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Effectiveness of three methods of teaching breast self-examination

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EFFECTIVENESS OF THREE METHODS OF
TEACHING BREAST SELF-EXAMINATION

by

Rochelle Ann Jacober

A Thesis Submitted to the Faculty of the
COLLEGE OF NURSING
In Partial Fulfillment of the Requirements
For the Degree of
MASTER OF SCIENCE
In the Graduate College
THE UNIVERSITY OF ARIZONA

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ABSTRACT

A quasi-experimental design was used in this study to determine if guided practice would result in higher breast cancer knowledge scores, higher breast self-examination (BSE) knowledge scores and higher intent to practice scores than modeling alone or teaching without modeling or guided practice. Fifty-eight women participated in the study. There were 19 women in the guided practice group, 22 in the modeling group and 17 in the control group.

A pre-test, post-test format was used. ANCOVA was used to statistically control for the variance in pre-test scores. Descriptive statistics were used to analyze demographic data. The results showed that all methods of teaching resulted in higher breast cancer and BSE knowledge scores and in higher intent to practice scores. There were no statistically significant differences between the groups. Nursing research needs to continue in this area to find the most effective method of teaching women breast self-examination.

CHAPTER I

INTRODUCTION

Breast cancer is a major health problem in women in the United States. The American Cancer Society (ACS) (1987) estimated that 130,000 new cases of breast cancer will be diagnosed in 1987, and deaths from this disease were estimated to be 41,300. Since there is no way to prevent breast cancer at this time, early detection of the disease is the primary method to reduce the morbidity and mortality from breast cancer.

Ninety percent of women diagnosed with localized breast cancer can expect to be alive in five years. If there are metastases, the rate drops to 60% (ACS, 1987). Given these statistics it becomes apparent that the goal is to detect breast cancer in its early stages.

While mammography has proven to be an effective way to detect early breast cancers, it is not recommended for all women. The American Cancer Society recommends that women between the ages of 20 and 40 years should practice monthly breast self-examination and have a breast examination every three years by a physician. Between the ages of 35 and 40 years a baseline mammogram should be done in addition to monthly breast self-examination; women older than 40 years need a yearly physician breast examination as well as monthly breast self-examination. Mammograms are recommended every two years for women 40-49 years and every year for women 40 years and older (ACS, 1983).

Breast self-examination is an inexpensive, non-invasive, and accessible way to detect breast cancer. Ninety-six percent of women have heard of breast self-examination (BSE) and though it is easy to learn and inexpensive, not over 50% of women practice it every month (National Cancer Institute, 1980). Instruction about breast cancer and BSE instruction have been shown to increase practice of BSE and increase knowledge about the early signs of breast cancer (Brailey, 1986; Baines, Wall, Risch, Kuin & Fan, 1986). There are several methods of teaching BSE (Marty, McDermott & Gold, 1983; Mettlin & Marshall, 1985; Edwards, 1980) and nurses should be concerned about the most feasible and effective method of teaching women of all ages.

One method use to teach BSE is modeling the behavior using a breast model. Modeling includes a demonstration of the behavior (such as BSE) that the instructor wants the learner to adopt. In addition to modeling, guided practice is sometimes used, which includes having the learner do a return demonstration on the breast model and receiving corrective feedback on her performance. Another alternative is to teach BSE without using breast models for modeling or for guided practice.

Purpose of the Study

The purpose of this study was to determine whether or not having women do a return demonstration and receiving individual corrective feedback while practicing on a breast model (guided practice) is more effective than modeling the behavior on a breast model without receiving corrective feedback, or is more effective than instruction without using modeling or using guided practice. The three groups in the study were:

(1) A group instructed using guided practice; (2) A group instructed using modeling without guided practice; and (3) A group receiving instruction without guided practice or modeling.

Research Questions

1. Does guided practice result in higher breast cancer knowledge scores than modeling alone or instruction without modeling or guided practice?
2. Does guided practice result in higher BSE knowledge scores than modeling alone or instruction without modeling or guided practice?
3. Does guided practice result in higher intent to practice scores than modeling alone or instruction without modeling or guided practice?

Significance of the Study

The issue of health education is significant to the nursing profession. Part of nursing's role is educating clients about health and illness. Because several studies show that with BSE instruction reported practice increases (Mamon & Zapka, 1985; Brailey, 1986; Baines, Wall, Risch, Kuin & Fan, 1986), the method of teaching BSE becomes highly significant in the attempt to increase practice in the greatest number of women possible. Different methods of BSE education have been tested and different results have been reported (Marty, McDermott & Gold, 1983; Edwards, 1980). In a time when consumers are demanding more from health care professionals it becomes necessary to continue this research and attempt to discover the most effective method for teaching BSE to women

of all ages. Nurses are an appropriate group of health care professionals to teach BSE because of their focus on wellness, response to illness and preventive health practices. Therefore, nurses need to be involved in the research process to discover the most effective methods of teaching BSE.

Monthly breast self-examination has been recommended by the American Cancer Society and by the National Cancer Institute. The method for practicing BSE has been outlined, but the best way for teaching women the technique needs to be investigated so that the most proficient and most cost effective methods will be used.

Definition of Terms

Modeling - An activity whereby the instructor demonstrates the correct method of performing BSE using a breast model.

Guided Practice - An activity whereby the participant is shown BSE using a breast model and then performs BSE on a breast model and receives corrective feedback.

Breast Cancer Knowledge - Correct responses to items on a questionnaire that test factual information about the incidence, risk factors, and signs and symptoms of breast cancer.

BSE Knowledge - Correct responses to the items on the questionnaire that measures cognition of the correct procedure for doing BSE.

Intent to Practice - A subjective response from the subject about how many times she plans to practice BSE in the six months following BSE instruction.

Summary

Breast self-examination has been recommended as a method for early detection of breast cancer. The goal is to educate women about BSE in the most efficient and effective way. The intent of this study was to compare the effectiveness of three methods of teaching BSE on breast cancer and BSE knowledge and on the intent to practice BSE. One method included using guided practice to give corrective feedback to women who are practicing BSE on a breast model. Another method was to teach BSE using the method of modeling the behavior on a breast model but not using guided practice. The third method was to instruct women in BSE without using breast models for modeling or guided practice.

CHAPTER II

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Included in this chapter is the literature related to breast self-examination (BSE) and literature that provides background for the theoretical framework. BSE has been investigated from several perspectives including attitudes and beliefs about BSE and breast cancer, factors predicting BSE practice, proficiency of women doing BSE, BSE related to breast cancer stage and education programs for teaching BSE.

