Cozby, 1973). The instrument, initially described by Jourard and Lasakow (1958), consists of 60 items, 10 items in 6 content areas; namely, attitudes and opinions, tastes and interest, work or studies, money, personality, and body. To determine the level of self-disclosure, an individual will respond to each item by indicating the extent to which the information has been revealed to four targeted persons: mother, father, best opposite-sex friend, and best same-sex friend. The items

are scored as 0 (no disclosure to the targeted person), 1 (disclosure only in general terms), or 2 (full and complete disclosure).

In this initial study by Jourard and Lasakow (1958), there was an investigation comparing the self-disclosure of married and unmarried males to married and unmarried females. It was determined that there was no difference between married and unmarried subjects in total self-disclosure. However, it was found that there was more self-disclosure to the spouse than to any other target person (mother, father, best opposite-sex friend, best same-sex friend) by the married subjects. Therefore, marriage has an effect on the self-disclosure, not by increasing or decreasing the extent to which spouses disclose themselves, but by producing a redistribution of self-disclosure. In essence, the married subjects seemed to concentrate the disclosure upon the spouse, and became less disclosing to others. Finally, although there have been other instruments developed for specific studies, the investigation of self-disclosure between couples has been very limited.

Summary

This chapter provided an overview of breast cancer, including such aspects as incidence of the disease, detection methods, and treatment options. Also addressed,

and in regard to coping with breast cancer, are the impact of the disease, effects on the marriage and spouse support, and common coping strategies. The chapter also covers the related literature regarding self-disclosure.

CHAPTER 3

METHODOLOGY

This chapter is divided into the following topics: sample selection, instrumentation, methodological steps of data collection, and data interpretation.

Sample Selection

The sample for this study consisted of married or exclusively dating couples where the women was diagnosed with breast cancer and scheduled for surgical treatment. Both patient and her partner were equally involved in the study. Patients were scheduled for surgery at either the University of Tennessee Medical Center at Knoxville or Baptist Hospital at Knoxville. The criteria for participating in the study were: 1) the diagnosis of breast cancer, 2) scheduled for surgical treatment, and 3) married or in an exclusive dating relationship.

The women in the study were identified through a process which involved the Knoxville Breast Center (KBC). The process began with women who were evaluated at the KBC. The women scheduled their evaluations at the KBC for one of two reasons: either to receive a routine breast exam or to determine the status of a suspicious breast abnormality.

Following the evaluation at the KBC, the women were informed that they either required no further evaluation after the KBC, or that they required further assessment to confirm the possibility of a malignancy.

Women requiring no additional assessment were eliminated from the study. The women requiring further confirmation were scheduled for a consultation date with an attending surgeon of their choice. If unfamiliar with a surgeon, one was recommended by the KBC. In order for the investigator to know the potential candidates for participation in the study, a daily list was provided by the KBC of all women scheduled for further investigation. This daily list included the patient's name, address, phone number, and the consultation date with the attending surgeon. At the consultation visit, the patient was allowed an opportunity to discuss the situation with the surgeon as well as schedule a time to have an open biopsy. This open biopsy was performed to determine the exact status of the abnormality detected and to determine if extensive surgery was necessary.

Following the consultation date, and prior to the open biopsy, the attending surgeon's secretary or nurse was contacted to receive the date of the open biopsy which had been set. After the biopsy it was necessary to contact the secretary or nurse a second time to obtain the results of the biopsy. If the results were negative and no further

surgery was required, the patient was eliminated from the study. If results were positive, the patient was considered a candidate for the study.

In the case of a positive biopsy the patient was allowed to return home before having the actual breast surgery. It was after returning home that the patient was contacted by phone to introduce her to the study. This conversation consisted of informing the woman of the nature and purpose of the study along with eliciting her help as a participant. There was also inquiry regarding the willingness of her partner being a participant. If both patient and partner decided to be in the study, then their names were documented in a study log and assigned an identification number.

The possibility of participating in a research study was not completely unknown to patients contacted. This is because all women attending the KBC are asked to sign a general consent form regarding involvement in any type of research (Appendix A). By signing this consent form at the KBC the patient is acknowledging her willingness to participate in research studies. In other words, any patient deciding to be a subject in this study had already agreed to participate in research prior to being contacted by the investigator. In addition, the KBC released only the names of patients who signed this initial consent form.

Instrumentation

The instrumentation used in the present study focused on the self-disclosure and coping styles of married or exclusively dating couples experiencing the diagnosis and treatment of breast cancer. In order to collectively gather data for coping styles and self-disclosure, two separate questionnaires were used. The first questionnaire, regarding coping styles, was the Medical Coping Modes Questionnaire (MCMQ). The second questionnaire, regarding self-disclosure, was the Self-Disclosure Questionnaire (SDQ). Attached to the two questionnaires was a demographic section eliciting age, gender, relationship status, length of current relationship, children in relationship, prior surgery, level of education, and household income. In addition, each participant was asked to address concerns they had in regard to the cancer, loss of sexual functioning, loss of attractiveness, medical procedure, and partner rejection. Each subject was to respond whether the concern was small, moderate, or great (Appendix B). The following is an elaboration of the two instruments.

The Medical Coping Modes Questionnaire

The Medical Coping Modes Questionnaire (MCMQ) is an instrument designed to measure coping styles of medical patients with life-threatening and non life-threatening

illnesses (Appendix C). The MCMQ is a 19 item questionnaire which is answered on a four-point continuum ("never" to "all the time" and "very little" to "very much"). The instrument indicates whether or not individuals adhered to population norms. According to Feifel, Strack, and Nagy (1986), it has been shown to produce a high degree of validity and reliability in medical patients under 65 years of age with life-threatening and non-life-threatening illnesses. The construct validity was obtained from three sources: a personality measure, self-report from patients, and reports from physicians and significant others.

The questionnaire is directed toward the coping modes of confrontation, avoidance, and acceptance-resignation. The alpha coefficient for each is .70, .66, and .67, respectively. The following is a brief description of the three coping modes:

- 1) confrontation, which consists of eight items and refers to the patient dealing with the medical condition in a direct manner.
- 2) avoidance, which consists of seven items and refers to the patient trying to keep the medical condition away from conscious thought; and
- 3) acceptance-resignation, which consists of four items and refers to the patient developing a sense of having little control over the medical condition.

The Self-Disclosure Questionnaire (SDQ)

The SDQ is a 17 item instrument developed by the investigator specifically for this study (Appendix D). It was designed to elicit information regarding self-disclosure experienced between the married or dating couples after the diagnosis and during cancer treatment. The items on the questionnaire focus on the interaction which occurred between the couple.

Ten items referring to verbal self-disclosure were created to determine how the diagnosis and treatment of the cancer influenced such interactions between the couple. These items (1,2,3,5,11,12,14,15,16,17) examined aspects such as frequency of discussion regarding the medical condition, honesty when discussing feelings, discussing the desire for intimacy, discussing the emotional support needed, and reluctance to discuss the medical condition.

In addition to the items regarding verbal self-disclosure, the questionnaire includes seven items (4,6,7,8,9,10,13) which address other dimensions of self-disclosure. They include understanding emotional needs created by the medical condition, openly displaying emotions, fears and desires related to intimacy, and inhibitions created by the medical condition.

Since this questionnaire is newly developed, it required testing for reliability and validity. With regard to validity, it was determined by a review of related

studies (Andersen & Jochimsen, 1985; Funch & Mettlin, 1982; Northouse & Northouse, 1987; Leiber et al., 1976; Lichtman et al., 1987) that items such as those listed on the SDQ were important in determining self-disclosure. Therefore, content validity was established.

To obtain reliability, the questionnaire was pilot-tested using a group of 30 female oncology patients at the University of Tennessee Medical Center admitted for a variety of cancerous conditions. Following this data collection, an alpha coefficient of .81 was determined.

Data Collection

Before any type of contact was made between the couple and the investigator, approval was obtained from the KBC physicians and any surgeon included in the study. This approval was granted by each physician and surgeon through verbal commitment and written consent (Appendix E).

The instrument administered to the couple was a packet consisting of the SDQ and the MCMQ. Couples agreeing to be in the study were informed in the telephone conversation that they would be met in the hospital prior to the surgery. Typically, the woman was admitted into the hospital two to four hours before the actual surgery. This would be the initial face-to-face encounter between investigator and the couple and allowed adequate time to talk openly with them

again about the study. Any questions or concerns were addressed. This time was also used to create a rapport which would encourage their further participation.

At the initial meeting with the investigator, the couple signified their willingness to participate by signing another consent form designed exclusively for this study. There was a consent form for the patient (Appendix F) and one for her partner (Appendix G). They were informed that their participation was strictly voluntary and they could withdraw at any time with no effect on treatment. Participants understood that it would be necessary to elicit information at three different times to determine the effects created by the diagnosis and treatment of the breast cancer.

It was also at the initial meeting in the hospital that the couple completed the instrument for the first time. The patient and her partner were instructed to complete the instrument separately, considering only the feelings or opinions which were currently being experienced. The time necessary to complete the instrument was approximately 15 minutes. After completion, the instruments were taken and the couple were reminded that the instrument would need to be completed a second time following the surgery, but prior to discharge from the hospital.

The second administration of the instrument was three to six days after the surgery, depending on the required

hospital recovery time. Each was again given the instrument and instructed to complete it according to his or her current feelings or opinions. This second administration would take slightly less time than the first because it was not necessary to complete the demographic section. The instruments were obtained from the couple and once again they were reminded that they would need to complete the instrument a final time at the first post-surgery visit with the attending surgeon.

The final administration of the instrument was at the attending surgeon's office during the woman's first post-operative visit. It was necessary to contact the nurse or secretary of the surgeon to obtain the date and time of this scheduled visit. This usually occurred within three weeks of the surgery. At this final administration, each was given an instrument to complete while waiting to see the doctor. The instruments were then taken from each participant. Because this was the final time, they were not required to do anything more. In the event that the husband was absent at this final time of administering the instrument, it was carried home by the patient for him to complete. It was subsequently returned by mail.

All responses on the instrument were held in strict confidence. A coding system was used to identify participants to maintain anonymity. As each couple agreed to participate, their names were placed in a log and

assigned numbers. Only the numbers were placed on the instrument as it was administered to each participant. All names, consent forms, and data collected were stored under lock and key in the investigator's office at the University of Tennessee.

Statistical Procedures

Since the purpose of this exploratory and descriptive study was to delineate the process of investigating the effects of cancer on self-disclosure and coping styles, it was most appropriate to use statistical procedures which were descriptive in nature. The following areas of this study were addressed:

1) Instrument construction - refers to the development of the self-disclosure questionnaire and the means by which it was pilot tested.

2) Instrument data - refers to the patterns of self-disclosure and coping among men and women over time.

3) Subjects - refers to the number, demographics, and cooperation of the patients and their spouses

4) Personnel and office/hospital arrangement - refers to the medical and clerical assistance, facility arrangements, and interactions between all individuals involved in the study.

5) Obstacles - refers to any problems which were

overlooked initially or developed during the course of the study.

Summary

The chapter is divided into four sections, including sample selection, instrumentation, data collection, and data interpretation. The first section describes the sample population. Discussed are the specific requirements necessary to be included in the study and the selection process. The second section describes instrumentation. The instruments used are the Medical Coping Modes Questionnaire (MCMQ) and a questionnaire developed by the investigator called The Self-Disclosure Questionnaire (SDQ).

The third section addresses the data collection, including a description of specifics related to guidelines for administration of the instrument, time intervals used, and correct procedures for completing the questionnaire. The final section outlines the statistical procedures employed to describe the data.

CHAPTER 4

INTERPRETATION OF DATA

The purpose of this chapter is to delineate the process of investigating the effects of breast cancer on self-disclosure and coping styles among couples. By delineating such a process, the following proposed study should be conducted: "A Prospective Investigation of the Effects of Diagnosis and Treatment of Breast Cancer on Self-Disclosure and Coping Styles Among Couples." This proposed study will focus on the effects of breast cancer beginning at the time of diagnosis and concluding four months post-surgery. Therefore, based on a one year close association with breast cancer patients and attending medical and clerical personnel, along with an extensive review of the literature regarding the effects of breast cancer, it was determined that the following issues and tasks must be addressed prior to any analytical investigation: 1) a protocol describing the process of investigating the effects of breast cancer on self-disclosure and coping styles, 2) the nature and characteristics of various interactions between investigator, subjects, and medical and clerical personnel, 3) the construction of an instrument that will determine levels of self-disclosure among couples, 4) patterns of self-disclosure and coping which occur over time,

5) appropriate statistical procedures employed for analyzing data, 6) appropriate theoretical model to serve as a framework, and 7) study obstacles and adjustments. In summation, this chapter will provide a comprehensive overview of the process and additional concerns required to effectively complete the proposed study.

Study Protocol¹

Facility and Personnel

When beginning this study, perhaps the most determinant factor in obtaining an adequate number of subjects is to develop an organized and systematic plan to identify couples eligible for the study. The most resourceful place to locate patients with breast cancer is a facility which deals exclusively with breast cancer. Such a facility is usually referred to as a breast center (BC). By using such a facility, all women with a malignancy can be easily identified from one source, rather than relying on numerous nursing and clerical personnel within several medical centers. Therefore, to obtain the most comprehensive listing of potential breast cancer patients, and eliminate various complications, a facility such as a breast center should be utilized. It should be viewed as a "home base",

¹This section is written in future tense to reflect the suggested study protocol for future investigation.

which serves to pinpoint patients and attending surgeons. From this base there is more control for the researcher and less dependence on others. In essence, the investigator will be using the breast center to provide all of the demographic information of potential subjects for the study, while the clerical and nursing personnel within the surgeons office will provide only results of biopsies and surgery dates. This limits the demands on any individual, thus creating a greater likelihood of cooperation.

When deciding on a particular breast center to use as the source for patients, there are factors which must be considered. Foremost is the center's interest in research. If the center has a history of research, or possibly a research director, then there is likely to be greater acceptance of research proposals from outside investigators. In addition, if the primary physicians at the facility are familiar with the benefits of research investigating psychosocial aspects, as compared to exclusively medical research, then a study focusing on such areas as self-disclosure and coping styles is also likely to be well received.

