

## **APPENDIX A**

### **LIST OF EXPERTS**

For fitting the conceptual definition and method of measurement, the content validity of the instruments was determined by five experts including:

1. Assistant Professor Thitima Suntharasaj.  
A physician from Obstetrics-Gynecological Department, Faculty of Medicine, Songkla Nagarind Hospital, Prince of Songkla University.
2. Associate Professor Bongkoch Kengkhetkit, Surgical Department, Faculty of Nursing, Mahidol University. Present position; early retire.
3. Assistant Professor Dr. Wongchan Petpichetchian, Faculty of Nursing, Prince of Songkla University.
4. Dr. Kanittha Naka, Faculty of Nursing, Prince of Songkla University.
5. Miss Junchai Saetung, Head Nurse in Female- Surgery Ward, Faculty of Medicine, Songkla Nagarind Hospital, Prince of Songkla University.

## APPENDIX B

### INFORMED CONSENT SHEET

Dear Participants,

My name is Ms. Napassawan Sunjorn. I am a registered nurse. Now I am doing my Master degree in Adult Nursing Science (International program) at Prince of Songkla University (PSU), Thailand. You are being asked to participate in a research project designed to study the factors influencing breast cancer screening practice in healthy women. The gathered information will be used to write a report and may be presented at professional meetings. Expected outcomes from this study would give us a better understanding of the factors that affect breast cancer screening in healthy working women, to develop a guideline for health care teams to promote preventive behavior in women, to decrease mortality rate from breast cancer by using information about factors related to breast cancer screening, to increase the number of women who perform breast cancer screening, and to increase self-awareness to protect themselves from breast cancer through health promoting education. Your names will not be mentioned. During the study, you have the right to withdraw from the project any time you want without any problems prior to completion of data collection. All information and your responses in connection with this study will remain confidential. Only the researcher is eligible to access the data. However if you are interested to participate in this study, I will interview you about factors which influence breast cancer screening practices by using a questionnaire that comprises 4 parts: demographic data, breast cancer screening practice

for early detection, knowledge about breast cancer and breast cancer screening practices, and individual perceptions questionnaire. Please answer all items of the questionnaire as accurately as you can.

If you feel uncomfortable about participation in this study, please do not hesitate to tell me. There is no cost to participate in this study and no financial reward.

### **For participant**

I have read and understood all the information and I voluntarily to give my consent to participate in this study.

.....	.....	...../...../.....
(Name of participant)	(Participant's Signature or thumbprint)	Date
Napassawan Sunjorn.	.....	...../...../.....
(Name of Researcher)	(Signature of Researcher)	Date

If you have any questions due to this questionnaire at anytime during the study, please feel free to ask or discuss with me. Please contact me at the following address:

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 Faculty of Nursing, Prince of Songkla University  
 Hat Yai, Songkhla province, Thailand 90110  
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5. Occupation..... occu
1. Unemployed or housewife       2. Government officer
3. General employee       4. Agriculturist/ Fisherman/ Shop keeper
5. Others (please specify).....
6. Income per month.....Baht.      inc1
7. Your income per month and expenditure      inc2
1. Adequate
2. Inadequate and have debt
8. Did you have a history of breast problems?      ill
1. Yes...please specify.....
2. No
9. When did you get this problem?.....month/year      when
10. Do you have any family members with breast cancer or other cancer?      family
1. Yes...who has/had breast cancer in your family?.....
- ....., Which organ?.....
2. No
11. Have you ever received any information regarding breast cancer and it's prevention?
- | Information                     | Received                 | Not received             | inf                      |
|---------------------------------|--------------------------|--------------------------|--------------------------|
| -Breast cancer and risk factors | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| -Breast cancer prevention       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| -Breast self-examination        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| -Mammography                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

12. From question 11, have you received BSE information from any of the following information sources? (can answer more than 1 choice and run number 1-5 from highest; 1 to lowest; 5)

- |  |                             |
|--|-----------------------------|
| <input type="checkbox"/> 1. Health care team such as physician, nurse, etc.                        | 1. <input type="checkbox"/> |
| <input type="checkbox"/> 2. Village health volunteers/ Community Health care team.                 | 2. <input type="checkbox"/> |
| <input type="checkbox"/> 3. Friend.  | 3. <input type="checkbox"/> |
| <input type="checkbox"/> 4. Family members/ relatives.   | 4. <input type="checkbox"/> |
| <input type="checkbox"/> 5. From books, newspaper, magazine, television, radio, leaflet, handbook. | 5. <input type="checkbox"/> |

info

### **Part2: Breast Cancer Screening Practices for Early Detection Questionnaire**

The objectives of these questions are; (1) To survey the frequency and regularity of breast cancer screening practices of BSE and related, (2) To survey intention and experience to have mammography.

After listening or reading this question, please choose only one answer by marking “/” in  for the factual situation last year.

- |  |                          |
|--|--------------------------|
| 1. Do you have been performed BSE?   | bse1                     |
| <input type="checkbox"/> 1. Yes  | <input type="checkbox"/> |
| <input type="checkbox"/> 2. No (please go on to question 6).                 |                          |
| 2. If “yes” How often did you perform BSE (choose only the best /one answer) | bse2                     |
| <input type="checkbox"/> 1. More than 1 times/ month                         | <input type="checkbox"/> |
| <input type="checkbox"/> 2. 1 time/month                                     |                          |
| <input type="checkbox"/> 3. 2-4 months/time                                  |                          |
| <input type="checkbox"/> 4. More than 5 months/time                          |                          |
| 3. Did you perform BSE regularly?  | bse3                     |
| <input type="checkbox"/> 1. Yes  | <input type="checkbox"/> |
| <input type="checkbox"/> 2. No   |                          |
| 4. Did you ever find any abnormalities in your breast?                       | bse4                     |
| <input type="checkbox"/> 1. Yes  | <input type="checkbox"/> |
| <input type="checkbox"/> 2. No (please go on to question 6).                 |                          |