Theoretical Framework

The theoretical framework for this study is represented in Figure 1. Teaching, particularly health education, is aimed at increasing a wanted health behavior or decreasing an unwanted behavior by increasing health knowledge. In this study, the goal was to determine the best way to increase a wanted behavior, i.e., BSE. In an ACS study conducted by Gallup (1974), three major factors were cited for reasons women did not perform BSE, the wanted health behavior. The three factors were lack of confidence, fear and anxiety, and lack of knowledge about the importance of frequent breast examinations. Modeling, learning a behavior via watching another perform it (Edwards, 1980; Marty, McDermott & Gold, 1983), has been advocated as a useful educational tool. Bloomquist (1986) states "showing people how to perform is often an effective way of increasing the probability of their learning and practicing healthful lifestyles" (p. 8). Bloomquist also stated that mental

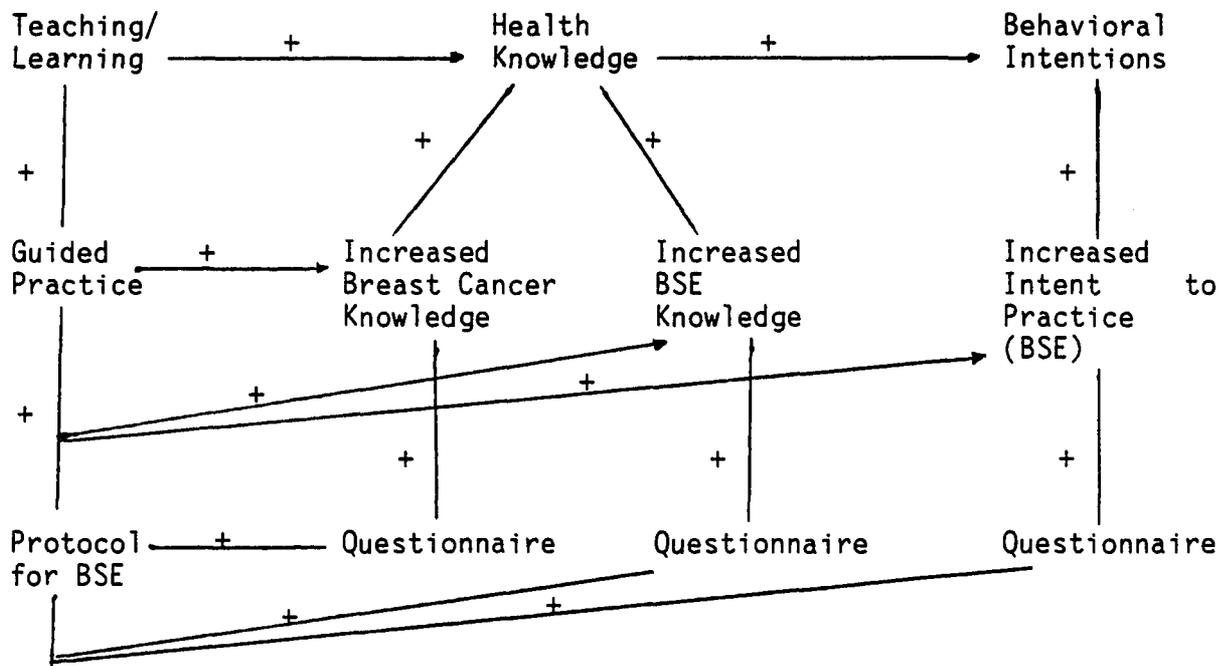


Figure 1. Theoretical Framework for Study

rehearsal will aid memory and that performance of the modeled activity will increase if corrective feedback is given during the practice of the activity. Guided practice, in which the participant rehearses the modeled behavior and receives performance feedback (Edwards, 1980; Marty, McDermott & Gold, 1983), can provide practice to increase confidence and reassurance that the technique is performed correctly. Additionally, further information can be provided during the feedback process. Using guided practice may increase BSE and breast cancer knowledge, provide increased confidence and lead to a greater intent to practice. Dwyer (1986) contends that rehearsal also facilitates the movement of learned information from short-term memory to long-term memory.

Based on the literature, guided practice, which will teach the protocol for performing BSE may lead to increased practice of BSE. The BSE knowledge and practice tool is designed to measure the extent to which the participant knows the protocol for performing BSE as well as their intent to practice.

Review of the Literature

Attitudes and Beliefs About Breast Cancer and BSE and Factors Predicting BSE Practice

Several studies have attempted to explore which variables explain why some women practice BSE and others do not. Some researchers have used the Health Belief Model to study the variables (Massey, 1986; Champion, 1985; Calnan & Rutter, 1986; Hirshfield-Bartek, 1982). Calnan & Rutter (1986), in a study comparing 262 women who voluntarily attended BSE classes to 594 women who served as controls, found that the

beliefs/behavior relationship was weak while others have found that this model has been useful. Hirshfield-Bartek (1982) and Massey (1986) found that increased perceived susceptibility scores are related to increased BSE practice. Additionally, women with low barriers-to-practice scores practice BSE more frequently (Hirshfield-Bartek, 1982; Champion, 1986). Some of the barriers found are: embarrassment, having to start a new habit, time, and difficulty in doing BSE (Champion, 1986). Champion (1986), in a study with 301 women using a self-administered questionnaire, found that variances in the frequency of BSE can be significantly accounted for by the variable of health motivation.

The individual's perception of the health benefits resulting from the action, how distasteful the act is considered to be and the degree the individual perceives social support were the factors studied by Norman & Tudiver (1986). Questionnaires were mailed to family practice patients and the investigators attempted to clarify relationships between knowledge of BSE practice, how the women were instructed in BSE and the frequency they practiced BSE. The knowledge of effective BSE and the frequency with which the women practiced BSE were found to have little relationship. The results showed that the best single predictor of BSE practice was perceived social support. The index of distastefulness also added to the prediction of BSE practice.

Horne, McDermott & Gold (1986) used Fishbein's Model of Behavioral intent. The first is an attitudinal factor and the second a normative factor. In a population of 163 women, they found that the model accounted for 22% of the women had heard of BSE and 28.7% reported

having practiced BSE once a month or more in the three months prior to the study.

Researchers have also attempted to define the characteristics of those who practice BSE. It has been found that women who practice BSE tend to be younger women (Cole & Gorman, 1984; Celentano & Holtzman, 1983). Knowledge of breast cancer and the risk factors have been identified as not affecting frequency of BSE practice (Cole & Gorman, 1984; Schlueter, 1982). Confidence in ability to do BSE has also been studied and Celentano & Holtzman (1983) and Hall, et al. (1980) found that women practicing monthly BSE had higher perceived confidence in performing BSE. Contrary to this, Hirshfield-Bartek (1982) found that lack of confidence was not a barrier to practicing BSE.

Schlueter (1982) studied athletic and nonathletic women to find out if athletic women who were engaged in the preventive health behavior of exercise were more apt to engage in monthly BSE. No significant difference in the women regarding BSE practice was found. A self-report format was used and the results indicated that most of the women thought there was some susceptibility to breast cancer and that BSE was beneficial but didn't apply these thoughts to BSE practice.

Proficiency of Women Doing BSE

Health care professionals must also be concerned with how well women are doing BSE. Haughey, et al. (1984) studied 126 registered nurses and their ability to detect nodules in silicone breast models. "The results of this research suggest that the technique by which BSE is performed appears to have an important effect on nodule detection

skills" (p. 41). Hall, et al. (1980) used a unique research approach to measure proficiency in detecting actual breast masses. Six women were recruited and these women had a total of 13 breast lumps, all benign. Then, 20 subjects examined the six women before and after a 20 to 30 minute training session using breast models or a period of unrelated activity. They found the ability to detect masses in a breast model to be directly related to the ability to detect lesions in actual breast tissue.