Other factors to consider are the attitudes and cooperation level within the breast center. This is referring to the general disposition of the personnel and willingness to become involved. It must be determined before the study begins if access to the necessary

information can be obtained and assistance will exist after the study begins. These are things which can be determined during the initial visits to the breast center. The investigator must realize at this point if specific responsibilities can be accomplished by individuals designated to do so. To have a "wait and see" attitude may prove to be disastrous in terms of time and effort. Therefore, questions should be asked regarding whether such individuals can handle the additional demands. If the personnel are overworked, resentful, or uncooperative, then time spent at the center is likely to be unproductive, as well as unenjoyable.

One final consideration which an investigator may wish to consider is regarding problems between facility personnel. Clear leadership within such a facility may be lacking, thus creating subtle, yet obvious, power struggles among physicians, as well as clerical workers. This may, in turn, cause an investigator to question who should be contacted regarding specific issues requiring breast center attention. Such personality conflicts typically lead to inappropriate criticisms and minimal congruence among all workers, thus creating an unfavorable working environment. Although often overlooked, productivity can definitely be inhibited if roles are not clearly delineated and responsibilities accepted. An example of such a problem is to obtain full approval of the study, gain access to the

facility, and incorporate the assistance of the clerical workers, yet have someone within the facility object to what has been undertaken. To encounter individuals who insist on creating difficulties, for numerous personal reasons, should be expected. Therefore, in summation, when selecting a facility to serve as a source for the study, the investigator must consider such factors. To overlook potential difficulties at the beginning of a study may not only provide limited data, it may also create a sense of frustration and reluctance to continue with the study.

In order to obtain permission to include their patients in a study, it will be necessary for the investigator to discuss the procedures with those in charge at the breast center. This usually includes the primary physicians and any management personnel, such as a research director. A meeting should be scheduled at their convenience which will basically cover all aspects of the study and responsibilities of the breast center. In addition, a complete protocol of the study, including instrument(s), should be provided to the center. Upon having permission granted and roles for the study clearly defined, an approval letter (Appendix H) should be signed by the attending physicians or management in charge. A description of all responsibilities of the breast center, attending surgeons, and medical and clerical personnel are outlined in the following protocol procedures.

Sample Selection

In order to determine the effects of diagnosis and treatment of breast cancer on self-disclosure and coping styles among couples, it is necessary to involve both breast cancer patient and her spouse or exclusively dating partner equally. Therefore, the sample for this study will consist of married or exclusively dating couples where the woman has been diagnosed with breast cancer and scheduled for surgical treatment. All breast cancer patients over the age of 18 with an exclusive partner should be considered for the study.

The women in the study will be identified through a systematic process at the breast center serving as the source for patients. The process begins with the woman reporting to the breast center for either a routine breast exam or to determine the status of a suspicious breast abnormality. Following various screening procedures, the woman will be informed that she requires no further evaluation after the breast center, requires further assessment, through surgical biopsy, to confirm the possibility of a malignancy, or that breast surgery will definitely be required.

Women requiring no additional assessment are eliminated from the study. Women requiring further confirmation or surgery are scheduled for a consultation visit with an attending surgeon of their choice. If unfamiliar with a

surgeon, one is recommended by the breast center. In order to know the potential candidates for participation in the study, the breast center will need to supply a daily list of all women scheduled for a consultation date with a surgeon. In essence, the study will require someone at the breast center to identify the potential subjects. The person most suitable for this job is whoever does the patient scheduling, typically a secretary. Such a person has easy access to files, is aware of the results at the breast center, and will know the attending surgeon chosen by the patient. Their role is to simply make a daily listing of woman who are scheduled for a consultation visit. The daily list is to be provided on a form (Appendix I) and will include the patient's name, address, phone number, results of the evaluation at the breast center, surgeon's name who will perform the biopsy and/or mastectomy, and consultation date with the surgeon.

To maintain confidentiality, the breast center may withhold the names of patients who have not acknowledged their willingness to participate in research. Typically this will be the case, since there is an ethical consideration regarding confidentiality. Therefore, the breast center should provide the patient with a general consent form (Appendix A) regarding research prior to being seen by a physician at the breast center. Such a form is offered to the patient at the initial visit and simply

states that research is conducted at the facility and they are invited to participate on a voluntary basis. By signing the consent form the patient is acknowledging her willingness to be included in research. If the breast center does not provide such a consent form, one should be submitted to the breast center by the researcher.

This initial consent form is beneficial in two ways. First, it will inform the patient before she is evaluated at the breast center that research is being conducted and her participation is desired. If she agrees, the consent form will be signed, thus indicating her willingness to become involved in research should surgery be required. If she chooses not to sign the consent form, then it is understood from that point and her name will not be considered for research. Secondly, by having patients make the decision regarding participation in the study at the initial visit to the center, the researcher will be obtaining only the names of patients who have stated that they will participate in research. This will provide a pool of names of those very likely to participate and, at the same time, eliminate the inconvenience of contacting patients not likely to participate.

Prior to the breast center providing the daily list of patients, the investigator must determine which attending surgeons will be included in the study. This decision is made by obtaining, from the secretary or research director,

a list of surgeons receiving a high percentage of patients from the breast center. The decision as to how many surgeons should be included will rest with the researcher. However, factors such as number of patients going to a particular surgeon, close proximity, and willingness and cooperation of medical and clerical personnel within the surgeons office should be strongly considered.

Once the surgeons have been selected, it will be necessary to contact each one to discuss the possibility of actually participating in the study. In order to improve the chances of the surgeon becoming involved in the study, it is very beneficial to receive a letter of support and approval from the breast center prior to meeting with the surgeon (Appendix J). The letter will encourage surgeon participation and will be signed by the breast center physicians and/or research director. This letter, combined with an overview of the study (Appendix K), should be hand-carried to the office of the surgeon and left with the secretary. At this visit, the investigator should also give the secretary a brief verbal explanation of the study. After allowing approximately a week, a meeting should be arranged with the surgeon to discuss any matters of concern. If the surgeon agrees to participate in the study, s/he will sign an approval letter which states that the researcher is allowed to contact patients under his or her medical care (Appendix E). Therefore, the role of the surgeon is to

simply allow his or her patients to be included in the study.

Also at the meeting with the surgeon, the investigator will discuss the role of the clerical personnel (secretary) within the surgeons office. Their role will be to provide information, by telephone, regarding date of biopsy, results of biopsy, and date of surgery. This should occur one or two days after the consultation date with the attending surgeon. The secretary simply informs the investigator of the scheduled date of the open biopsy or breast surgery. If a biopsy is to be performed, then the date is obtained. Following the date of the biopsy, the secretary is contacted again approximately two days later to obtain the results of the biopsy. If the results were negative and no further surgery is required, the patient is eliminated from the study. If results were positive, the patient is considered a candidate for the study.

If the patient is diagnosed at the breast center as definitely having a malignancy, no further confirmation through a biopsy will occur. This patient simply has the consultation with the surgeon to determine when surgery will be conducted. In such a case, the secretary of the surgeon will be contacted the day following the consultation date to obtain the surgery date. The researcher will be aware of the patients who do not require a biopsy by the information on the list provided by the secretary at the breast center.

The results of the evaluation at the breast center will be designated as positive, thus indicating surgery is required. Further, although there are patients who do not receive the open biopsy, it must be reiterated that the vast majority of patients going for a consultation visit to a surgeon from a breast center will receive an open biopsy prior to surgery. Typically the investigator should contact the surgeon's secretary two or three times a week to obtain the necessary information.

Data Collection

Once it is determined from the attending surgeon's secretary that surgery is required, the patient is considered a potential subject for the study. The patient should then be contacted by telephone a few days prior to her surgery and invited to participate in the study. The conversation will include an introduction from the researcher which basically states who is calling, who he or she is working with, an overview of the study purpose and intent, and asking the patient and her partner to participate. Couples agreeing to be in the study are informed on the telephone that they will be met in the hospital prior to surgery.

The woman is usually admitted into the hospital two to four hours before the surgery. The exact time of admittance is obtained from the surgeon's secretary, while the room

number for the patient must be obtained from the information desk at the hospital. The meeting at the hospital will be the initial face-to-face encounter between investigator and the couple and will provide more than adequate time to discuss any concerns regarding the study. This initial meeting can also serve to establish a rapport with the couple, which may prove to be the determining factor for future participation. At the initial meeting with the investigator, the couple will signify their willingness to participate by signing a consent form designed exclusively for this study (Appendix F and G). The couple should be informed that their participation is strictly voluntary and they may withdraw at any time. In addition, patients will need to understand that it will be necessary to elicit information at four different times: 1) shortly after admission into the hospital and prior to surgery, 2) after surgery and prior to discharge from the hospital, 3) two weeks post-surgery, and 4) four months post-surgery. Also at this initial meeting in the hospital, the couple should be assigned a coding number by which they can be identified. Only this number will be on the instrument each time it is completed. All names and addresses should be kept under lock and key.

After the investigator discusses the study and any concerns, the couple is asked to complete the instrument for the first time. The instrument administered to the couple

will be a packet consisting of the MCMQ (Appendix C) and the SDQ (Appendix D). The packet will also include a demographic section eliciting age, gender, relationship status, length of current relationship, children in relationship, prior surgery, level of education, and household income. In addition, each participant will be asked to address concerns he or she has in regard to the cancer, loss of sexual functioning, loss of attractiveness, medical procedure, and partner rejection. Each is to respond whether the concern is small, moderate, or great (Appendix B). The time necessary to complete the instrument is approximately 15 minutes. After completing the instruments they are taken and the couple is reminded they will complete it a second time following the surgery and prior to discharge from the hospital. Further, after the first instrument has been completed, a brief letter (Appendix M) stating that the patient and her partner have agreed to participate in the study is mailed to the attending surgeons office. This letter should be placed in the patient's file for future reference.

The second administration of the instrument will be approximately three to six days after the surgery, depending on the required hospital recovery time. The time of discharge should be determined by asking the attending nurse after the surgery has been performed. In addition, the researcher should be aware that discharge dates are not

always absolute. Therefore, arrangements should be made for the nurse to inform the investigator if a patient is to be discharged earlier than initially announced. This can best be accomplished by leaving a telephone number that has either an answering machine or someone to take a message.

Typically the best time for the couple to complete the instrument for the second administration is one day prior to discharge. This time eliminates the confusion often observed during the actual day of discharge. At this time the couple will again be given the instrument and instructed to complete it according to their current feelings or opinions. The second administration will take slightly less time than the first because it is not necessary to complete the demographic section. The instruments will be obtained from the couple and once again they are reminded that they will need to complete another one in approximately two weeks.

Although both partners may be at the hospital for the second administration, it is possible that the husband will not be present. If this occurs, the researcher will need to leave the instruments and a self-addressed stamped envelope with the patient. The patient should be instructed to have her partner complete the instrument as soon as possible. After both instruments have been completed, they should be placed in the return envelope and mailed back to the researcher. Another problem which may exist at this time is

regarding visitors. There may be friends or relatives present when the couple is due to complete the questionnaire, which, of course, will create an interference. In such a case the same procedures should be followed for an absent partner. In addition, the couple should again be reminded that they are to complete the questionnaire independent from their partner.

The third and fourth administrations of the instrument will occur approximately two weeks and four months after the surgery. Although these times correspond with the patient's post-operative visits to the surgeon, and may suggest an ideal time to administer the instruments, it is considered most appropriate to use the mail for these administrations. This is because the partner will usually not accompany the patient to the post-operative office visit. Therefore, the instruments should be mailed out approximately one week prior to the two week and four month point. With the instruments there should be a cover letter (Appendix M) reminding them that this administration is necessary to make the study complete. It is also stated that they should answer the questions according to their current feelings and independent from their partner. After receiving the fourth instrument, couples will not be required to do anything more.

Finally, when the instruments are administered to the participants in the hospital or when mailed out, only the

number assigned at the initial meeting is used. A good rule to follow is to code the patients of each surgeon differently. For example, 100 - 199 for surgeon A, and 200 - 299 for surgeon B. Each couple should be assigned two consecutive numbers, a number for the female and a number for the male. Therefore, once a couple has their assigned numbers, they will always be identified by the numbers. In order to distinguish between the particular administration times, the researcher simply designates this on each instrument by circling the administration time (1,2,3,or 4) which is currently being completed. Therefore, the identification number remains the same for each participant, only the administration number will be different. The list of names can be written on a form (Appendix N) or stored on a computer disk.

In summation, the preceding study protocol has provided a complete overview of the facility and personnel selection, sample selection, and data collection processes recommended for investigating the effects of breast cancer on self-disclosure and coping styles among couples. The following is an elaboration of the interactions which occurred between investigator, medical and clerical personnel, and subjects based on one year of observation and scrutiny.

Interactions

Investigator and Personnel

Although most interactions were favorable, there were times of confusion and frustration. The most troubling period of the entire process occurred at the beginning of the study. Due to the additional job responsibilities, a slight state of disorganization and uncertainty existed between investigator and the medical and clerical personnel. A primary reason this occurred was due to a lack of communication regarding roles. Although there were initial meetings held to discuss specific roles, often they were forgotten, incomplete, or simply ignored. The investigator was required to provide a watchful eye over all involved in the study, especially during the initial stages. It was necessary to become very active in immediate follow-up of responsibilities to assure that roles were being performed correctly. If responsibilities were not carried out, then repeated notification was necessary, which, unfortunately, led to further problems of dealing with fragile and explosive personalities. Therefore, the investigator must make every effort in providing the proper instruction and guidance during the beginning steps of the study. It often becomes apparent that some individuals simply want no additional demands combined with an already overactive schedule. Should this be the case, the investigator must

recognize this early and assign the responsibility to someone capable. Complications often arise because some nursing or clerical personnel working within a surgeons office are less than cooperative. Not necessarily because they are malicious individuals, but because such workers often carry the burden of many roles and responsibilities within the surgeon's office. Typically these clerical and nursing personnel are terribly rushed trying to schedule appointments, converse with patients, and assist the surgeon, thus allowing very limited time to become involved in research. In turn, due to the many obligations, they may forget to report possible patients, feel the extra work is an affliction, or simply refuse to take the time to contact the researcher. To reiterate, this is why the investigator must determine early whether the individual can handle the additional responsibilities.