More commonly, proficiency of BSE practice is reported not by direct observation by the researcher but by self-reporting of the women in the study. Sheley (1983) conducted a telephone survey and elicited information about BSE. Only 21% of the sample of 290 women knew the correct time and technique for BSE and 27% of those who practiced monthly BSE knew the correct time and method for BSE. In Celentano & Holtzman's study (1983), a scoring system for BSE competency was developed. Higher scores were found to be related to women who were taught by health professionals.

BSE's Relation to Breast Cancer Stage

Senie, Rosen, Lesser & Kinne (1981) studied 1,216 women with breast cancer and collected data on the frequency of BSE, physician examination, mammography and method of detection of breast cancer. Eighty percent of the women detected their own tumors. No correlation was found between BSE and presence of axillary lymph nodes metastases. There was a significant correlation found between tumor size and axillary lymph node status at diagnosis and the frequency the women

had a medical examination. "A more favorable stage of disease was associated with more frequent physician examination" (p. 586). An interesting finding in this study was that more frequent BSE practice was found in women who had more frequent medical examination of the breasts.

Smith, Francis & Polissar (1980) studied women with breast cancer and asked if BSE was performed and if so how often. Practicing BSE three times per year was considered effective. Seventy-six percent of all the women found their own tumors and women who practiced BSE were significantly more likely to find their own tumors. There was, however, no significant relationship between the group who practiced BSE and the extent of disease, measured by stage, number of lymph nodes and tumor size.

Greenwald et al. (1978) conducted a study to find out if women who discovered their tumors by BSE or had them discovered by a routine examination by a physician are more likely to have their cancer diagnosed at an earlier stage than those who accidentally discover their tumor. They found that tumors detected by BSE tended to be diagnosed at an earlier stage (TNM system). They also found that tumors discovered either by BSE or routine physician examination were significantly smaller than those found by accident.

Foster et al. (1978) found that "there was a significant relation between frequency of breast self-examination and lower clinical stage of breast cancer at first diagnosis" (p. 266). Philip, Harris, Flaherty & Joslin (1986) found interesting information about how long women waited to report discovered abnormalities. Forty-five percent of the

women who never did BSE reported symptoms within a month while 64% of those practicing reported symptoms within a month. There was also a significant finding between the BSE practicers and non-practicers and the incidence of clinically early cancers. Forty-eight percent of the BSE practicers compared to 35% of non-practicers had clinically early cancers. There was no significant difference between BSE practitioners and those women whose tumors were discovered by a physician.

Owen et al. (1985) studied relationships between 11 variables and found that of the cancers detected by BSE, 57.7% were either in situ or localized. They stated "...it is possible to conclude that cancers found by BSE, routine physical examination, and screening did not differ significantly with respect to stage; cancers found by casual discovery were at a significantly later stage" (p. 1172).

Huguley & Brown (1981) found again that the delay in diagnosis was less for the women who practiced BSE than for those who did not. They also presented evidence that women who practiced BSE presented with smaller tumors and earlier staged disease. Foster & Costanza (1984) looked at BSE in relation to the survival of breast cancer patients and found that increased frequency of BSE resulted in a better survival rate within the first several years. They again found that frequent BSE was associated with a better clinical stage of cancer and again less delay of diagnosis after the women discovered a lump.

Education Programs for Teaching BSE

Several researchers have attempted to find the best way to teach BSE, that is, the method that will result in the highest rates of BSE

practice with the greatest proficiency. Marty, McDermott & Gold (1983) compared the use of pamphlets alone, modeling alone, and modeling with guided practice. They found knowledge about breast cancer and BSE did not differ between groups. Modeling with rehearsal was superior to the others in effectiveness of getting women to do BSE and to do it proficiently. In Marty, McDermott & Christiansen's (1983) work, knowledge levels between groups did not differ when comparing education by pamphlet alone or education which involved discussion and guided practice. They did, however, find a significant difference in the number of women in the two groups who reported having practiced BSE three months later. Of the women in the guided practice group, 60.5% reported doing BSE and 39.5% of the pamphlet group reported doing BSE. McDermott & Marty (1984) tested subjects using pamphlets alone versus guided practice. Again, knowledge scores were equivalent but practice was greater in the women who had been educated using a guided practice method. It would appear from these studies that knowledge about breast cancer and BSE can be taught effectively in a number of ways, including distribution of pamphlets. Practice of BSE is greater with guided practice.

Another comparison of teaching methods was done by Mettlin & Marshall (1985). They tested pamphlets alone, pamphlets plus viewing a videotape, and pamphlets plus having women practice BSE on a model. The group who practiced were more confident and better able to detect lumps in a breast model three months after instruction.

Four methods of teaching, modeling, modeling plus guided practice, modeling plus self-monitoring, and modeling plus peer support

have also been tested (Edwards, 1980). Practice of BSE increased in all of the groups but there were no statistically significant differences between the groups.

Allowing women to practice BSE can be an effective educational method. Another issue that needs to be considered, however, is a question of allocating resources. It requires someone knowledgeable and proficient in BSE to teach BSE. Therefore, the next question becomes: Is BSE best learned in an individual, small group or large group format? A small group format has been shown to be effective (Bailey, 1986; Mamon & Zapka, 1985). Bailey (1986) compared small group to individual teaching and found both ways created increased practice. Individual teaching also had the effect of increasing women's perceived susceptibility to breast cancer and also to the benefit of BSE. Young & Marty (1985) also found a small group format to be more effective than a larger lecture type of format.

One other concept in the literature commands some attention. This is the idea of follow-up on BSE education. After women have been taught BSE their practice increases and increases even more after follow-up one and two years later (Baines, Wall, Risch, Kuin & Fan, 1986). More research needs to be done to obtain information about the most effective way to do follow-up to determine if the practice of BSE had continued.

Hypotheses

The hypotheses for this study were as follows:

1. Subjects receiving BSE instruction that includes guided practice will have scores which indicate greater knowledge of breast cancer than those who receive instruction using modeling alone or instruction without guided practice or modeling.

2. Subjects receiving BSE instruction that includes guided practice will have scores which indicate greater knowledge of the correct method for performing BSE than those who receive instruction using modeling alone or instruction without guided practice or modeling.

3. Subjects receiving BSE instruction that includes guided practice will have a greater intent to practice than those who receive education using modeling alone or instruction without guided practice or modeling.

Summary

Breast self-examination has been investigated in a variety of ways but there are no definitive results regarding exactly which variables result in BSE practice. Once women decide to do BSE, proficiency is crucial. Some studies have found that proficiency increased with practice on models and some studies have found that women practicing BSE monthly are not necessarily doing it correctly.

The data about practicing BSE resulting in a better clinical stage are somewhat conflicting. Earlier reporting of breast lumps by women practicing BSE is a significant finding in and of itself. Several kinds of educational programs can result in increased BSE and

breast cancer knowledge but practice of BSE is increased when women are allowed to practice the technique during instruction.

The hypotheses for the study were focused on guided practice being a superior way to teach breast self-examination. It was hypothesized that guided practice would result in higher knowledge scores and higher intent to practice scores.

CHAPTER III

RESEARCH METHODOLOGY

This chapter focuses on the methodology for this research. The design, sample, tools, the protocol for collecting data and the statistical analysis methods are discussed.

Design

A quasi-experimental design, which allows the manipulation of the independent variable was used for this research. In a quasi-experimental approach there is a lack of either randomization or a control group that is needed for an experimental design (Polit & Hungler, 1987). This study lacked the randomization of individual subjects to groups, as the sample was one of convenience. There was, however, randomization of the treatment to the groups using a table of random numbers. It was recognized that this is not the best way to randomize but it was the most clinically feasible for this study. The strengths of these types of design are their "practicality, feasibility, and, to a certain extent, their generalizability" (Polit & Hungler, 1987, p. 137). The disadvantage of this kind of design is its inability to allow the researcher to make causal inferences (Polit & Hungler, 1987).

Sample and Setting

Fifty-eight women comprised the sample for this study. Subjects were recruited by putting a notification in an apartment complex newsletter, by distributing flyers to women, and by verbally spreading the word of the need for volunteers. Twelve sessions were scheduled and there were two to six women per group. The women were asked to call and sign up for a session that was most convenient for them. They were informed that it would take approximately 30 to 60 minutes. The groups were scheduled to meet in the evenings and on the weekend days. The criteria for inclusion in the study were as follows:

1. Eighteen years of age or older
2. Female
3. Able to read and write English

Protection of Human Subjects

The proposal was reviewed by the Ethical Review Committee of the University of Arizona College of Nursing for approval to conduct the study (Appendix A). A brief explanation of the research was given to the subjects at the time they agreed to participate in the study and at the time of data collection. A disclaimer was also prepared and given to the participants (Appendix B).

Measurement Instrument

A demographic data sheet consisting of 12 questions was used to elicit information such as age, marital status, previous history of breast cancer, previous history of breast biopsy, and current frequency of breast self-examination (Appendix C). The level of education

was also asked, as well as the number of children, family history of breast cancer, history of mammogram examination, and past education about BSE. The questions on personal history, history of breast cancer, family history of breast cancer, age in years at time of first child's birth and history of breast biopsy, were asked to obtain information which can identify women who may have some of the risk factors identified by the American Cancer Society (1987). The questionnaire (Appendix D) was designed to measure breast cancer knowledge, BSE knowledge and the intent to practice BSE in the future. The questionnaire was developed by the researcher and the content was taken from the guidelines for BSE and information on breast cancer developed by the American Cancer Society (ACS, 1982; ACS, 1977). Content validity for the questionnaire was established by having the tool critically reviewed for content and accuracy by two graduate students specializing in oncology nursing. A pilot study consisting of 11 graduate nursing students was conducted prior to the study to assist the researcher in constructing a method to assure distinct treatment to each of the groups.

Part one of the questionnaire was designed to measure knowledge of breast cancer and the risk factors associated with breast cancer. Consisting of six multiple choice questions, the first five questions each had four possible answers. The sixth question was aimed at measuring knowledge of risk factors; seven possible choices were listed and the subject was asked to indicate as many as apply. The range of correct possible answers in part one was zero to 12.

The second part of the questionnaire was designed to measure knowledge about the correct method of performing breast self-examination.

There were a total of 12 multiple choice questions and each had four possible choices. Two of the questions required that the subject choose the response from a list of answers. The range of possible correct scores for this part was zero to 12.

Part three of the questionnaire measures subjects intent to practice BSE and their confidence in practicing BSE. There are also two questions to determine if subjects think that practicing BSE is important. There was a total of five Likert-type questions on this part of the questionnaire. Participants were asked to rate a statement using the following responses: agree strongly, agree, disagree, and disagree strongly. Part four of the questionnaire asked the subjects to choose a response indicating the number of times they believe they will practice BSE in the six months following participation in this study. There were five choices from which to choose in response to a single question, ranging from "never" to "more than six times". There was only one question in this part.

Data Collection Protocol

Three different methods of teaching breast cancer information and BSE were taught at scheduled times. Subjects were told that they were participating in a study that aimed to assess the effectiveness of different methods of teaching BSE. The groups were randomly assigned to determine which sessions were treatment groups and which were the control groups.

The following describes the sequence of events in collecting data.

Pre-test

Control Group (instruction without guided practice or modeling), Treatment One Group (modeling alone), Treatment Two Group (Guided Practice). Once each of the groups had assembled, they were given a brief description of the study and the disclaimer. They were also given a description of the sequence of events. They were then given the demographic data sheet to fill out along with the questionnaire.

Treatment

Control Group (instruction without modeling or guided practice). The education for this group consisted of a discussion that lasted approximately five minutes and included breast cancer statistics, the signs and symptoms of breast abnormalities, who should do BSE, why BSE should be done, when it should be done and what they should do if they find an abnormality. Following this short discussion, subjects viewed a 12 minute videotape which showed them how to do breast self-examination. The film featured a young woman who is bare breasted and talks through a complete breast examination.

Treatment One Group (modeling alone). The education for this group consisted of the same discussion and videotape described above. In addition, the women received instruction by having a breast examination modeled on a breast model by the researcher. The women were then allowed to practice breast self-examination on the breast models which have simulated breast lumps.

Treatment Two Group (guided practice). The women in this group received the same information via discussion as the control and

treatment one group as well as the same videotape. They also received education via modeling as described for the treatment one group. In addition, they were taught using guided practice. They were asked to demonstrate and describe the correct technique for a complete breast examination using a breast model. The following list gives the behaviors the women were asked to perform:

1. Demonstrate the proper way to position her arms for examination of the breasts in front of a mirror.
2. Show the correct fingers used to perform BSE and the correct part of the fingers to use.
3. Show the correct positions for her arms to be in while performing BSE lying down.
4. Do a breast examination on the model. The subject was asked to do a complete examination on a breast model and was given feedback about her examination with emphasis on the following: (a) Starting at the 12:00 position and going around the periphery of the breast and then moving in until she reaches the nipple; (b) palpating directly over the nipple area and in the axilla; and (c) squeezing the nipple gently between the thumb and the index finger to check for discharge.

Post-test

Control Group, Treatment One Group, and Treatment Two Group.

At the end of instruction for each of the groups the events of the post-test were identical. The subjects in each group completed the post-test.

Statistical Analysis

Analysis of covariance (ANCOVA) was used to estimate the differences between groups (Polit & Hungler, 1983) in this study. ANCOVA was used to statistically control for the variance in the pre-test scores. The pre-established significance level was 0.05. Descriptive statistics were used to analyze the demographic data such as age, prior BSE practice, and family history of breast cancer.

Summary

A quasi-experimental design was used to test the effectiveness of guided practice on knowledge of breast cancer and BSE and on the intent to practice BSE. Fifty-eight women were the subjects for this study; they were self-appointed to a group and the group was randomly selected to be a control, treatment one group, or treatment two group. The questionnaire used for data collection was developed by the researcher. A pre-test, post-test format was used to evaluate the effectiveness of the intervention. Statistical analysis was done using ANCOVA and descriptive statistics.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

This chapter presents the results and analysis of data collected in this study. The reliabilities for the questionnaire are also reported.

A quasi-experimental design was used to determine if guided practice was a superior teaching method for breast self-examination (BSE) instruction. BSE was taught to one group using guided practice, a second group was taught using modeling alone and a third group was taught without using either guided practice or modeling.

A pre-test, post-test format was used to collect data. Subjects completed a pre-test, were instructed in BSE, and then completed a post-test. A convenience sample was used and the groups were randomized into a guided practice, modeling or control group teaching format.