There are many problems which arise when individuals feel the extra effort for research is trivial. For example, one particular clerical worker for an attending surgeon simply did not contact the investigator regarding potential patients on several occasions. This occurred following an agreement to direct patients into the study. After a brief investigation it was determined that the clerical worker had, in her words, forgotten about the study. However, following more instructions to the same clerical worker, the lack of cooperation continued. A further investigation

concluded that several existing responsibilities remained the sole priority, leaving little concern for the ongoing research. Although stating a willingness to assist, she basically dismissed the research responsibilities as a frivolous chore. Another example is regarding a clerical worker who, on several occasions, reported inaccurate biopsy results and surgery dates, thus eliminating couples eligible for the study. This occurred because the clerical worker relied on an inaccurate memory rather than actual documentation when reporting results to the investigator. Both of these examples are related to lack of time or concern, or both. In each case there was too much dependence on a particular individual who possessed little regard for the study. However, not all clerical and nursing workers were this inefficient. In one surgeon's office it was recognized how thorough individuals can be. In this particular office the clerical worker and nurse both assisted in providing the necessary information, were cooperative, and enthusiastic. Each time they were contacted they sounded cordial and directed all efforts to the investigator's inquiry. There was no dependence on memory and no resentment for becoming involved in the study. Each comment regarding results of biopsies or surgery dates was confirmed by checking in the records. This type of efficiency should be sought by the investigator when selecting the surgeons for the study.

Although there may be some problems, especially at the outset of the study, most interactions with the medical and clerical personnel should be beneficial and enjoyable. However, this depends, to a large degree, on the approach taken by the investigator. There must be flexibility and tolerance combined with an understanding of what is to be accomplished. For example, it was observed that one clerical worker became upset when called during specific times. To eliminate this problem, a simple readjustment was made regarding the time of contacting this person. It is also important for the investigator to be tolerant of behavior. For instance, the moodiness of a specific nurse created a working environment which forced the investigator, as well as other nurses and clerical workers, to become reluctant to approach this individual. In such a case it is crucial to retain composure and not retaliate with verbal attacks. The investigator should alleviate the problem by either assigning this role to someone else or becoming aware, by confronting the individual, of when the best time may be for inquiry. In essence, when dealing with the medical and clerical personnel, it is necessary to develop a strategy which will benefit the progress of the study. This can best be achieved by following simple rules. For instance, schedule as much as possible around times convenient for the medical and clerical personnel. They should be contacted only at times which are designated as

favorable. In fact, the workers should be allowed to schedule specific times during each week for working with the investigator. This gives a sense of control to the workers while it minimizes animosity for being interrupted.

Investigator and Subjects

Interactions which occur between investigator and subjects should be expected to be varied. Most subjects, after they agree over the telephone to be in the study, will be very cooperative. However, even after agreement, some will complete the instruments with a reluctance or with an uncooperative attitude. This is when the investigator must be understanding as to what the couple is facing. An empathetic disposition is most beneficial in such occurrences.

Although there were a few couples who objected slightly to completing the instrument, the vast majority were actually excited to be included in such a study. They were not only willing to complete the instruments, they wanted to discuss their illness. At many of the initial meetings in the hospital there seemed to be a benevolent atmosphere among many of the subjects, especially the patient. This attitude may have existed because during the initial conversation with the patient it was explained that the information obtained would be used to benefit future patients. In addition, most couples remained receptive to

the investigator throughout all administrations of the instrument.

Regarding participation, all couples who were contacted agreed to become involved in the study. The overall receptiveness of the couple to the investigator is believed to be attributed to the approach taken by the investigator. It is crucial that the investigator be tactful, yet empathetic, during the initial telephone conversation with the patient. The phone conversation should begin with a statement of who is calling, followed immediately by announcing that the investigator is working with the breast center and the attending surgeon to obtain information regarding the effects of the medical condition on the relationship. The patient should be told that the surgeon has full knowledge of the study and is excited about determining the effects of such a medical condition. In addition, the patient is informed that the results may be beneficial to other couples facing similar situations. The investigator should be careful not to use the term "cancer", but instead should use a less threatening general term such as "medical condition." For many individuals there is an antagonizing stigma associated with the word cancer, even if they fully realize they have the disease. Therefore, the investigator should avoid any terminology which could negatively influence the couple's decision to cooperate. Perhaps the only shortcoming in interacting with couples was

in regard to completing the final two instruments. Although a few couples did fail to return the third and fourth instruments, one or two telephone calls persuaded them to return the missing instruments. Only two couples who agreed to the study, even after several calls, failed to return the final two instruments. Therefore, follow-up telephone calls should be considered an effective means to encourage couples to promptly return overdue instruments.

Instrument Construction

To assess the level of self-disclosure among couples facing a personally traumatic medical condition such as breast cancer, an instrument was developed and pilot tested. Although this instrument was designed to focus exclusively on breast cancer patients, it is suitable to use in any similar medical condition where self-disclosure is to be measured. The instrument is referred to as the Self-Disclosure Questionnaire (SDQ) (Appendix D).

The SDQ was created following an extensive review of related literature. Many studies designated the specific areas of communication between partners (Andersen & Jochimsen, 1985; Brewin, 1977; Heinrich, Schag, & Ganz, 1984; Leiber et al., 1976; Lichtman et al., 1987; Wellisch, 1985), being understanding and honest with one's partner (Lichtman et al., 1987; Schover, 1988), displaying true

feelings (Northouse & Northouse, 1987; Schover, 1988), intimacy (Leiber et al., Andersen & Jochimsen, 1985), social support (Funch & Mettlin, 1982; Graydon, 1988; Hilton, 1989; Lichtman et al., 1987; Peters-Golden, 1982; Wellisch, 1985; Wortman & Dunkel-Schetter, 1979), and fears (Schain, 1985; Wortman & Dunkel-Schetter, 1979), as primary factors influencing a couple's relationship while facing breast cancer. Therefore, the SDQ was formulated from previous investigations regarding such factors and their association with the effects of breast cancer, thus establishing content validity.

In regard to establishing reliability, the SDQ was pilot-tested using a group of women patients ($N = 30$) at the University of Tennessee Medical Center, Knoxville. The patients completing the questionnaire were all oncology patients and had been admitted into the hospital for various types of cancer. Following this data collection, Cronbach's alpha was used to determine reliability. An alpha coefficient of .81 was determined.

The scoring for the questionnaire is based on total points accumulated. Each question is measured by a four-point likert-type scale, where 1 is considered low self-disclosure and 4 is high self-disclosure. Therefore, the highest score possible is 68 and the lowest possible is 17. In order to determine levels of self-disclosure, four categories were developed: low (17-25), fair (26-42),

moderate (43-59), high (60-68).

Patterns of Self-disclosure and Coping

The following data were collected in a one year process of designing, implementing, and modifying methodology regarding the investigation of the effects of breast cancer diagnosis and treatment on self-disclosure and coping styles among couples. In addition, since the nature of this study was to delineate such a process and provide guidelines for future studies, quantitative data are limited. Therefore, the information provided in this section will serve only to suggest patterns of self-disclosure and coping styles among couples facing breast cancer.

Demographics

Data were collected from 20 subjects. The subjects included 10 women patients and their partners where the woman had been diagnosed with breast cancer and scheduled for surgery. All patients received either a total mastectomy ($n = 3$) or modified radical mastectomy ($n = 7$). All patients were married. Six of the couples had been married for over 15 years and the majority ($n = 8$) had children from this relationship. In regard to having prior surgery, the males ($n = 5$) had considerably less than the females ($n = 8$). The education level of all subjects

included some high school ($n = 2$), completion of high school ($n = 1$), some college ($n = 9$), completion of college ($n = 4$), and some graduate studies ($n = 4$). The household income of the couples included ranges of \$10,000 - \$19,000 ($n = 1$), \$20,000 - \$29,000 ($n = 0$), \$30,000 - \$39,000 ($n = 1$), \$40,000 - \$49,000 ($n = 3$), more than \$50,000 ($n = 5$). These data are presented in Table 4.1.

The instrument return rate for all four administrations was very high. Only two couples who agreed to participate in the study failed to return all instruments; one couple did not return the fourth instrument and one couple did not return both the third and fourth instrument. In addition, a follow-up telephone call was needed to encourage three other couples to return the final instrument.

Female Concerns

Each woman in the study completed a section on the instrument which addressed concerns she had in regard to the cancer. The woman was to consider five areas (cancer, loss of sexual functioning, loss of attractiveness, medical procedure, and partner rejection) and mark whether the concern was small, moderate, or great. In regard to the concern for the cancer, nine women reported that there was a great concern for the cancer during the pre-operative time. Six women had a great concern when measured again five-days post-operative. In addition, four women reported that there

Table 4.1
Subject Demographics

Variable	Quantitative Component (number/percent)
GENDER	
Male	10 / 50%
Female	10 / 50%
RELATIONSHIP STATUS	
Married	20 / 100%
Exclusive Relationship	0 / 0%
Single	0 / 0%
LENGTH OF CURRENT RELATIONSHIP (as couples)	
One year or less	0 / 0%
2-4 years	0 / 0%
5-9 years	2 / 20%
10-14 years	2 / 20%
15 or more years	6 / 60%
CHILDREN FROM THIS RELATIONSHIP (as couples)	
Yes	8 / 80%
No	2 / 20%
HAD PRIOR SURGERY	
Male yes	5 / 50%
no	5 / 50%
Female yes	8 / 80%
no	2 / 20%
EDUCATION LEVEL	
Less than High School	0 / 0%
Some High School	2 / 10%
Completed High School	1 / 5%
Some College	9 / 45%
Completed College	4 / 20%
Some Graduate Studies	4 / 20%
Completed Graduate Studies	0 / 0%
HOUSEHOLD INCOME (as couples)	
Less than \$10,000 per year	0 / 0%
\$10,000 - \$19,999 per year	1 / 10%
\$20,000 - \$29,000 per year	0 / 0%
\$30,000 - \$39,000 per year	1 / 10%
\$40,000 - \$49,000 per year	3 / 30%
More than \$50,000 per year	5 / 50%

was a small concern for the cancer at two-weeks post operative, while there were no couples reporting a great concern at the two week post-operative time.

In regard to loss of sexual functioning, there was little variance between administration times. Approximately two or three women reported concerns of small, moderate, and great prior to and post surgery. Only one woman reported a great concern at the two week period. Reported in a very similar pattern were the data for loss of attractiveness. In this area there were again no major differences in the level of concern for the women at any time.

Regarding the medical procedure, six women reported a moderate concern prior to their surgery. No women considered the medical procedure a small concern at the pre-operative time, while two considered it a great concern. However, a larger portion of the women ($n = 4$) considered the medical procedure a great concern at the five-day post-operative time, while three considered it a moderate concern and one a small concern. In addition, only one woman considered the medical procedure a great concern at the two week post-operative time, whereas two considered it a moderate concern and four a small concern at this time.

In regard to partner rejection, one woman considered it a great concern prior to surgery. A larger number of women four considered partner rejection a moderate concern and three felt it was a small concern. At the 5 day post-

operative time, five women reported that the concern for partner rejection was small, whereas one considered it moderate and two considered it great. The two week post-operative time revealed that the four patients considered partner rejection to be a small, and three considered it to be moderate. No women considered it a great concern at this time. These data are presented in Table 4.2.

Male Concerns

The male subjects, like their partners, were asked to complete the section regarding concerns. In regard to the concern for the cancer, seven males reported a great concern prior to their partner's surgery, while eight reported it was a great concern five days following the surgery. In addition, six males reported their concern was still great at the two week post-operative time. There were no men reporting a small concern for the cancer at either the pre-operative or five day post-operative times.

In regard to loss of sexual functioning, five males reported only a small concern at the pre-operative time. At the five day evaluation time there were three males reporting a small concern, and four males at the two week evaluation time. There were no men who considered loss of sexual functioning a great concern at any evaluation time. There were, however, two men to report a moderate concern at the pre-operative time, and three men at both the five day

Table 4.2

Female and Male Concerns by Percent

Variable & level of concern	Administration Time and Gender					
	Pre operative		5 day post operative		2 week post operative	
	F	M	F	M	F	M
Cancer						
Small	0%	0%	10%	0%	40%	10%
Moderate	10%	30%	20%	20%	30%	20%
Great	90%	70%	60%	80%	0%	60%
Loss of Sexual Functioning						
Small	30%	50%	40%	30%	30%	40%
Moderate	30%	20%	20%	30%	30%	30%
Great	20%	0%	20%	0%	10%	0%
Loss of Attractiveness						
Small	20%	40%	20%	50%	30%	50%
Moderate	30%	40%	40%	10%	30%	20%
Great	30%	0%	20%	0%	10%	0%
Medical Procedure						
Small	0%	10%	10%	10%	40%	10%
Moderate	60%	40%	30%	40%	20%	50%
Great	20%	10%	40%	30%	10%	0%
Partner Rejection						
Small	30%	50%	50%	50%	40%	30%
Moderate	40%	20%	10%	0%	30%	10%
Great	10%	10%	20%	10%	0%	20%

and two week post-operative times. The loss of attractiveness concerns were very similar to those reported for loss of sexual functioning. There were only small and moderate concerns, and no great concerns. At the pre-operative time a small level of concern was reported by four of the males, whereas there were five males at the five day and two week post-operative times.

In regard to the medical procedure, one male cited a small concern for each of the three times of evaluation. The concern was primarily moderate, with four males at the pre-operative, four at the five day post-operative, and five at the two week post-operative times reporting. In regard to partner rejection, the concern was primarily small, with five males for the pre-operative, five for the five day post-operative, and three for the two week post-operative times. The percentage of men with moderate or great levels of concern did not exceed two in either the five day or two week post operative times. These data are also presented in Table 4.2.