Characteristics of the Sample

Fifty-eight women comprised the sample for this study. There were 17 women in the control group, 22 women in the modeling group and 19 women in the guided practice group. One subject began the study but withdrew, the data are not included here.

Subjects' ages ranged from 18 to 79 years. The mean age of the entire sample was 35.03 years with a standard deviation of 13.18. The mean age of the guided practice group was 38.37 years, with a standard deviation of 13.44. The group instructed by modeling alone had

a mean age of 31.77 years with a standard deviation of 11.84. The control group, the group taught without modeling or guided practice, had a mean age of 35.53 with a standard deviation of 14.28 (Table 1).

Fifty-seven of the subjects were Caucasian and one was Asian. Pregnancy and the time of the first pregnancy is related to the risk of breast cancer. A woman is at the greater risk for breast cancer if she has never been pregnant or if her first pregnancy occurred after the age of 30. Twenty-eight of the subjects had never been pregnant; 30 subjects had been pregnant and 27 of these 30 women were under 30 at the time of their first pregnancy. The remaining three were older than 30 years of age at the time of their first pregnancy. Thirty-six of the women were married. One woman was divorced, one was widowed and 20 women had never been married.

The highest level of education completed was reported by the women. Eight women reported high school as the highest level of education, two reported technical school, 26 reported some college education, 12 graduated from college and 10 had at least some graduate education. The mean number of years of education for the sample was 14.76 with a standard deviation of 2.65. The guided practice group had a mean of 14.05 years of education with a standard deviation of 2.66. The modeling group had a mean of 15.04 years of education with a standard deviation of 2.77 and the control group's mean number of years of education was 15.18 with a standard deviation of 2.48 (Table 1).

None of the subjects had ever been diagnosed with breast cancer. Forty-six of the women had no family history of breast cancer; 11 had a family history of breast cancer and one subject did not provide that

Table 1. Characteristics of Sample by Age and Years of Education Completed by Subjects

	Sample N=58	Guided Practice N=19	Modeling N=22	Control N=17
Age				
\bar{x}	35.03	38.37	31.77	35.53
SD	13.18	13.44	11.84	14.28
Years of Education				
\bar{x}	14.76	14.05	15.04	15.18
SD	2.65	2.66	2.77	2.48

information. Of the women in the guided practice group, 15 had no family history of breast cancer. Of the four who did have a family history, two had mothers with breast cancer, one had an aunt with the disease and one did not specify. There were four women in the modeling group with a family history of breast cancer. Two of the women in this group specified grandmothers, one a mother, one a sister and one did not specify. There were three women with family histories of breast cancer in the control group. All three women specified aunts as the relative with a history of breast cancer.

Forty-seven of the women in the study had never had a mammogram. Of the 11 who stated they had had a mammogram, two had one within the last year, seven one to two years ago, one had a mammogram more than eight years ago and one did not specify. Three of the 58 women in the study had had a breast biopsy. One woman in the modeling group had a biopsy approximately one year prior to the study. Two women in the control group had had a breast biopsy. One woman's biopsy was 14 years ago and one 15 years before the study. None of the women in the guided practice group had ever had a breast biopsy. Table 2 shows data related to subjects with a family history of breast cancer, subjects who had a breast biopsy and subjects who had a mammogram.

Sixty-four percent of the women in the study had been taught BSE on a previous occasion; 36% had never been taught BSE. Of the guided practice group, 47% of the women had been taught BSE and 53% had not been. Of the modeling group, 59% had been taught BSE and 41% had not been. Eighty-eight percent of the control group had been taught

Table 2. Frequency of Subjects With a Positive Family History for Breast Cancer, Number of Subjects Who Have Had Breast Biopsies and Number Who Have Had Mammograms

	Sample N=58		Guided Practice N=19		Modeling N=22		Control N=17	
	n	%	n	%	n	%	n	%
Family History of Breast Cancer	11	19	4	21.1	4	18.2	3	17.6
History of Mammogram	11	19	5	26.3	4	18.2	2	11.8
History of Breast Biopsy	3	5.2	0	0	1	4.5	2	11.8

BSE in the past while 12% had not. Table 3 displays the data for previous BSE education.

Table 3 presents data on the number of times the subjects reported having done BSE in the six months prior to the study. Forty-seven percent of the subjects never practiced BSE in the six months prior to the study. Twenty-eight percent practiced BSE one to two times, 15% practiced BSE three to four times, and 10% practiced five to six times in the six months prior to the study. Of the women in the guided practice group, 47% reported never practicing BSE in the six months prior to the study, 16% reported having performed this behavior one to two times, 26% reported practicing BSE three to four times, and 11% reported practicing BSE five to six times in the last six months. Of the subjects in the groups taught by modeling alone, 50% reported never having practiced BSE in the six months prior to the study, 27% reported practicing the technique one to two times, 14% practiced BSE three to four times, and 9% practiced BSE five to six times in the six months prior to the study. Forty-one percent of the women in the control group reported never having performed BSE in the six months prior to the study. Forty-one percent reported having performed BSE one to two times in the six months prior to the study, 6% reported having done BSE three to four times and 12% had done BSE five to six times in the six months prior to the study.

Reliability of the Instrument

The questionnaire used for this study (Appendix D) was developed specifically for this study. Reliability coefficients were done on

the pre- and post-test items in parts I and II. The pretest alpha for part I was 0.87 and the post-test alpha was 0.24. The pre-test alpha for part II was 0.67 and the post-test alpha was 0.52. A reliability coefficient above 0.70 is considered satisfactory for a new instrument (Polit & Hungler, 1983). The low reliability coefficients for the post-test make the results of the post-test questionable for part II. On the post-test for part I there were two items that had no variance and therefore it would not be possible to get a very high reliability.

Analysis of Findings

Hypothesis Number One

The first hypothesis stated that guided practice would result in higher scores on the questions measuring knowledge about breast cancer than modeling alone or a teaching method utilizing neither guided practice or modeling. The pre- and post-test scores for those questions measuring breast cancer knowledge (part I) are shown in Table 4. The higher the score, the greater the knowledge of breast cancer was possessed. The guided practice group had a mean score of 7.00 with a standard deviation of 2.52 on the pre-test. On the post-test the guided practice group had a mean score of 10.63 with a standard deviation of 2.59. The group who received modeling alone had a mean pre-test score of 5.90 with a standard deviation of 1.57. Their mean post-test score was 10.86 with a standard deviation of 1.25. The control group, the group who received BSE instruction without guided practice or modeling, had a pre-test mean of 6.29 with a standard

Table 4. Mean Pre- and Post-test Scores for Part I (Knowledge of Breast Cancer) of Questionnaire

	Guided Practice		Modeling		Control	
	<u>Pre</u>	<u>Post</u>	<u>Pre</u>	<u>Post</u>	<u>Pre</u>	<u>Post</u>
\bar{x}	7.00	10.63	5.90	10.86	6.29	11.18
SD	2.52	2.59	1.57	1.25	1.83	1.24

deviation of 1.83 and a post-test mean of 11.18 with a standard deviation of 1.24.

Analysis of covariance (ANCOVA) was used to statistically control for the differences in pretest score for part I of the questionnaire. The pre-test scores of the groups were not significantly different ($p=0.33$). The main effects of the different interventions were also not statistically significant ($p=0.57$). There were no statistically different results based on the different interventions. These results are displayed in Table 5.

Hypothesis Number Two

The second hypothesis for this study stated that teaching breast self-examination using guided practice would result in higher scores on the items on the questionnaire that measured knowledge of the correct procedure for doing BSE than modeling alone or using neither guided practice or modeling. The mean scores for the groups for those questions (part II) which measured knowledge of the BSE procedure can be found in Table 6. The guided practice group had a mean pre-test score of 8.58 with a standard deviation of 2.46. Their post-test mean was 11.16 with a standard deviation of 0.69. The modeling group had a pre-test mean of 8.27 with a standard deviation of 2.39 and a post-test mean of 10.68 with a standard deviation of 1.04. The control group had a pre-test mean of 9.00 with a standard deviation of 2.00. The control group's post-test mean was 10.82 with a standard deviation of 1.29.

Table 5. Analysis of Covariance, Part I (Knowledge of Breast Cancer) of Questionnaire

Source of Variation	Sum of Squares	DF	Mean Square	F	Signif. of F
Covariate Pretest	3.07	1	3.06	0.95	0.33
Main Effects Group	3.66	2	1.83	0.57	0.57
Residual	173.42	54	3.21		
Total	180.15	57	3.16		

Table 6. Mean Pre- and Post-test Scores for Part II (Knowledge of BSE) of Questionnaire

	<u>Guided Practice</u>		<u>Modeling</u>		<u>Control</u>	
	<u>Pre</u>	<u>Post</u>	<u>Pre</u>	<u>Post</u>	<u>Pre</u>	<u>Post</u>
	8.58	11.16	8.27	10.68	9.00	10.82
SD	2.46	0.69	2.39	1.04	2.00	1.29

ANCOVA was also used to statistically control for the differences in pre-test scores on part II. There were statistically significant differences in the pre-test scores ($p=0.00$). The main effects were not significant ($p=0.24$) and the differences cannot be attributed to the differences in treatment. These results can be found in Table 7.

Hypothesis Number Three

The third hypothesis for this study stated that guided practice would result in higher intent to practice BSE scores (part IV of the questionnaire) than modeling alone or instruction without guided practice or modeling. Table 8 displays the data showing the pre- and post-test intent to practice scores.

ANCOVA was used to statistically control for the differences in pre-test scores. The pre-test scores of the groups were significantly different ($p=0.00$). The main effects of the interventions were not significant ($p=0.50$) when the scores of the covariate were controlled. These results can be seen in Table 9.

Summary

This chapter discussed the characteristics of the sample, the reliabilities of the questionnaire used to collect data and the results of the study. There were a total of 58 women in the sample, 19 women in the guided practice group, 22 women in the modeling group and 17 women in the control group. The reliabilities for the tool were satisfactory for the pre-test for part I were low for the post-test due

Table 7. Analysis of Covariance, Part II (Knowledge of BSE) of Questionnaire

Source of Variation	Sum of Squares	DF	Mean Square	F	Signif. of F
Covariate Pretest	16.96	1	16.96	22.36	0.00
Main Effects Group	2.23	2	1.11	1.47	0.24
Residual	40.96	54	0.76		
Total	60.15	57	1.05		

Table 8. Pre- and Post-test Scores for Part IV (Intent to Practice BSE) of Questionnaire

	Guided Practice				Modeling				Control			
	<u>Pre</u>		<u>Post</u>		<u>Pre</u>		<u>Post</u>		<u>Pre</u>		<u>Post</u>	
	n	%	n	%	n	%	n	%	n	%	n	%
Less than 5 times	4	21	2	11	11	50	4	18	8	48	3	18
5 times or greater	14	74	16	84	11	50	17	78	9	52	14	82
No Response	1	5	1	5	0	0	1	4	0	0	0	0

Table 9. Analysis of Covariance, Part IV (Intent to Practice BSE) of Questionnaire

Source of Variation	Sum of Squares	DF	Mean Square	F	Signif. of F
Covariate Pretest	14.49	1	14.49	13.19	0.00
Main Effects Group	1.56	2	0.78	0.71	0.50
Residual	59.33	54	1.10		
Total	75.38	57	1.32		

to little variability. The reliabilities for part II were insufficient for the pre-test and the post-test.

Three hypotheses were tested in this study and none were supported. Guided practice did not result in higher breast cancer knowledge scores, higher BSE procedure scores or higher intent to practice scores.

CHAPTER V

CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

Included in this chapter are the results of the study presented in Chapter IV in relation to the theoretical framework. Limitations of the study, as well as nursing implications and recommendations for further study, are also presented.

Findings in Relation to the Theoretical Framework

The theoretical framework for this study suggested that guided practice would result in higher breast cancer knowledge scores, higher breast self-examination (BSE) scores and higher intent to practice scores than modeling alone or instruction using neither modeling or guided practice. The theoretical framework suggested that teaching would lead to health knowledge and this knowledge would result in specific behavioral intentions, which in this study was practicing BSE. The scores on the knowledge portions of the questionnaire did increase from pre-test to post-test as did intent to practice scores. There was, however, no evidence in this study that the knowledge and intent to practice scores were higher in the guided practice groups as compared to the modeling or control group. Marty, McDermott & Gold (1983) did not find a difference in breast cancer knowledge scores when comparing the use of pamphlets, modeling and guided practice scores. They did find, however, that guided practice did result in

more women performing BSE after instruction than the other two methods. Marty, McDermott & Christiansen (1983), also found increased practice of BSE for women who were taught using guided practice. These studies measured actual practice of a health behavior as opposed to intent to practice a behavior but the differences in findings can still be appreciated. Edwards (1980) used four methods of teaching BSE including guided practice. Edwards found that all methods resulted in increased practice but none of the groups practiced significantly more or less. This is similar to the findings of this study in that all the groups had increased intentions of practicing BSE but there was no significant difference between the groups.

The hypotheses for this study were that guided practice would result in breast cancer knowledge scores, BSE scores and intent to practice scores that were higher than the modeling group and the control group. These hypotheses were not supported.

Limitations

There are several limitations to this study. These limitations must be considered when the results of the study are reviewed.

The first limitation for the study is the instrument used to collect data. The instrument was developed for the study and the reliabilities were found to be low, particularly the post-test reliabilities. This severely limits how accurate the results are. In addition to the reliabilities, it is noted that the tool did not measure some of the additional interventions that guided practice offered. The tool did not elicit information about the positions the women should

use in front of a mirror, the correct positions for the arms to be in when lying down to do BSE or the needed amount of pressure needed when palpating the breast. All of these things were practiced by the women in the guided practice group and the women were given feedback, but the tool did not measure these behaviors.

Another limitation to the study is that the women were tested on their knowledge of BSE only by answering questions on the instrument. The women's proficiency was not tested by having the women do a breast self-examination.

A third limitation to the study is the immediate post-test. The post-test was given immediately following the intervention. It is therefore difficult to know what the long term benefits or drawbacks are.

All of the women in this study had at least completed high school. Many of the women had completed college. This limits the study in that education may be a factor in the method that is most effective.

The last limitation discussed is the size of the sample. There were 58 women in the study. A larger sample size may offer a better representation of the entire population.