Female Self-disclosure

The data from this study indicate that self-disclosure ranged almost exclusively within the moderate range. For the pre-operative and five day post-operative administration times, nine of the women fell into this category, whereas seven were in this range for the two week post-operative

time. There was one woman in the fair range on each administration time. There were no women reporting low or high self-disclosure for any administration time. These data are presented in Table 4.3.

Male Self-disclosure

The males in this study showed a little more variance than the females. Although most men (8 for pre-operative, 7 for five day post-operative, and 6 for two week post-operative) fell within the moderate range, there was also one for pre-operative, two for five day post-operative, and one for two week post-operative to fall in the high self-disclosure range. In addition, there was one male for pre-operative, one for five day post-operative, and two for the two weeks post operative to fall within the fair range. There were no men in the low range for any administration time. These data are also presented in Table 4.3. The mean and standard deviation scores of self-disclosure for males and females are presented in Table 4.4.

Coping Styles

Coping was assessed by using the Medical Coping Modes Questionnaire (MCMQ). This questionnaire measures three types of coping. The three types, including general statistics, are: 1) confrontation - an eight item scale with a coefficient alpha of .70, scale mean of 20.4, and SD of 3.8; 2) avoidance - a seven item scale with a coefficient

Table 4.3

Female and Male Self-disclosure by Percent

Administration Time	Scale			
	Low (17-25)	Fair (26-42)	Moderate (43-59)	High (60-68)
Pre Operative				
Female	0%	10%	90%	0%
Male	0%	10%	80%	10%
5 day post operative				
Female	0%	10%	90%	0%
Male	0%	10%	70%	20%
2 week post operative				
Female	0%	10%	70%	0%
Male	0%	20%	60%	10%

Table 4.4
Male and Female Self-disclosure
Mean and Standard Deviation (SD) Scores

Gender	Administration Time		
	Pre Operative	5 Days Post Operative	2 Week Post Operative
Male			
mean	51.50	50.80	49.33
SD	6.90	6.55	7.37
Female			
mean	50.90	49.00	50.75
SD	5.57	5.83	5.88

alpha of .66, scale mean of 14.6, and a SD of 3.9; and
3) acceptance/resignation - a four item scale with a
coefficient alpha of .67, scale mean of 6.8, and a SD of 2.4
(Feifel, Strack, & Nagy, 1987).

Males. The mean for each type of coping was slightly less than the scale mean. In regard to confrontation, although the means were lower than the scale mean, each mean did increase with each administration time. This was in contrast to acceptance/resignation means, which decreased with each administration time. In regard to avoidance, the mean for the five day post-operative time was slightly higher than the pre-operative and the two week post-operative. The SD for confrontation varied only slightly from the scale mean with each administration time, whereas the avoidance and acceptance/resignation varied more significantly.

Females. For confrontation, the means were slightly higher than the scale mean for each administration time. In regard to avoidance, the means at pre-operative and five day post-operative were slightly higher than the scale mean, whereas the mean at two weeks post-operative was slightly less. In regard to acceptance/resignation, the pre-operative mean was slightly higher than the scale mean, whereas the five day post-operative and two week post-operative were slightly less.

The SD for confrontation and avoidance was slightly less than the corresponding scale SD for all administration times. Acceptance/resignation had a slightly higher SD than the scale SD for pre-operative and two week post-operative times, and a SD slightly lower for the five day post-operative time. Both male and female data are presented in Table 4.5.

Correlations Between Variables

By conducting a correlation matrix of the variables (concern for cancer, concern for sexual functioning, concern for medical procedure, concern for partner rejection, concern for attractiveness, total self-disclosure, total avoidance, and total acceptance/resignation) there were moderately positive correlations revealed. Although data were limited, these correlations may suggest strong relationships between specific variables. Tables 4.6 (males) and 4.7 (females) reveal the positively related variables and the correlation.

Suggested Research Questions and Statistical Procedures

Since this is an exploratory and descriptive study, two aspects regarding data analysis are briefly outlined. First, research questions that will serve as a foundation from which to operate, and second, statistical procedures appropriate for analyzing the data. Although these

Table 4.5

**Means and Standard Deviations (SD) for Coping Styles
Among Couples**

Administration Time	Coping Styles		
	Confrontation	Avoidance	Acceptance/ Resignation
Pre operative			
<u>Males</u>			
Mean	18.40	11.90	6.00
SD	3.34	5.43	1.56
<u>Females</u>			
Mean	22.44	15.44	6.89
SD	2.65	2.24	2.67
5 days post operative			
<u>Males</u>			
Mean	19.20	12.00	5.90
SD	3.30	5.19	1.60
<u>Females</u>			
Mean	21.73	14.73	6.00
SD	2.87	2.69	1.90
2 week post operative			
<u>Males</u>			
Mean	20.11	11.33	5.78
SD	3.55	5.15	2.39
<u>Females</u>			
Mean	23.00	11.25	5.63
SD	3.38	2.12	2.45
Scale means	20.4	14.6	6.8
Scale SD	3.8	3.9	2.4

Source: Feifel, H., Strack, S. & Nagy, V. T. (1987).
Coping strategies and associated features of
medically ill patients. Psychosomatic Medicine
49, 616-625.

Table 4.6
Correlations Between Variables for Males

Variables	Correlation
Concern for Sexual Functioning and Concern for Attractiveness	.61
Concern for Partner Rejection and Total Self-disclosure	.61
Concern for Partner Rejection and Total Acceptance/Resignation	.64
Total Self-disclosure and Total Acceptance/Resignation	.70

Table 4.7**Correlations Between Variables for Females**

Variables	Correlation
Concern for Sexual Functioning and Concern for Partner Rejection	.77
Concern for Partner Rejection and Concern for Attractiveness	.72
Total Self-disclosure and Total Acceptance/Resignation	.63

procedures are suggested, they are offered exclusively to provide direction for the proposed study and should not be considered absolute. The following research questions should be considered:

1. How did self-disclosure among women change from the time of breast cancer diagnosis to four months post-surgery?
2. How did self-disclosure among men change from the time of breast cancer diagnosis to four months post-surgery?
3. How did coping styles among women change from the time of breast cancer diagnosis to four months post-surgery?
4. How did coping styles among men change from the time of breast cancer diagnosis to four months post-surgery?
5. What relationships exist between breast cancer concerns, self-disclosure, and coping styles for females?
6. What relationships exist between breast cancer concerns, self-disclosure, and coping styles for males?

To address the above research questions it is recommended that the investigator use one-way ANOVA with repeated measures for research questions 1 - 4. In order to determine the relationships between variables (concerns, self-disclosure, coping styles) Pearson product moment correlation should be employed.

Theoretical Model

To provide a theoretical framework for the proposed study, the cognitive theory of stress and coping is considered very appropriate. The theory provides a description of how individuals deal with a personally threatening situation. Considered in the theory are two critical factors, appraisal and coping, which determine how individuals perceive and then cope with such a situation. The theory relates closely to the proposed study because breast cancer patients will typically follow patterns analogous to those outlined in the theory.

From the time breast cancer is initially diagnosed, the patient and anyone associated will begin an appraisal and reappraisal process to determine what effects the cancer has on them personally and what can be done to alleviate the problem. The theory provides an outline of events which commonly occur when facing a threatening situation such as breast cancer. It describes how perceptions, personal and situational factors, pre-existing beliefs, commitments, emotions, and problem-solving efforts are all involved in dealing with such a threatening situation. Therefore, since the diagnosis and treatment of breast cancer has profound effects on personal relationships, and because such influential factors are discussed, the theory is considered to be applicable to the investigation of the effects breast cancer has on self-disclosure and coping among couples. The

following is an elaboration of the theory.

Cognitive Theory of Stress and Coping

The theory on which this study is based is a cognitively oriented theory of stress and coping which was developed over many years of study. The theory has originated from the research findings of Lazarus (Lazarus, 1966; Lazarus & Folkman, 1984; Lazarus, Kanner, & Folkman, 1980; Lazarus & Launier, 1978) and his colleagues (Coyne & Lazarus, 1980; Folkman, 1984; Folkman & Lazarus, 1980; Folkman, Schaefer, & Lazarus, 1979; Folkman, Lazarus, Gruen & Delongis, 1986).

The theory identifies two processes which are viewed as being crucial mediators of stressful person-environment relationships and their immediate and long-term outcomes (Folkman, et al., 1986). The two processes are: 1) cognitive appraisal, and 2) coping (Folkman, 1984; Folkman et al., 1986; Lazarus & Folkman, 1984; Rice, 1987). By combining these two processes, the theory is considered to be both relational and process oriented. It is relational in that there is a relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and as endangering well-being (Folkman et al., 1986; Lazarus & Folkman, 1984; Folkman, 1984). Process oriented refers to two separate meanings: 1) the person is in a dynamic relationship with the

environment, and 2) this relationship is bidirectional, with the environment and the person acting on each other (Folkman, 1984; Lazarus & Folkman, 1984). Also considered in the theory is the concept of personal control. This is considered within the theory in two ways. First, as a general belief of the individual regarding the extent to which they control outcomes of importance, and, second, as a situational appraisal of the possibilities for control in a particular troubling encounter. In addition, when these forms of personal control are considered in regard to cognitive appraisal and coping, the impact and overall effect of a stressful situation become less difficult to comprehend (Folkman, 1984). The following are elaborations of the two processes, cognitive appraisal and coping.

Cognitive Appraisal. The cognitive appraisal refers to the person evaluating whether a specific encounter with the environment is related to his or her personal well-being and to what extent (Lazarus & Folkman, 1984; Folkman et al., 1986). It is the process of categorizing an encounter and all of its many facets with respect to its significance for a positive outcome. In other words, it is to determine the effect the encounter will have now or in the future, and what can be done about it (Lazarus & Folkman, 1984).

According to Lazarus and Folkman (1984), there are three basic forms of appraisal which provide meaning and

influence the course of coping when a situation is appraised as stressful. The three appraisals are: 1) primary, 2) secondary, and 3) reappraisal. A primary appraisal provides the initial evaluation of the situation (Lazarus & Folkman, 1984; Rice, 1987). According to Folkman and associates (1986), the person evaluates whether they have anything at stake in this encounter. There are three kinds of primary appraisal: 1) irrelevant, 2) benign-positive, and 3) stressful (Folkman, 1984, Folkman et al., 1986; Lazarus & Folkman, 1984). An irrelevant appraisal is when an encounter with the environment has no implication for the well-being of the individual. The transaction places no demands on the person and nothing is lost or gained, and it impinges on no value or commitment. For example, an individual is walking down the street and hears a car horn. In this encounter the individual responds automatically to the noise, but quickly realizes that nothing of personal relevance is happening. Although appraisals of irrelevance are not considered of great interest adaptationally, it is of interest to understand the cognitive process through which such situations are appraised. This is because a person must distinguish between relevant and irrelevant cues so he or she can prepare for action only when it is really necessary (Lazarus & Folkman, 1984).

A benign-positive appraisal is when a situation is evaluated as being desirable or, at worst, neutral and will

present no real demands to personal skills (Rice, 1987). In this situation the outcome of an encounter is perceived as positive and it preserves the thought of well-being. An example of this type of appraisal is when a person receives news that they have been chosen for the weekly award at their job. In such a case the individual would feel the impact of the situation, but because it was only a weekly acknowledgment there would be no great response. Such appraisals are characterized by pleasurable emotions such as joy, love, happiness, exhilaration, or peacefulness (Lazarus & Folkman, 1984).

The stressful appraisal involves an encounter with the environment which is viewed as damaging to well-being. There are three different types of stressful appraisals: (a) harm/loss, (b) threat, and (c) challenge. Harm/loss refers to injury or damage which has already occurred. This includes such situations as an incapacitating injury or illness, damage to self-esteem, or loss of a loved one. It relates to those events in which extensive commitments are lost. Examples include loss of a limb, death of a spouse, or loss of a job (Folkman et al., 1986; Lazarus & Folkman, 1984).

Threat refers to the potential for harm or loss. It concerns the harms or losses that have not yet occurred, but are anticipated (Folkman & Lazarus, 1984). Examples include the possibility of losing a job, awaiting death of a loved

one, or preparing for an impending surgery. Although harm/loss and threat are both characterized by negative emotions such as anger, fear, and resentment, there is a primary difference. The threat appraisal permits anticipatory coping, whereas harm/loss is sudden with no time to prepare (Rice, 1987). However, even after a harm/loss has occurred, it is always combined with threat. This is because each loss will consist of some type of negative implications for the future. For instance, persons who have been burned over a large portion of their bodies are likely to feel the threat of later being viewed by others as grotesque (Folkman, 1984; Lazarus & Folkman, 1984).

Challenge, on the other hand, refers to an opportunity for growth and personal gain from an encounter. Examples include a job promotion, marriage, or birth of a child. It is characterized by pleasurable emotions such as eagerness, excitement, and exhilaration. Further, although challenge and threat must be viewed as separate, they may actually occur simultaneously. An example of this would be a job promotion, where the individual appraises the opportunity as a chance for growth, but at the same time may fear the new demands that go along with the promotion (Folkman, 1984; Lazarus & Folkman, 1984).

Regardless of the type of primary appraisal, there are two factors which serve to shape each type. They are

personal and situational factors. The most important of the person factors are beliefs and commitments (Folkman, 1984; Folkman et al., 1986; Lazarus & Folkman, 1984). Beliefs refer to preexisting ideas about reality which act as a perceptual eye. Any person-environment transaction is determined by the individual's perception of the transaction. In other words, the extent to which a person assumes they can control outcomes of dire importance are directly related to their beliefs about control in general. Perhaps the best example regarding a general sense of control is the concept of internal versus external locus of control formulated by Rotter (1966). An internal locus of control refers to the belief that events are dependent upon personal behavior, whereas an external locus of control is centered around the belief that events are contingent upon chance, luck, fate, or others. Therefore, when people make a primary appraisal, the more ambiguous the situation is the more they must make inferences based on their beliefs, such as past experience and personality, to accurately determine what is happening (Folkman et al., 1986; Lazarus & Folkman, 1984).