Nursing Implications

All of the methods used to teach BSE in this study increased knowledge and intent to practice scores. This is consistent with other studies which have looked at teaching BSE (Brailey, 1986; Baines, Wall, Risch, Kuin & Fan, 1986). This in itself suggests that education may

increase practice of BSE. Nurses are concerned with illness prevention and early detection and can have a significant impact by teaching the public health promoting behaviors. Though guided practice was not significantly better in increasing the knowledge and intent to practice scores, it did increase scores from the time of the pre-test to the post-test.

Recommendations

The first recommendation that stems from this research is to conduct a follow-up study. This would allow information to be collected to find out if any of the teaching methods was more effective for long term education. A follow-up would also allow the researcher to find out if any of the methods actually resulted in increased practice rather than only increased intent to practice.

The second recommendation is to revise and perfect the instrument used to collect data. The low reliabilities of the post-test severely limit interpretation of the data.

Another recommendation is to repeat the study using a larger sample. This may result in a sample that more closely resembles the population. A further recommendation is that a more diverse ethnic group be considered as well as women coming from different educational levels.

It is also recommended that several methods of collecting data be used. Collecting data on the proficiency of women by observing an actual breast examination would be appropriate. Lastly, it is

recommended that nurses continue to research factors that affect the performance of BSE by women.

Summary

A quasi-experimental design was used in this study to determine if guided practice would result in higher breast cancer knowledge scores, higher breast self-examination (BSE) knowledge scores and higher intent to practice scores than modeling alone or teaching without modeling or guided practice. Fifty-eight women participated in the study. There were 19 women in the guided practice group, 22 in the modeling group and 17 in the control group.

A pre-test, post-test format was used. ANCOVA was used to statistically control for the variance in pre-test scores. Descriptive statistics were used to analyze demographic data. The results of the study showed that all methods of teaching resulted in higher breast cancer knowledge and BSE knowledge scores and in higher intent to practice scores. There were, however, no statistically significant differences between the groups. Nursing research needs to continue in this area to find the most effective method of teaching women breast self-examination.

APPENDIX A

HUMAN SUBJECTS APPROVAL



THE UNIVERSITY OF ARIZONA
TUCSON, ARIZONA 85721

COLLEGE OF NURSING

MEMORANDUM

TO: Rochelle Jacober

FROM: Linda R. Phillips, PhD, FAAN
Acting Director of Research

DATE: June 1, 1987

RE: Effectiveness of Three Methods of
Teaching Breast Self-Examination

Your project has been reviewed and approved as exempt from University review by the College of Nursing Ethical Review Subcommittee of the Research Committee and the Director of Research. A consent form with subject signature is not required for projects exempt from full University review. Please use only a disclaimer format for subjects to read before giving their oral consent to the research. The Human Subjects Project Approval Form is filed in the office of the Director of Research if you need access to it.

We wish you a valuable and stimulating experience with your research.

APPENDIX B

DISCLAIMER

DISCLAIMER

EFFECTIVENESS OF THREE METHODS OF
TEACHING BREAST SELF-EXAMINATION

You are being asked to participate in a study entitled "Effectiveness of Three Methods of Teaching Breast Self-Examination". The purpose of this study is to collect information concerning the best way to teach breast self-examination.

You are being asked to voluntarily complete a questionnaire, receive instruction on breast self-examination and then to complete another questionnaire after instruction. There are no costs to you in participating and there are no known risks. The investigator will be available to answer any questions you may have.

All of the information collected in this study will be confidential. You will not be identified by name in any reporting of the data. A summary of the results of this study will be provided to you upon request.

You may withdraw from this study at any time. If you have any questions, please contact the investigator at the address below. Thank you for your participation in this study.

Rochelle Jacober, R.N., B.S.N.
8665 E. Speedway, #303
Tucson, Arizona 85710
(602) 885-8864

APPENDIX C

DEMOGRAPHIC DATA SHEET

DEMOGRAPHIC DATA SHEET

Subject I.D. _____ Date _____

Age in Years _____ Site _____

Please circle the correct number:

Age at time of first pregnancy:

1. Have never been pregnant
2. 30 years of age or younger
3. Over 30 years old

Ethnic Origin

1. Caucasian
2. Black
3. American Indian
4. Hispanic
5. Asian
6. Other

Marital Status

1. Married
2. Separated
3. Divorced
4. Widowed
5. Never been married

Highest Level of Education Completed

1. Grade School
2. Completed High School
3. Technical School
4. Some College
5. Graduated From College
6. Graduate Education

Years of Education: (Please circle the highest grade in school you have completed)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Have you ever had breast cancer?

1. No
2. Yes

If yes, Date _____
Type of treatment received _____

Do you have any family history of breast cancer?

1. No
 2. Yes
If yes, describe relationship (sister, mother, etc.)
-

Have you ever had a mammogram?

1. No
2. Yes
If yes, Date _____

Have you ever had a breast biopsy?

1. No
2. Yes
If yes, Date _____

Have you ever been taught breast self-examination?

1. No
2. Yes
If yes, Date _____

How often have you practiced breast self-examination in the last six months?

1. Never
2. 1-2 times
3. 3-4 times
4. 5-6 times
5. More than 6 times

APPENDIX D
QUESTIONNAIRE

QUESTIONNAIRE

PART I

Directions: Circle the number that gives the correct response to the question.

1. What are the chances of a woman in the U.S. developing breast cancer at some time in her life?
 1. One of one hundred women
 2. One of fifty women
 3. One of ten women
 4. One of twenty-three women

 2. Where does breast cancer rank as a cause of cancer deaths for women in the U.S.?
 1. It is the leading cause of death
 2. It is the second leading cause of death
 3. It is the fifth leading cause of death
 4. It is the seventh leading cause of death

 3. On the average, what percent of breast lumps found are NOT cancer?
 1. 35%
 2. 80%
 3. 50%
 4. 20%

 4. What percent of breast lumps are found by women themselves?
 1. 10-15%
 2. 65-70%
 3. 45-50%
 4. 90-95%

 5. On the average, the risk of a woman developing breast cancer begins to increase after what age?
 1. 30 years
 2. 40 years
 3. 50 years
 4. 60 years

 6. Which of the following puts a woman at increased risk of developing breast cancer? (Circle as many as apply)
 1. If she has had a mother or sister who has had breast cancer
 2. If she is taking birth control pills
 3. If she has had children
 4. If she has never had children
 5. If she is past menopause
 6. If she has had breast cancer before
 7. If she has been hit in the breast
-

PART II

Directions: Circle the number that gives the correct response to the question.

1. What is the best part of your hand to use to do breast self-examination?
 1. The palm of your hand
 2. The pads of your fingers
 3. The fingertips
 4. The thumb

2. What fingers are used to do breast self-examination?
 1. The thumb and index finger
 2. The fingers are not used
 3. The middle three fingers
 4. The ring finger and middle finger

3. What do you NOT need to feel for when doing breast self-examination?
 1. Any hairs
 2. Any lumps
 3. Hard knots
 4. Thickenings

4. What is the reason for putting a pillow under your shoulder and your arm behind your head when doing breast self-examination?
 1. To make sure you remain comfortable
 2. To distribute the breast tissue evenly
 3. To make the breast hang to one side
 4. To evenly distribute any lumps that may be present

5. What is the best time to examine the breasts if you are still having periods?
 1. The first day of the month
 2. During the time you are bleeding
 3. After the bleeding has stopped
 4. Anytime is O.K.

6. What is the best time for women who no longer have periods to examine their breasts?
 1. It is not necessary to examine the breasts after menopause
 2. Any day that it is easy to remember each month
 3. At the time they use to have their period
 4. On the first day of each month

7. How often is observation of the breast in a mirror necessary?
 1. It is never necessary
 2. Needed once monthly
 3. Needed twice monthly
 4. Needed every other month

 8. How often does the American Cancer Society recommend doing breast self-examination?
 1. Monthly
 2. Weekly
 3. Yearly
 4. Quarterly

 9. What should one expect to see when squeezing the nipple?
 1. A slight white discharge
 2. A slight yellow discharge
 3. A slight clear discharge
 4. No discharge at all

 10. What should a woman do if she finds a lump in her breast?
 1. Wait a month to see if it is still there
 2. Wait two weeks to see if it is still there
 3. Report it to her doctor as soon as she finds it
 4. Do nothing, as it will probably go away

 11. Which of the following is/are the best position(s) for doing breast self-examination?
 1. Lying down
 2. In the shower or bathtub
 1. 1 only
 2. 2 & 3
 3. 1 & 2
 4. 1 & 3

 12. A comparison of both breasts would always show which of the following to be normal?
 1. That both are the exact same size
 2. That both remain unrestricted from the chest wall
 3. That both have some puckering on the inner aspects of the breasts
 1. 1 only
 2. 2 only
 3. 1 & 2
 4. 2 & 3
-

PART III

Directions: Each of the following statements asks how you feel about breast self-examination. Please rate each statement and circle the letter that is closest to how you feel.

	Agree Strongly (1)	Agree (2)	Disagree (3)	Disagree Strongly (4)
1. Practicing breast self-examination is important				1 2 3 4
2. I feel confident in practicing breast self-examination				1 2 3 4
3. I plan to practice breast self-examination in the future				1 2 3 4
4. There is no point in examining my breasts; I couldn't tell if anything was wrong				1 2 3 4
5. There is no good reason to examine my breasts				1 2 3 4

PART IV

Directions: The following question is designed to try to find out how many times you think you'll practice breast self-examination in the next six months. Please circle the number that represents the number of times you think you'll practice breast self-examination.

1. In the next six months I plan to practice breast self-examination:
 1. Never
 2. 1-2 times
 3. 3-4 times
 4. 5-6 times
 5. More than 6 times

Comments:

APPENDIX E

QUESTIONNAIRE II

I.D. _____

QUESTIONNAIRE II

PART I

Directions: Circle the number that gives the correct response to the question.

1. On the average, the risk of a woman developing breast cancer begins to increase after what age?
 1. 30 years
 2. 40 years
 3. 50 years
 4. 60 years
 2. What percent of breast lumps are found by women themselves?
 1. 10-15%
 2. 65-70%
 3. 45-50%
 4. 90-95%
 3. Where does breast cancer rank as a cause of cancer deaths for women in the U.S.?
 1. It is the leading cause of death
 2. It is the second leading cause of death
 3. It is the fifth leading cause of death
 4. It is the seventh leading cause of death
 4. What are the chances of a woman in the U.S. developing breast cancer at some time in her life?
 1. One of one hundred women
 2. One of fifty women
 3. One of ten women
 4. One of twenty-three women
 5. On the average, what percent of breast lumps found are NOT cancer?
 1. 35%
 2. 80%
 3. 50%
 4. 20%
 6. Which of the following puts a woman at increased risk of developing breast cancer? (Circle as many as apply)
 1. If she has had a mother or sister who has had breast cancer
 2. If she is taking birth control pills
 3. If she has had children
 4. If she has never had children
 5. If she is past menopause
 6. If she has had breast cancer before
 7. If she has been hit in the breast
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PART II

Directions: Circle the number that gives the correct response to the question.

1. How often does the American Cancer Society recommend doing breast self-examination?
 1. Monthly
 2. Weekly
 3. Yearly
 4. Quarterly
2. What do you NOT need to feel for when doing breast self-examination?
 1. Any hairs
 2. Any lumps
 3. Hard knots
 4. Thickenings
3. What is the best part of your hand to use to do breast self-examination?
 1. The palm of your hand
 2. The pads of your fingers
 3. The fingertips
 4. The thumb
4. What should one expect to see when squeezing the nipple?
 1. A slight white discharge
 2. A slight yellow discharge
 3. A slight clear discharge
 4. No discharge at all
5. What fingers are used to do breast self-examination?
 1. The thumb and the index finger
 2. The fingers are not used
 3. The middle three fingers
 4. The ring finger and middle finger
6. How often is observation of the breast in a mirror necessary?
 1. It is never necessary
 2. Needed once monthly
 3. Needed twice monthly
 4. Needed every other month
7. What should a woman do if she finds a lump in her breast?
 1. Wait a month to see if it is still there
 2. Wait two weeks to see if it is still there
 3. Report it to her doctor as soon as she finds it
 4. Do nothing, as it will probably go away

8. What is the reason for putting a pillow under your shoulder and your arm behind your head when doing breast self-examination?
 1. To make sure you remain comfortable
 2. To distribute the breast tissue evenly
 3. To make the breast hang to one side
 4. To evenly distribute any lumps that may be present

 9. What is the best time for women who no longer have periods to examine their breasts?
 1. It is not necessary to examine the breasts after menopause
 2. Any day that it is easy to remember each month
 3. At the time they use to have their period
 4. On the first day of every month

 10. What is the best time to examine the breasts if you are still having periods?
 1. The first day of the month
 2. During the time you are bleeding
 3. After the bleeding has stopped
 4. Anytime is O.K.

 11. A comparison of both breasts would always show which of the following to be normal?
 1. That both are the exact same size
 2. That both remain unrestricted from the chest wall
 3. That both have some puckering on the inner aspects of the breasts
 1. 1 only
 2. 2 only
 3. 1 & 2
 4. 2 & 3

 12. Which of the following is/are the best position(s) for doing breast self-examination?
 1. Lying down
 2. In the shower or bathtub
 3. While lying on your side
 1. 1 only
 2. 2 & 3
 3. 1 & 2
 4. 1 & 3
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PART III

Directions: Each of the following statements asks how you feel about breast self-examination. Please rate each statement and circle the letter that is closest to how you feel.

	Agree Strongly (1)	Agree (2)	Disagree (3)	Disagree Strongly (4)
1. I plan to practice breast self-examination in the future				1 2 3 4
2. There is no good reason to examine my breasts				1 2 3 4
3. I feel confident in practicing breast self-examination				1 2 3 4
4. Practicing breast self-examination is important				1 2 3 4
5. There is no point in examining my breasts; I couldn't tell if anything was wrong				1 2 3 4

PART IV

Directions: The following question is designed to try to find out how many times you think you'll practice breast self-examination in the next six months. Please circle the number that represents the number of times you think you'll practice breast self-examination.

1. In the next six months I plan to practice breast self-examination:
 1. Never
 2. 1-2 times
 3. 3-4 times
 4. 5-6 times
 5. More than 6 times

Comments:

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