A second important personal factor in primary appraisal is commitment. This refers to determining what is valuable or has meaning to the person. If an encounter with a situation involves a strongly held commitment, then the individual will evaluate it as being significant with

respect to their personal well-being (Folkman, 1984; Lazarus & Folkman, 1984). According to Antonovsky (1979) and Kobasa (1981), people who exhibit a high level of commitment will typically involve themselves totally in the situation rather than exist in an alienated and passive manner. However, this view of significance may be perceived to such an extent that the expected outcome has a negative effect on the commitment (Lazarus & Folkman, 1984). For instance, a woman believed to have cervical cancer may feel stressed prior to a pelvic exam because it threatens a long-term goal of having children. The woman perceives her commitment to having children in jeopardy. Therefore, the more an individual feels committed to something, the more he or she will feel it necessary to have control over the outcome (Folkman et al., 1986).

The final factor which serves to shape the three types of primary appraisal is situational influence. This includes how likely an event is to occur, when it may occur, the nature of the harm or threat, and what the expected outcome will be (Lazarus & Folkman, 1984). This is highly individualistic because it refers to personal perception of threat. The situational factors, then, involve the times before, during, and after an encounter, with each time creating a particular stress effect. They refer to the personal concerns ranging from everything which has occurred to things which may occur (Lazarus & Folkman, 1984).

According to Selye (1956), the time during an encounter, that is, the duration, is considered the period which is likely to wear down the individual the most psychologically and physically, therefore making the post-duration time more difficult to deal with.

The second type of cognitive appraisal is called secondary. Here the individual evaluates what, if anything, can be done about the situation. Various coping resources, such as physical, social, psychological, and material assets are called upon to face the situation. The physical resources are the individual's general health, energy level, and stamina. Social resources refer to the social support systems surrounding the person from which they can gain knowledge and emotional support. The psychological resources are the beliefs and perceptions, which serve to instill hope, esteem, and morale. Finally, the material assets refer to the tangibles such as finances and necessary equipment (Folkman, et al., 1986; Folkman, 1984; Lazarus & Folkman, 1984).

Secondary appraisal is more than simply recognizing things which may be done. According to Lazarus and Folkman (1984), secondary appraisal is a very complex evaluative process in which the individual considers all coping options available. It also refers to the likelihood that a given coping option will accomplish what it is supposed to, and if that specific strategy can be applied effectively.

A part of secondary appraisal which is considered critical is the situation appraisal of control. This refers to individual judgment and belief about the possibilities of control in the encounter. A major concern is dealing with the question, control over what? An individual is likely to sport changes in his or her appraisal as the situation unfolds. Changes may come because of information gained or as a result of more effective coping strategies. However, regardless of how control is managed, it may be perceived as lost if self-doubt or a sense of helplessness is allowed to enter the mind. This is especially true if the commitment to the event is extremely strong. In addition, during secondary appraisal people must view the situation from a very broad scope and consider all alternatives. They must realize that personal adjustments will need to be made over the course of time and that there are many resources available.

Reappraisal is the final type of cognitive appraisal. It refers to an appraisal which has been changed based on new information from the environment. An individual may change his or her appraisal because of transactions which occur following the initial appraisal. For instance, if an individual recognizes that self-pity or flares of anger are affecting others, then he or she may change their appraisal to avoid upsetting or offending anyone else.

The reappraisal is basically a method of feedback which

causes a person to critically reanalyze the encounter. Due to the various influences, an individual may change his or her initial appraisal. However, this change is not necessarily for the better. A person may develop a sense of guilt, shame, or fear after having no signs of such emotions during the initial appraisal, or on the other hand, generate positive actions to overshadow the initial pessimism and dismay (Lazarus & Folkman, 1984).

Coping. The second process of the cognitive theory is coping. According to Folkman and associates (1986), coping refers to:

"the person's cognitive and behavioral efforts to manage (reduce, minimize, master, or tolerate) the internal and external demands of the person-environment transaction that is appraised as taxing or exceeding the person's resources."

This definition of coping refers to the efforts to manage the demands, regardless of how successful they may be. The coping is recognized as being independent of the outcome (Folkman, 1984). Furthermore, the definition stands alone from other definitions in which coping means to manage or succeed, and where not coping implies failure. This is the theoretical separation between this model and others. Other models do not separate the outcome from the coping effort. They recognize an effort and anticipate an outcome simultaneously, with no regard for possible confounding effects, or consideration of failure. The cognitive theory

purports that it is necessary to view coping efforts independent from the outcome in order to use the coping construct to predict the outcome. This is because when coping becomes confounded by the outcome, the coping construct as a predictor becomes meaningless. In other words, the individual deals with the encounter as the encounter demands, based on the resources available at that particular time as well as internal and external influences. Each person will react differently to any given stress encounter, and everyone will experience change in coping from the time of initial impact until the stress is at least manageable. This is why reappraisal is considered a crucial part of this model, so any necessary adjustments can be made to manage the situation (Lazarus & Folkman, 1984).

Using this formulation there are two major forms of coping: 1) emotion-focused coping, and 2) problem-focused coping (Folkman, 1984; Folkman et al., 1986; Lazarus & Folkman, 1984). According to Folkman & Lazarus (1980), both of these forms are used in most stressful encounters. However, the extent to which each form is used will vary according to how the encounter is appraised by the individual.

Emotion-focused coping refers to the regulation of emotions under distress. It includes cognitive processes such as avoidance, distancing, self-controlling, accepting responsibility, selective attention, positive comparisons,

and positive reappraisal (Folkman et al., 1986; Lazarus & Folkman, 1984). Examples of common cognitive maneuvers used to reduce personal threat include the following: "I decided there were other things which needed my attention"; "I realized that things could be much worse"; "I'm a stronger person now that I have gone through this." In each instance, threat is reduced by changing the personal meaning of the encounter. The individual develops a sense of control by placing things into a perspective that is easily related to.

Problem-focused coping refers to the management of the problem which is the cause of the distress. This form of coping includes strategies similar to those used for problem-solving. However, where problem-solving is focused exclusively on the environment using an objective and analytic process, the problem-focused coping will go one step further to include strategies which are directed inwardly, toward the self (Lazarus & Folkman, 1984). Such strategies directed toward the self include efforts to alter levels of aspiration, reduce levels of ego involvement, develop alternative channels of gratification, and learning new skills. Additional problem-focused efforts which are common include aggressive interpersonal actions to alter the situation (Folkman et al., 1986), generating alternative solutions, and weighing the alternatives in terms of costs and benefits and acting on the one most suitable (Lazarus &

Folkman, 1984).

The effectiveness of problem-focused efforts will depend to a large degree on the success of emotion-focused efforts. In other words, when facing a troubling situation, having emotions under some control will serve as a valuable aid in managing or altering the situation with the problem-focused efforts. If one does not have at least minimal control over emotions, then the heightened emotions would interfere with the cognitive action necessary for the problem-focused coping (Lazarus, 1966). In addition, the perception of uncertainty will also play an instrumental role during the problem-focused effort. This is because any ambiguity which may exist during a time of heightened emotions will make it difficult to determine whether there will be harm or threat and how severe it will be (Lazarus & Folkman, 1984).

Summary

This chapter provides an overview of the results of designing and implementing a study to evaluate the effects of breast cancer on self-disclosure and coping styles among couples. Addressed are aspects such as facility selection, interactions, instrument construction, patterns of self-disclosure and coping styles, and theory appropriate for the proposed study.

CHAPTER 5

SUMMARY, FINDINGS, DISCUSSION, AND RECOMMENDATIONS

Summary

The purpose of this exploratory and descriptive study was to delineate the process of investigating the effects of breast cancer on self-disclosure and coping styles among couples. The following issues and tasks were addressed:

1. A protocol for investigating the effects of breast cancer on self-disclosure and coping styles among couples.
2. The nature and characteristics of various interactions between investigator, subjects, and medical and clerical personnel.
3. The construction of an instrument that will determine levels of self-disclosure among couples.
4. Patterns of self-disclosure and coping styles which occur over time.
5. Appropriate statistical procedures for analyzing the data.
6. Appropriate theoretical model to serve as a framework.

By delineating the process required for investigating

the effects of breast cancer on self-disclosure and coping styles among couples, the proposed study entitled "A Prospective Investigation of the Effects of Breast Cancer on Self-disclosure and Coping Styles Among Couples" should be conducted. Therefore, this current study provides the foundation for future studies investigating breast cancer, or any medical condition, and the effects on self-disclosure and coping styles.

The sample for the proposed study is to consist of women who choose a breast center as a means for breast screening. Any woman who is in an exclusive relationship and diagnosed with breast cancer and scheduled for surgery meets the criteria for the study. The investigation should incorporate a breast center which is interested in determining the psychosocial effects of breast cancer. Such a breast center will serve as a "home base" for identifying potential subjects. Within the breast center a clerical worker is to identify any patient who requires further assessment as a potential subject for the study. This clerical worker will simply provide the patients name, address, phone number, consultation date with an attending surgeon, and surgeon's name. Following the consultation date, the investigator will contact the attending surgeon's secretary to obtain information regarding whether surgery is required. If surgery is necessary, the patient and her partner are invited into the study.

The instrument used to determine levels of self-disclosure is a questionnaire called the self-disclosure questionnaire (SDQ). It consists of 17 items which measure levels of disclosure which occur between a couple. The SDQ was pilot-tested and has an alpha coefficient of .81. The instrument to measure coping styles is the medical coping modes questionnaire (MCMQ). It consists of 19 items which reflect the coping strategies of confrontation, avoidance, and acceptance/resignation. The alpha coefficients are .70, .66, and .67, respectively. Both patient and her partner should complete the instruments on four occasions: 1) pre-operative, 2) post-operative and prior to discharge, 3) two weeks post-operative, and 4) four months post-operative. In order to maintain anonymity, only numbers should be used to identify the subjects.

In regard to interactions which occurred, overall they were good following the incorporation of a breast center. Prior to using a breast center for identifying patients there were difficulties with cooperation from several clerical workers. However, after the inclusion of the breast center, and reducing the responsibilities of everyone involved, the overall cooperation improved drastically. In regard to the subjects, it was observed that the vast majority were more than cooperative and actually willing to openly discuss their situation.

Finally, since the proposed study should be based on a

theoretical model, the cognitive theory of stress and coping is suggested. The theory outlines various behaviors and processes which are analogous to those experienced by individuals facing breast cancer.

Findings

Since the nature of this study was exploratory and descriptive, findings consisted of outlining the process for conducting future studies and describing patterns of self-disclosure and coping styles. The primary finding concerning the process was in regard to the facility used to identify subjects. It is crucial to a study of this nature to include a facility attending exclusively breast cancer patients. Such a facility will provide the most comprehensive listing of potential patients and minimize complications associated with relying on numerous individuals within several medical facilities. From this facility the investigator can easily identify subjects and maintain control over others involved in the study.

In regard to self-disclosure and coping styles among couples, limited data allowed only patterns to be recognized. However, although data were very limited, there were patterns developing. First, in regard to the concern for the cancer, nine out of ten women and seven out of ten men reported a great concern for the cancer prior to

surgery. In addition, no males reported a great concern for either loss of sexual functioning or loss of attractiveness. In regard to self-disclosure, all women fell into the fair or moderate range for each administration time, whereas men were in the fair, moderate, and high ranges. Both groups were primarily in the moderate range.

In regard to coping styles, women showed slightly higher mean scores than men for confrontation, whereas the remaining data show no discernable pattern. In regard to a relationship between variables (concerns, self-disclosure, and coping styles), patterns for men suggest moderately positive correlations between sexual functioning and concern for attractiveness, concern for partner rejection and total self-disclosure, concern for partner rejection and total acceptance/resignation, and total self-disclosure and total acceptance/resignation. The patterns for women suggest moderately positive correlations between sexual functioning and concern for partner rejection, concern for partner rejection and concern for attractiveness, and total self-disclosure and total acceptance/resignation.

Discussion

Following an extensive effort to conduct a prospective investigation of the effects of breast cancer, it was determined that a complete delineation of the process was

needed prior to undertaking such a study. Although this was not the original purpose, this descriptive and exploratory study was crucial to future studies of this nature. The information obtained provided crucial information regarding the correct protocol to follow, interactions between investigators and medical and clerical personnel, instrumentation, patterns of self-disclosure and coping, and theoretical model. By delineating the process and establishing patterns, future studies regarding the effects of breast cancer, or any medical condition, on self-disclosure and coping styles among couples may be completed.

This proposed study is to be prospective and include both patient and her partner. The four evaluation times (prior to surgery, post surgery and prior to discharge, two weeks post-surgery, four months post-surgery) outlined were selected in order to assess the changes in self-disclosure and coping which occur over time, beginning at the time of diagnosis. Since data are very limited regarding prospective studies and breast cancer, and because no other studies have focused on these four evaluation times, this study provides a foundation for future investigations concerning self-disclosure and coping styles. The first three evaluation times (pre-operative, post-operative and prior to discharge, two-week post-operative) are to investigate the immediate effects on self-disclosure and coping, whereas the four month follow-up is to determine

whether change occurs over time. According to Weisman (1979), there is a time of "cumulative anxiety" approximately 3 months following the initial diagnosis. Everyone closely involved with the cancer has gone through the diagnosis, treatment, family adjustments, and other demands. Therefore, the proposed study is designed to investigate not only the immediate effects on self-disclosure and coping styles, but also determine effects several months after diagnosis. Similar studies have focused on three month (Heim, Augustiny, Blaser, Burki, et al., 1988; Morris, Greer, & White, 1977) and four month (Maguire, Lee, Bevington, Kuchemann, Crabtree, & Cornell, 1978) follow-up evaluation times.

This study provided crucial information for using a breast center as a means to identify patients with breast cancer. By incorporating such a facility, there is a central location from which to operate. It is believed that an analytical investigation can easily be accomplished by following the information provided in this study. In addition, the procedures outlined to identify patients and work within a breast center may be beneficial in various types of breast cancer research.

Recommendations

Based on information obtained in this exploratory and descriptive study, the following are recommendations for future related investigations:

1. To include a breast center interested in psychosocial research as the source for identifying potential patients. From this source, incorporate several attending surgeons staff to provide information regarding surgery and to serve as the link between investigator and subjects.
2. To carefully select participating clerical and medical personnel. Be assured that individuals agreeing to assist are capable of completing assigned responsibilities.
3. To anticipate difficulties with clerical and medical personnel. The investigator must retain composure and make adjustments as necessary, such as assigning duties to others or discussing to clarify.
4. To be empathetic when discussing the study with the subjects. It is important to avoid threatening language or insinuations.
5. To realize that follow-up contacts will be necessary to obtain all desired data.
6. To allow approximately one year to complete data

collection.

7. To include a control group of healthy patients and their partners. The investigator should consider women attending the same breast center for annual check-ups. The groups should be matched for age and education level.

CHAPTER 6

EPILOGUE

Originally, the intent of this study was to investigate the effects of diagnosis and treatment of cervical intraepithelial neoplasia (CIN) and breast cancer on self-disclosure and coping styles among couples. This was to be a prospective study evaluating both patient and her partner on four separate occasions: 1) prior to surgery, 2) after surgery and prior to discharge, 3) two weeks post-surgery, and 4) four months post-surgery. Although the original study was carefully designed with the assistance of many experienced researchers and physicians, there were several obstacles which interfered with the research effort. Therefore, due to complications beyond the control of the investigator, it was necessary to modify the original study. The following is a description of the original study, obstacles which arose, and modifications which ensued.

The original study was designed to include three physicians, one for cervical cancer and two for breast cancer. The sole responsibility of each physician was to simply direct any patient meeting the criteria into the study. The criteria were to be diagnosed with either cervical or breast cancer where surgery was required, and be in an exclusive relationship.

The primary obstacle in the original study was simply a lack of patients. Each attending physician had assured the investigative team that several patients per week would meet the study criteria. At this rate the anticipated number of patients, 30 cervical and 30 breast, would have been obtained in approximately six months. However, this did not occur. Although guaranteed an adequate number of patients by the professionals who deal with such occurrences on a daily basis, after five months there were only six cervical patients and four breast cancer patients included in the study. In addition, although there were other obstacles, such as working with uncooperative clerical and nursing personnel, the primary restriction for the original study was an inadequate number of patients meeting study criteria.

After approximately seven months of following the original study design, the investigative team made the decision to exclude the cervical aspect from the study and focus exclusively on breast cancer patients and their partners. This decision was made due to an opportunity to involve the Knoxville Breast Center (KBC). The KBC agreed to participate in the study and serve as the primary source of identifying patients for the study. This incorporation was considered appropriate because such a facility deals exclusively with breast cancer screening. In addition, by working with such a facility it was much easier to identify patients, and with minimal complications. The investigator

used this facility as the base from which to receive names of potential subjects, thus relying less on several individuals within separate medical centers.

After including the KBC, the major obstacles in the study were reduced significantly. This is because each individual involved in the study played only a small role. The role of the breast center was to provide a daily listing of patients scheduled for further assessment and their attending surgeon. The role of the clerical workers within the surgeon's office was simply to provide results of biopsies and surgery dates. Once the patient was identified, the investigator did everything else. Therefore, by assigning only minor responsibilities to a few individuals, there was more cooperation and much less resentment than observed in the original study.

After including the KBC as the source for patients, and collecting data for several months, it was determined that a study focusing exclusively on breast cancer patients would provide the necessary data in eight to twelve months. Evidence for this is in the fact that approximately 30 women are seen daily at most breast centers and at least two of these will need breast surgery. Therefore, by using three attending surgeons the study could be completed easily within one year.

Finally, although this study deviated from the original study design, it should be recognized as a valuable

contribution regarding the prospective investigation of breast cancer effects. In addition to providing a complete protocol, this study presents the reality of designing and implementing such a program, as well as describing the many interactions.

In order to complete this research, several skills were necessary. Foremost, is the ability to relate to people. Regarding research, this refers to possessing a tolerant and flexible, yet firm, disposition. Many of the obstacles encountered in this research were directly related to the individuals who were relied on the most. To alleviate the problems it was necessary to make adjustments which centered around these individuals, without altering the context of the study. The second skill was to realize that there are usually options available to the researcher if difficulties arise. In the case of this current research, it was necessary to seek new sources for patients and eliminate one aspect of the original study design. By taking the initiative and contacting several facilities it was possible to expand the study to include a new, more productive, source. This action, although it required new adjustments and further interactions, ultimately led to establishing the final research design. The third skill required was to be empathetic toward the subjects in the study. It is believed that projecting an understanding nature and genuine concern to the subjects was a strong contributing factor leading to

the high compliance in this study. In summation, although this study did change from quantitative to descriptive and exploratory, such an alteration was necessary in order to provide the necessary outline to properly conduct future prospective investigations.

REFERENCES

REFERENCES

- Adler, R. B., Rosenfeld, L. B., & Towne, N. (1980). Interplay: The process of interpersonal communication. New York: Holt.
- Antonovsky, A. (1979). Health, stress, and coping. San Francisco: Jossey-Bass.
- Andersen, B. L., & Jochimsen, P. R. (1985). Sexual functioning among breast cancer, gynecologic cancer, and healthy women. Journal of Consulting and Clinical Psychology, 53(1), 25-32.
- Andersen, B. L., Karlsson, J. A., Andersen, B., & Tewfik, H. H. (1984). Anxiety and cancer treatment: Response to stressful radiotherapy. Health Psychology, 3(6), 535- 551.
- Babbie, E. (1983). The practice of social research. (3rd. ed). California: Wadsworth.
- Baider, L. A. & De-Nour, A. K. (1988). Breast cancer - a family affair. In G. Cooper (ed.) Stress and breast cancer. (pp. 155-170), New York: John Wiley.
- Barber, H. R. (1980). Manual of gynecologic oncology. New York: Lippincott.
- Bard, M. & Sutherland, A. M. (1955). Psychological impact of cancer and its treatment: Adaptation to radical mastectomy. Cancer, 8, 656-672.
- Baum, M. (1981). Breast cancer: The facts. New York: Oxford.
- Bloom, J. R. (1982). Social support, accommodation to stress and adjustment to breast cancer. Social Science and Medicine. 16, 1329-1338.
- Bogdan, R. (1982). Qualitative research for education: An introduction to theory and methods. Boston: Allyn & Bacon.
- Boyd, P. (1984). The silent wound. Massachusetts: Addison- Wesley.
- Breast cancer detection awareness. (1986). American Cancer Society.

- Burish, T. G. & Lyles, J. N. (1983). Coping with the adverse effects of cancer treatments. In T. G. Burish and L. A. Bradely (eds.) Coping with chronic disease: Research and applications. New York: Academic Press.
- Brewin, T. B. (1977). The cancer patient: Communication and morale. British Medical Journal, 2, 1623-1627.
- Cancer facts and figures. (1991). Atlanta: American Cancer Society.
- Chelune, G. J. (1975). Self-disclosure: An elaboration of its basic dimensions. Psychological Reports, 36, 79-85.
- Chelune, G. J. (ed.) (1979). Self-disclosure. San Francisco: Jossey-Bass.
- Cobb, S. (1976). Social support as a moderator of life stress. Psychosomatic Medicine, 38, 300-314.
- Coyne, J. C. & Lazarus, R. S. (1980). Cognitive style, stress perception, and coping. In I. L. Kutash & L. B. Schlesinger (Eds.), Handbook on stress and anxiety: Contemporary knowledge, theory, and treatment. (pp. 144-158). San Francisco: Jossey-Bass.
- Cozby, P. C. (1973). Self-disclosure: A literature review. Psychological Bulletin, 79(2), 73-91.
- Dansak, D. A. & Cordes, R. S. (1979). Cancer: Denial or suppression? International Journal of Psychiatry in Medicine, 9, 257-262.
- Derogatis, L. R., Abelloff, M. D., & Melisaratos, N. (1979). Psychological coping mechanisms and survival time in metastatic breast cancer. Journal of American Medical Association, 242(14), 1504-1508.
- Feifel, H., Strack, S., & Nagy, V. T. (1987). Coping strategies and associated features of medically ill patients. Psychosomatic Medicine, 49, 616-625.
- Fitzpatrick, M. A. (1987). Marriage and verbal intimacy. In V. J. Derlega & J. H. Berg (Eds.) Self-disclosure: Theory, research, and therapy. New York: Plenum Press.
- Folkman, S. (1984). Personal control and stress and coping processes: A theoretical analysis. Journal of Personality and Social Psychology, 46(4), 839-852.

- Folkman, S. & Lazarus, R. S. (1980). An analysis of coping in a middle-aged community sample. Journal of Health and Social Behavior, 21, 219-239.
- Folkman, S., Lazarus, R. S., Gruen, R. J., & DeLongis, A. (1986). Appraisal, coping, health status, and psychological symptoms. Journal of Personality and Social Psychology, 50(3), 571-579.
- Folkman, S., Schaefer, C., & Lazarus, R. S. (1979). Cognitive processes as mediators of stress and coping. In V. Hamilton & D. M. Warburton (Eds.) Human stress and cognition: An information-processing approach. (pp. 265-298). London: Wiley.
- Friedman, L. C., Baer, P. E., Nelson, D. V., Lane, M., Smith, F. Dworkin, R. J. (1988). Women with breast cancer: perception of family functioning and adjustment to illness. Psychosomatic Medicine, 50, 529-540.
- Funch, D. P., & Mettlin, C. (1982). The role of support in relation to recovery from breast surgery. Social Science and Medicine, 16, 91-98.
- Giacquinta, B. (1977). Helping families face the crisis of cancer. American Journal of Nursing, 77, 1585-1588.
- Glucksberg, H., & Singer, J. W. (1980). Cancer care: A personal guide. Baltimore: John Hopkins University Press.
- Good, C. V. (1954). Methods of research. New York: Appleton.
- Gotay, C. C. (1984). The experience of cancer during early and advanced stages: The views of patients and their mates. Social Science Medicine, 18(7), 605-613.
- Gottman, J. M. (1979). Marital interaction. New York: Academic Press.
- Graydon, J. E. (1988). Factors that predict patients' functioning following treatment for cancer. International Journal of Nursing Studies, 25(2), 117-124.
- Heim, E., Augustiny, K. F., Blaser, A., Burki, C., Kuhne, D., Rothenbuhler, M., Schaffner, L., & Valach, L. (1987). Coping with breast cancer - a longitudinal prospective study. Psychotherapy and Psychosomatics, 48, 44-59.

- Heinrich, R. L. & Schag, C. C. (1987). The psychosocial impact of cancer: Cancer patients and healthy controls. Journal of Psychosocial Oncology, 5(3), 75-91.
- Heinrich, R. L. Schag, C. C. & Ganz, P. A. (1984). Living with cancer: The cancer inventory of problem situations. Journal of Clinical Psychology, 40(4), 972-980.
- Hilton, A. B. (1989). The relationship of uncertainty, control, commitment, and threat of recurrence to coping strategies used by women diagnosed with breast cancer. Journal of Behavioral Medicine, 12(1), 39-54.
- Holland, J. & Mastrovito, R. (1980). Psychological adaptation to breast cancer. Cancer, 46, 1045-1052.
- Humphrey, M. (1978). Delay in seeking medical advice for breast symptoms. In P. C. Brand and P. A. van Keep (Eds.) Breast cancer: Psycho-social aspects of early detection and treatment. Baltimore: University Press.
- Jamison, K. R., Wellisch, D. K., & Pasnau, R. O. (1978). Psychosocial aspects of mastectomy: I. The woman's perspective. American Journal of Psychiatry, 135(4), 432-436.
- Jourard, S. M. (1959). Self-disclosure and other cathexis. Journal of Abnormal and Social Psychology, 59, 428-431.
- Jourard, S. M. (1971). The transparent self. New York: Van Nostrand Reinhold.
- Jourard, S. M. & Lasakow, P. (1958). Some factors in self-disclosure. Journal of Abnormal and Social Psychology, 56, 91-98.
- Jourard, S. M. (1974). Healthy personality. New York: Macmillan.
- Katz, J. L., Weiner, H., Gallagher, T. F., & Hellman, L. (1970). Stress, distress, and ego defenses: Psychoendocrine response to impending breast tumor biopsy. Archives of General Psychiatry, 23, 131-142.
- Kushner, R. (1984). Alternatives. Massachusetts: Kensington.
- Lazarus, R. S. (1966). Psychological stress and the coping process. New York: McGraw-Hill.

- Lazarus, R. S. & Folkman, S. (1984). Stress, appraisal, and coping. New York: Springer.
- Lazarus, R. S., Kanner, A., & Folkman, S. (1980). Emotions: A cognitive-phenomenological analysis. In R. Plutchik & H. Kellerman (Eds.) Theories of emotion (pp. 189-217). New York: Academic Press.
- Lazarus R. S. & Launier, R. (1978). Stress-related transactions between person and environment. In L. A. Pervin & M. Lewis (Eds.), Perspectives in interactional psychology (pp. 287-327). New York: Plenum.
- Leiber, L., Plumb, M. M., Gerstenzang, M. L., & Holland, J. (1976). The communication of affection between cancer patients and their spouses. Psychosomatic Medicine, 38(6), 379-389.
- Levine, P. M., Silberfarb, P. M., & Lipowski, Z. J. (1978). Mental disorders in cancer patients: A study of 100 psychiatric referrals. Cancer, 42, 1385-1391.
- Lewis, F. M. Ellison, E. S., & Woods, N. F. (1985). The impact of breast cancer on the family. Seminars in Oncology Nursing, 1(3), 206 - 213.
- Lichtman, R. R., Taylor, S. E. & Wood, J. V. (1987). Social support and marital adjustment after breast cancer. Journal of Psychosocial Oncology, 5,(3), 47-74.
- Lindsey, A. M., Norbeck, J. S., Carrieri, V. L., & Perry, E. (1981). Social support and health outcomes in post-mastectomy women: A review. Cancer Nursing, 4, 377-384.
- Louhivuori, K. A. & Hakama, M. (1979). Risk of suicide among cancer patients. American Journal of Epidemiology, 109, 59-65.
- Love, S. M. (1991). Dr. Susan Love's breast book. Massachusetts: Addison-Wesley.
- Lohr, K. N. (1990). Breast cancer: Setting priorities for effective research. Washington D. C.: National Academy Press.
- Maguire, G. P., Lee, E. G., Bevington, D. J., Kuchemann, C. S., Crabtree, R. J., & Cornell, C. E. (1978). Psychiatric problems in the first year after mastectomy. British Medical Journal, 1, 963-965.

- Mastrovito, R. C. (1974). Cancer: Awareness and denial. Clinical Bulletin, 4, 142-146.
- Meyerowitz, B. E. (1983). Postmastectomy coping strategies and quality of life. Health Psychology, 2(2), 117-132.
- Meyerowitz B. E., Heinrich, R. L. & Schag, C. C. (1983). A competency-based approach to coping with cancer. In T. G. Burish and L. A. Bradely (eds.) Coping with chronic disease: Research and applications. (pp.137-158). New York: Academic Press.
- Moos, R. H. (1986). Coping with life crises. New York: Plenum.
- Morris, T., Greer, H. S., & White, P. (1977). Psychological and social adjustment to mastectomy. Cancer, 40, 2381-2387.
- Northouse, L. L. & Swain, M. A. (1987). Adjustment of patients and husbands to the initial impact of breast cancer. Nursing Research, 36(4), 221-225.
- Northouse, P. & Northouse, L. (1987). Communication and cancer: issues confronting patients, health professionals, and family members. Journal of Psychosocial Oncology, 5(3), 17-46.
- Oktay, J. S. & Walter, C. A. (1991). Breast cancer in the life course. New York: Springer.
- Peck, A., & Boland, J. (1977). Emotional reactions to radiation treatment. Cancer, 40, 180-184.
- Pederson, L. M., & Valanis, B. G. (1988). The effects of breast cancer on the family: A review of the literature. Journal of Psychosocial Oncology, 6, 95-118.
- Peters-Golden, H. (1982). Breast cancer: varied perceptions of social support in the illness experience. Social Science Medicine, 16, 483-491.
- Polivy, J. (1977). Psychological effects of mastectomy on a woman's feminine self-concept. Journal of Nervous and Mental Disease, 164, 77-87.
- Raush, H. L., Barry W. A., Hertel, R. K., & Swain, M. A. (1974). Communication, conflict, and marriage. San Francisco: Jossey-Bass.

- Revenson, T. A., Wollman, C. A., & Felton, B. J. (1983). Social supports as stress buffers for adult cancer patients. Psychological Medicine, 45, 321-331.
- Rickers-Ovsiankina, M. A. (1956). Social accessibility in three age groups. Psychological Reports, 2, 283-294.
- Rice, P. L. (1987). Stress and health: Principles and practice for coping and wellness. California: Brooks/Cole.
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. Psychological Monographs: General and Applied, 80(1, whole no. 609).
- Schain, W. S. (1985). Breast cancer surgeries and psychosexual sequelae: Implications for remediation. Seminars in Oncology Nursing, 1(3), 200-205.
- Schover, L. R. (1988). Sex after cancer: help your patient avoid dysfunction. Sex and Cancer, 13, 34-40.
- Selye, H. (1956). The stress of life. New York: McGraw-Hill.
- Simon, J. L. (1978). Basic research methods in social sciences. (2nd ed.) New York: Random House.
- Stetz, K. M., Lewis, M. F., & Primomo, J. (1986). Family coping strategies and chronic illness in the mother. Family Relations, 35, 515 - 522.
- Taylor, S. E., Lichtman, R. R. & Wood, J. V. (1984). Attributions, beliefs about control, and adjustment to breast cancer. Journal of Personality and Social Psychology, 46(3), 489-502.
- Thorne, S. (1985). The family cancer experience. Cancer Nursing, 8(5), 285 - 291.
- Vondracek, F. W. & Marshall, M. J. (1971). Self-disclosure and interpersonal trust: An exploratory study. Psychological Reports, 28, 235-240.
- Warbrek, A. J., & Zingle, H. W. (1976). Mastectomy: Sexual implications. Primary care, 3, 803-810.
- Weisman, A. D. (1979). Coping with cancer. New York: McGraw-Hill.

- Weitzman, S. & Kuter, I. (1987). Confronting breast cancer. New York: Random House.
- Wellisch, D. K. (1985). The psychologic impact of breast cancer on relationships. Seminars in Oncology Nursing, 1(3), 195- 199.
- Wellisch, D. K., Jamison, K. R., & Pasnau, R. O. (1978). Psychosocial aspects of mastectomy: II. The man's perspective. American Journal of Psychiatry, 135(5), 543-546.
- West, L., & Zingle, H. W. (1969). A self-disclosure inventory for adolescents. Psychological Reports, 24, 439-445.
- Wortman, C. B. & Dunkel-Schetter, C. (1979). Interpersonal relationships and cancer: A theoretical analysis. Journal of Social Issues, 35(1), 120-155.
- Valanis, B. G., & Rumpler, C. H. (1985). Helping women to choose breast cancer treatment alternatives. Cancer Nursing, 8(3), 167-175.

APPENDIXES

APPENDIX A
CONSENT FORM FROM KNOXVILLE BREAST CENTER

KNOXVILLE BREAST CENTER

1111 Northshore Drive
Building 2, Suite 324
Knoxville, TN 37919
(615) 584-0291

Pt. Number _____

Breast disease research studies are being conducted all across the United States in medical centers just like the Knoxville Breast Center. These health studies provide researchers with a great deal of information about breast diseases, such as: which women have a greater chance of developing fibrocystic disease, which diagnostic techniques are better at finding breast cancer in its earliest stages, and how to reduce the cost of routine breast evaluations. In an effort to find the answers to these and other questions for the women who live in the east Tennessee area, the Knoxville Breast Center is conducting similar research studies.

Just like all other health studies, our research requires the use of information from the medical chart. Information such as age, race, occupation, reproductive history, and family history of breast cancer are just a few of the items required for the studies. This is why it is important to complete the patient information forms provided by the receptionist. Also, in addition to patient information, the results of breast evaluations conducted by the physicians will be included in the studies. **ANY IDENTIFYING INFORMATION (PATIENT'S NAME, SPOUSE'S NAME, ETC) WILL NOT BE USED IN THIS RESEARCH.** The patient's chart remains confidential and only the staff sees the identifying information, just as they do in processing an insurance claim.

Please sign below to authorize the use of information from your medical chart in breast disease research studies conducted at the Knoxville Breast Center. If you have any questions, please discuss them with the physician during your visit.

Thank you for your participation. The results of all studies will be sent to you in a patient newsletter.

I authorize the use of information from my medical chart for research purposes. I understand that my medical chart will be kept confidential and that neither I nor my family will be identified in any research study.

Signed _____ Date _____

APPENDIX B
SUBJECT DEMOGRAPHICS AND CONCERNS

ONCOLOGY INVESTIGATION
THE UNIVERSITY OF TENNESSEE MEDICAL CENTER
KNOXVILLE, TENNESSEE

P A T I E N T
Q U E S T I O N N A I R E

Office Use Only:

Patient ID#: _____

Patient Group: CIN GYN BR

Questionnaire: 1 2 3 4

DEMOGRAPHIC DATA SHEET

Part One of this information sheet only needs to be completed once. If you have completed it previously, please skip to Part Two of this sheet.

Part One

1. Gender (circle one): 1. Female 2. Male
2. Relationship Status (Circle one):
1. Married
 2. Not married but in an exclusive relationship
(just with one partner)
 3. Single

Age —

If you answered married or in an exclusive relationship please answer question number 3.
If you are single, skip to question number five.

3. Length of Current Relationship (Circle one):
1. One year or less
 2. 2-4 years
 3. 5-9 years
 4. 10-14 years
 5. 15 or more years
4. Do you have any children from this relationship (Circle one):
1. Yes
 2. No
5. Have you had prior surgery (Circle one):
1. Yes
 2. No

If yes, please explain: (Use Back of Page)

6. Please indicate your level of education (Circle one):
1. Less than High School
 2. Some High School
 3. Completed High School
 4. Some College
 5. Completed College (Bachelor's Degree)
 6. Some Graduate Studies
 7. Completed Graduate Studies (Masters/Doctorate)

7. Please indicate your household level of income (Circle one):

1. Less than \$10,000 per year
2. \$10,000 - \$19,999 per year
3. \$20,000 - \$29,999 per year
4. \$30,000 - \$39,999 per year
5. \$40,000 - \$49,999 per year
6. More than \$50,000 per year

Part Two

8. What is your (or partner's) current diagnosis? (Circle one):

1. Cervical Intraepithelial Neoplasia (CIN)
2. Gynecologic Cancer: (specify) _____
3. Breast Cancer
4. None of the Above (Control Group)

9. Please check any of the following which are a concern to you and tell me whether it is of small, moderate, or great concern.

<u>Concern</u>	<u>Small</u>	<u>Moderate</u>	<u>Great</u>
1. Cancer	_____	_____	_____
2. Loss of sex functioning	_____	_____	_____
3. Loss of attractiveness	_____	_____	_____
4. Medical procedure	_____	_____	_____
5. Partner rejection	_____	_____	_____

If you would like information regarding sexuality and the medical condition indicated AND/OR a copy of the results of this study, please complete the attached 3 x 5 card. It will be kept separate from the questionnaire.

Please continue with the remainder of the questionnaire.

APPENDIX C
MEDICAL COPING MODES QUESTIONNAIRE

SECTION TWO**MEDICAL COPING MODES QUESTIONNAIRE (MCMQ)**

DIRECTIONS: Listed below are several questions asking about your typical thoughts, feelings, and behaviors as they relate to you or your partner's current medical condition. Please indicate your answer by circling the number below each question which best represents your feelings at the present time.

QUESTIONS:

1. How much do you want to be involved in decisions regarding the treatment?
1 = Very much 2 = Moderately 3 = Somewhat 4 = Very little
2. How often do you try to talk about the illness with friends or relatives?
1 = Never 2 = Sometimes 3 = Frequently 4 = All the time
3. In conversations about the illness, how often do you find yourself thinking about other things?
1 = Never 2 = Sometimes 3 = Frequently 4 = All the time
4. How often do you feel there is really no hope for full recovery?
1 = All the time 2 = Frequently 3 = Sometimes 4 = Never
5. In the past few months, how much have you learned about the illness from talking with others who know something about it, such as doctors, nurses, etc.?
1 = Very little 2 = Some 3 = Quite a bit 4 = Very much
6. How often do you feel that you don't care what happens to you?
1 = Never 2 = Sometimes 3 = Frequently 4 = All the time
7. To what extent do you like talking to your friends and family because you won't have to think about the illness?
1 = Never 2 = Somewhat 3 = Quite a bit 4 = Very much
8. How much has the illness caused you to think about certain things in your life in a more positive way?
1 = Very little 2 = Some 3 = Quite a bit 4 = Very much

SECTION TWO CONTINUED: MCMQ

9. When you think about the illness, how often do you try to distract yourself by doing something else?
1 = All the time 2 = Frequently 3 = Sometimes 4 = Never
10. How often do you ask the doctor for advice about what do concerning the illness?
1 = All the time 2 = Frequently 3 = Sometimes 4 = Never
11. When friends or relatives try to talk to you about the illness, how frequently do you try to change the subject?
1 = Never 2 = Sometimes 3 = Frequently 4 = All the time
12. In the past few months, how much have you learned about your illness from reading books, magazines, or newspapers?
1 = Very much 2 = Quite a bit 3 = Some 4 = Very little
13. How often do you feel like just giving in to the illness?
1 = All the time 2 = Frequently 3 = Sometimes 4 = Never
14. To what extent do you try to forget about the illness?
1 = Very little 2 = Some 3 = Quite a bit 4 = Very much
15. How many questions have you asked your doctor about the illness?
1 = None 2 = Some 3 = Many 4 = Alot
16. When you meet someone with this kind of illness, how much do you talk about the details of the illness?
1 = Very little 2 = Some 3 = Quite a bit 4 = Very much
17. How often do you go to the movies or watch TV in order not to think about your illness?
1 = Never 2 = Sometimes 3 = Frequently 4 = All the time
18. To what extent do you feel there is nothing you can do about the illness?
1 = Very much 2 = Quite a bit 3 = A little 4 = Not at all
19. When close relatives or friends ask you about the illness, how often do you talk to them about it?
1 = All the time 2 = Frequently 3 = Sometimes 4 = Never

APPENDIX D
SELF-DISCLOSURE QUESTIONNAIRE

SECTION ONE

SELF-DISCLOSURE QUESTIONNAIRE (SDQ)

DIRECTIONS: The following questions deal with the amount of communication between you and your spouse or partner. Please complete this on your own by circling the number below each question which best represents your feelings at the current time.

QUESTIONS:

1. Do you discuss the medical condition with your spouse/partner?

1	2	3	4
never	sometimes	frequently	all the time
2. Do you feel afraid to talk about your true feelings about the medical condition with your spouse/partner?

4	3	2	1
never	sometimes	frequently	all the time
3. Do you believe your spouse/partner is afraid to discuss their true feelings about the medical condition?

4	3	2	1
never	sometimes	frequently	all the time
4. Do you feel that your spouse/partner is understanding of the emotional needs created on you by the medical condition?

1	2	3	4
never	sometimes	frequently	all the time
5. When the medical condition is discussed with your spouse/partner, are you honest about your feelings (e.g. fears, needs, support, etc.)?

1	2	3	4
never	sometimes	frequently	all the time
6. Do you openly display your emotions (sadness, happiness, etc.) to your spouse/partner in regard to the medical condition?

1	2	3	4
never	sometimes	frequently	all the time
7. Given the current medical condition, do you feel a desire to be intimately touched more often?

1	2	3	4
never	sometimes	frequently	all the time
8. Does your spouse/partner appear to be afraid to initiate intimate touching?

4	3	2	1
never	sometimes	frequently	all the time

SECTION ONE CONTINUED:SDO

9. Given the current medical condition, do you have a desire to touch intimately more often?
- | | | | |
|-------|-----------|------------|--------------|
| 1 | 2 | 3 | 4 |
| never | sometimes | frequently | all the time |
10. How often do you feel afraid to touch your spouse/partner intimately?
- | | | | |
|-------|-----------|------------|--------------|
| 4 | 3 | 2 | 1 |
| never | sometimes | frequently | all the time |
11. Do you discuss with your spouse/partner how you like to be touched intimately?
- | | | | |
|-------|-----------|------------|--------------|
| 1 | 2 | 3 | 4 |
| never | sometimes | frequently | all the time |
12. Do you discuss with your spouse/partner when you like to be touched intimately?
- | | | | |
|-------|-----------|------------|--------------|
| 1 | 2 | 3 | 4 |
| never | sometimes | frequently | all the time |
13. Do you believe the medical condition has a negative effect on intimate touching between you and your spouse/partner?
- | | | | |
|-------|-----------|------------|--------------|
| 4 | 3 | 2 | 1 |
| never | sometimes | frequently | all the time |
14. Do you feel that the medical condition has inhibited conversation between you and your spouse/partner?
- | | | | |
|-------|-----------|------------|--------------|
| 4 | 3 | 2 | 1 |
| never | sometimes | frequently | all the time |
15. How often do you and your spouse/partner discuss how much emotional support is needed?
- | | | | |
|-------|-----------|------------|--------------|
| 1 | 2 | 3 | 4 |
| never | sometimes | frequently | all the time |
16. I feel that I can confide in my spouse/partner on virtually anything?
- | | | | |
|-------|-----------|------------|--------------|
| 1 | 2 | 3 | 4 |
| never | sometimes | frequently | all the time |
17. How often do you feel your spouse/partner will not discuss the medical condition because they are fearful of the possible outcome?
- | | | | |
|-------|-----------|------------|--------------|
| 4 | 3 | 2 | 1 |
| never | sometimes | frequently | all the time |

APPENDIX E
SURGEON APPROVAL STATEMENT

APPROVAL STATEMENT

As an attending physician of breast cancer patients, I have agreed to allow James G. McGuire to include patients under my medical care in the research study investigating the effects of breast cancer on communication and coping styles of couples.

(physicians name)

(date)

APPENDIX F
CONSENT FORM FOR PATIENT

INFORMED CONSENT: PATIENT BREAST

IMPACT OF DIAGNOSIS AND TREATMENT OF BREAST CANCER ON SELF-DISCLOSURE AND COPING STYLES IN COUPLES

The purpose of this study is to determine the impact of diagnosis and treatment of breast cancer on communication and coping in couples. That is, this study is designed to find out how the diagnosis and treatment of breast cancer affects how you and your partner communicate and how each of you cope.

We would like to get this information from you and your partner in order to develop ways that will help you and other patients and partners deal with this medical problem.

If you decide to participate, you will be asked to fill out the same questionnaire on three occasions. The first time would be shortly after admission into the hospital before surgery. The second time will be after surgery and prior to discharge from the hospital; the final time will be at the first post-operative visit to your doctor's office. The questionnaire will take about ten minutes to complete and there are no right or wrong answers.

If you wish, you may answer the questions in private. Of course, while we would like you to participate in the study, please understand that your participation is voluntary and that you may withdraw from the study at any time. Such a decision will have no effect on your ability to receive medical treatment.

When you complete the questionnaire, it will be kept separate from your medical record so that no one will see it except for the researchers. When the information is analyzed, your name will not appear anywhere so that you cannot be identified. At the end of the study all the questionnaires will be destroyed.

Since a limited number of patients and partners are being asked to participate, it is important to answer each question as honestly as possible in order to understand what patient and partner are going through.

While Dr. J. Neutens (Department of Obstetrics and Gynecology) is the principal investigator for this study, if you have any questions now or in the future, you may contact Jim McGuire (974-5041). If you wish to take this and the questionnaire home for further review before signing this consent form please feel free to do so.

Consent: I have read the description of this study and I have freely volunteered to participate in it. I have had an opportunity to ask questions and have received acceptable answers. I understand that I may withdraw from this study at any time and, if I do so, it will in no way affect the care and treatment I am provided for my condition. I understand also that I will receive a copy of this document.

(Signature)

(Date) _____

(Witness)

(Date) _____

APPENDIX G
CONSENT FORM FOR PARTNER

INFORMED CONSENT: PARTNER BREAST

IMPACT OF DIAGNOSIS AND TREATMENT OF BREAST CANCER ON SELF-DISCLOSURE AND COPING STYLES IN COUPLES

The purpose of this study is to determine the impact of diagnosis and treatment of breast cancer on communication and coping in couples. That is, this study is designed to find out how the diagnosis and treatment of breast cancer affects how you and your partner communicate and how each of you cope.

We would like to get this information from you and your partner in order to develop ways that will help you and other patients and partners deal with this medical problem.

If you decide to participate, you will be asked to fill out the same questionnaire on three occasions. The first time would be shortly after admission into the hospital before surgery. The second time will be after surgery and prior to discharge from the hospital; the final time will be at the first post-operative visit to your doctor's office. The questionnaire will take about ten minutes to complete and there are no right or wrong answers.

If you wish, you may answer the questions in private. Of course, while we would like you to participate in the study, please understand that your participation is voluntary and that you may withdraw from the study at any time. Such a decision will have no effect on your partner's ability to receive medical treatment.

When you complete the questionnaire, it will be kept separate from your partner's medical record so that no one will see it except for the researchers. When the information is analyzed, your name will not appear anywhere so that you cannot be identified. At the end of the study all the questionnaires will be destroyed.

Since a limited number of patients and partners are being asked to participate, it is important to answer each question as honestly as possible in order to understand what patient and partner are going through.

While Dr. J. Neutens (Department of Obstetrics and Gynecology) is the principal investigator for the study, if you have any questions now or in the future, you may contact Jim McGuire (974- 5041). If you wish to take this and the questionnaire home for further review before signing this consent form please feel free to do so.

Consent: I have read the description of this study and I have freely volunteered to participate in it. I have had an opportunity to ask questions and have received acceptable answers. I understand that I may withdraw from this study at any time and, if I do so, it will in no way affect the care and treatment I am provided for my condition. I understand also that I will receive a copy of this document.

(Signature)

(Date)

(Witness)

(Date)

APPENDIX H

APPROVAL LETTER FROM KBC TO INVESTIGATOR

Knoxville
Breast Center



The Knoxville Breast Center has agreed to participate in the study investigating the effects of breast cancer on the communication and coping styles of married or exclusively dating couples. The Center agrees to direct patients who fulfill study participation requirements to James G. McGuire, who will administer data collection instruments as specified in the amended protocol entitled, "A Comparison of the Impact of Diagnosis and Treatment of CIN (Cervical Intraepithelial Neoplasia), Invasive Gynecologic Cancers, and Breast Cancer on Self-Disclosure, Coping Styles, and Sexual Relations in Couples" (CRP #3332-B).

Kamillia F. Gitschlag, M.D.

APPENDIX I
DAILY LIST FORM FROM KBC

DAILY LIST FORM - KBC

168

Date _____

<u>Patient Name, Address and Phone Number</u>	<u>Chart No.</u>	<u>Surgeon</u>	<u>Consultation Date/Time</u>	<u>FNB</u>
---	------------------	----------------	-------------------------------	------------

_____	_____	_____	_____	_____

Signed KBC Consent Form? Yes ____ No ____

<u>Patient Name, Address and Phone Number</u>	<u>Chart No.</u>	<u>Surgeon</u>	<u>Consultation Date/Time</u>	<u>FNB</u>
---	------------------	----------------	-------------------------------	------------

_____	_____	_____	_____	_____

Signed KBC Consent Form? Yes ____ No ____

<u>Patient Name, Address and Phone Number</u>	<u>Chart No.</u>	<u>Surgeon</u>	<u>Consultation Date/Time</u>	<u>FNB</u>
---	------------------	----------------	-------------------------------	------------

_____	_____	_____	_____	_____

<u>Patient Name, Address and Phone Number</u>	<u>Chart No.</u>	<u>Surgeon</u>	<u>Consultation Date/Time</u>	<u>FNB</u>
---	------------------	----------------	-------------------------------	------------

_____	_____	_____	_____	_____

APPENDIX J

APPROVAL LETTER FROM KBC TO SURGEON

Knoxville
Breast Center



UNIVERSITY OF TENNESSEE
MEDICAL CENTER
KNOXVILLE, TENNESSEE

October 31, 1991

John H. Bell, M.D.
University of Tennessee Medical Ctr
1924 Alcoa Hwy, Bx11, DOS
Knoxville, TN 37920-6999

Dear John:

This letter is to ask for your participation in a research study investigating the effects of breast cancer on communication and coping styles of married or exclusively dating couples. The study has been ongoing for the past six months at The University of Tennessee Medical Center and is being expanded to include the Knoxville Breast Center. The Center has agreed to direct patients into the study and is excited about being a part of this research project.

In order for the study to be successful, your participation as the attending surgeon for these patients is needed. Your part is simply to allow the administration of a questionnaire to the patient while she is under your care. The data collection will be conducted by University of Tennessee doctoral candidate, James G. McGuire, who will maintain all information as medical confidential. A brief description of the research procedures utilized by Mr. McGuire is enclosed for your information.

Also enclosed is an approval statement which gives your permission for Mr. McGuire to access patients in your care who have been identified by the Center as study participants. The University of Tennessee Internal Review Board requires two original copies of this statement on your letterhead. Mr. McGuire will contact you to arrange a convenient time to answer any questions you may have and to pick up the approval statements should you choose to participate.

If you require additional information from the Knoxville Breast Center, please contact me or Toni H. Newport, Director of Research, at 584-0291. I encourage your support of this project and look forward to future cooperative research endeavors.

Sincerely,

Kamilia F. Gitschlag, M.D.

Enclosures

APPENDIX K
OVERVIEW OF STUDY

OVERVIEW OF STUDY

**AN INVESTIGATION OF THE EFFECTS OF BREAST CANCER ON
COMMUNICATION AND COPING STYLES OF MARRIED OR EXCLUSIVELY
DATING COUPLES.**

The selection criteria for patients is (1) to be married or in an exclusive dating relationship, and (2) require surgical treatment for breast cancer.

The study has been designed to obtain information from the patient and her spouse or dating partner on three separate occasions: 1) shortly following admission to the hospital and prior to surgery, 2) following surgery and prior to discharge from the hospital, and 3) two weeks post surgery. The instrument used is a questionnaire which takes approximately ten minutes to complete. Both the patient and her partner will complete a questionnaire on each occasion.

The couple will be introduced to the study at the Knoxville Breast Center. At this time the necessary procedures will be explained to the couple. If they agree to participate, they will sign a consent form which states that they fully understand all aspects of the study. They will also understand that they may withdraw from the study at any time. Only those patients who have previously signed the Knoxville Breast Center Informed Consent form agreeing to participate in breast disease research studies will be approached for inclusion in this project. A copy of the Center's consent form is attached.

All data collection procedures will be conducted by The University of Tennessee doctoral candidate, James G. McGuire.

APPENDIX L
LETTER TO CONFIRM PATIENT PARTICIPATION

CONFIRMING PATIENT PARTICIPATION

_____ has agreed to participate in the research study entitled "An Investigation of the Effects of Breast Cancer on Communication and Coping Styles of Married or Exclusively Dating Couples." The patient and her partner have been informed of the necessary procedures regarding the study and have signed consent forms stating their willingness to participate.

Jim McGuire
Ph.D Candidate
University Of Tennessee

APPENDIX M
COVER LETTER FOR MAIL ADMINISTRATION

February 11, 1992

Patient and Partner Name
Street Address
City, State, Zip

Dear Patient and Partner:

A few weeks ago at the University of Tennessee Medical Center you were introduced to a research study investigating the effects of certain medical conditions on communication and coping styles of couples. As you may recall, each of you have completed questionnaires on two occasions. It is now time for the final questionnaire as was indicated at the time of your original consent to participate in the study.

The results of the study will allow us to develop ways to benefit patients who are facing similar medical conditions. Keep in mind, your names will remain confidential and separate from the data analysis so that you cannot be identified.

Please find enclosed two questionnaires and an addressed, stamped envelop for return of the completed questionnaires. It would be appreciated if you would return them within the next week. Remember, it is important that you complete the questionnaires separate from one another to maintain individual feelings and opinions. If you have any questions, please feel free to contact me at 974 - 5041.

I have also enclosed a copy of the consent form for your records. On behalf of the investigative team, thank you for your participation.

Sincerely,

James G. McGuire

APPENDIX N
PATIENT PARTICIPATION FORM

PATIENT PARTICIPATION FORM

178

PATIENT

Name _____ ID Number _____
Address _____

Phone Number _____ Chart Number _____

PARTNER

Name _____ ID Number _____
Partner Relationship Spouse _____ Boyfriend _____

GENERAL INFORMATION

Physician _____
KBC Consent Form Signed Yes _____ No _____
Study Consent Form Signed Yes _____ No _____
Fine Needle Results _____
Consultation Date & Time _____
Surgical Biopsy Date & Time _____
Surgery Date & Time _____

QUESTIONNAIRE ADMINISTRATION

Date Questionnaire # 1 Administered _____
Date Questionnaire # 1 Received _____
Date Questionnaire # 2 Administered _____
Date Questionnaire # 2 Received _____
Date Questionnaire # 3 Administered _____
Date Questionnaire # 3 Received _____

COMMENTS: _____

VITA

James Gregory McGuire was born in Gulfport, Mississippi on August 18, 1958. He received his undergraduate degree in community health at the University of Southern Mississippi (1982) and his Master of Science degree in health education at Western Kentucky University (1984). After receiving the M. S. degree he was employed (1984 - 1986) as an instructor at Northeast Louisiana University. In the fall of 1986 he moved to Hattiesburg, Ms. where he was employed as an instructor at the University of Southern Mississippi. He entered the University of Tennessee, Knoxville in the fall of 1988 where he completed the Doctor of Philosophy degree in health education. Graduation date was August, 1992.