5. What did you do when you found any abnormalities in your breast? bse5
1. Consult your friends or relatives.
2. Consult a physician or nurse.
3. Just waits don't consult anyone.
4. Performed BSE more frequently.
5. Others (please specify).....
6. Does your family encourage or promote you to perform BSE? bse6
1. Yes ....(Who?).....
2. No
7. Do you have someone/some group of person to encourage or - bse7  
promote you to perform BSE?
1. Yes ....(Who?).....
2. No
8. Have you ever had a physician's recommendation to do BSE? phy1
1. Yes
2. No
9. Have you ever heard/know about mammography? mam1
1. Yes...when?.....
2. No
10. Have you ever had a physician's recommendation to do a mammography? phy2
1. Yes
2. No
11. Have you ever planned or intended to have mammography? intend
1. Yes (please specify who/what is encourage or promote you   
to intend to have mammography).....
2. No
12. Have you ever had a mammogram? mam2
1. Yes...when?.....
2. No

### **Part 3. Knowledge about Breast Cancer and BSE.**

The objective of these questions is to survey the knowledge of breast cancer, and BSE.

Please fill “/” in for the factual situation (choose one answer for each question).

1. Women in which groups have higher risk of breast cancer.

	Yes	No	Risk1-6
1.1 Eat foods that contain high animal fat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2 Eat high carbohydrate foods	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3 Use pills or estrogen hormones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.4 Have mother and/or sister with breast cancer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.5 Have a history of illness of breast cyst	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.6 Have a history of breast cancer			

2. Which method usually detects breast cancer?

method

- 1. BSE
- 2. PBE
- 3. Mammography
- 4. Ultrasound
- 5. Don't know

3. An early sign of breast cancer is....

sign1

- 1. Dimple on breast
- 2. Wound or lesion on breast
- 3. Breast inflammation, swelling, and redness
- 4. Presence of a small mass in breast
- 5. Don't know

4. What is the abnormal sign that you should come to see the doctor?

sign2

- 1. Breast/s get softer
- 2. Breast/s get larger
- 3. Both nipples are dented
- 4. Blood, serum or any abnormal discharge from nipples
- 5. Don't know



5. Breast cancer is usually found at which part of breast? sign3
- 1. Inner upper part
  - 2. Inner lower part
  - 3. Outer upper part
  - 4. Can occur in every part of the breast
  - 5. Don't know
6. The most effective method to diagnose breast cancer is.... diag.
- 1. Mammography
  - 2. Breast biopsy
  - 3. PBE
  - 4. U/S
  - 5. Don't know
7. The benefit of BSE is.... benf
- 1. Prevent breast cancer
  - 2. Detection of breast cancer in early stages
  - 3. Prevent cancer cells spreading to another organ
  - 4. Saves cost because there is no need to mammogram anymore
  - 5. Don't know
8. How often should you perform BSE? often
- 1. Once a week
  - 2. Once a month
  - 3. Once a year
  - 4. Only when have abnormal signs and symptoms at breast
  - 5. Don't know.
9. Women should have their first BSE at age..... first
- 1. When have first menarche
  - 2. At age 20 years old
  - 3. At age 35 years old or over
  - 4. At age 40 years old or over
  - 5. Don't know

10. When is the appropriate time to perform BSE? time
- 1. 7-10 days after menstruation period
  - 2. First day of menstruation period
  - 3. One week before menstruation period
  - 4. Every day that you are comfortable
  - 5. Don't know
11. BSE is unnecessary for women in which group? unneces
- 1. Pregnant women
  - 2. Women who have had a breast mastectomy
  - 3. Menopausal women
  - 4. Children
  - 5. Don't know
12. The best position to performed BSE is... posit
- 1. Standing
  - 2. Sitting
  - 3. Laying down
  - 4. Every position
  - 5. Don't know
13. How should you do BSE in the laying down position? lay
- 1. Placing the pillow under your left shoulder and place your -   
left arm behind your head, raising your right arm and examining  
your left breast and repeat on your right breast.
  - 2. Placing the pillow under your both shoulders and place both arm beside,  
raising your right arm and examining your left breast and repeat on your right breast.
  - 3. Placing the pillow under your right shoulder that you are using to examining  
your left breast, raising your left arm over your head and repeat on your other breast.
  - 4. Placing the pillow under your both shoulder, raising your right arm  
over your head and examining your left breast and repeat on your right breast.
  - 5. Don't know

14. How to do BSE? do
1. Using the fingers to examine the breasts in oblique direction   
have reached your armpits
2. Using the fingers to examine the breasts, not fix direction
3. Using the fingers to examine the breasts in a circle outwards until you  
have reached your armpits
4. Using the fingers to examine the breasts in longitudinal direction
5. Don't know
15. Which part of hand do you use for BSE? hand
1. Use all five fingers
2. Use finger pads
3. Use lateral side of hand
4. Use palm
5. Don't know
16. The way to treat breast cancer is.... treat
1. Operation
2. Radiation
3. Chemotherapy
4. Use only one method above or use many methods together
5. Don't know
17. Breast cancer can curable if... cure
1. You receive treatment when breast mass is found
2. You receive treatment when breast mass is found at an early stage
3. You receive treatment when abnormal discharge from nipple is found
4. Restrict treatment to physician's suggestion
5. Don't know

#### **Part 4. Individual Perceptions Questionnaire.**

This part consists of 4 items. The objectives of these questions are needs to survey beliefs, the agreement about breast cancer, and about BSE and mammography. Please read and fill “/” in  for the factual situation. Please answer all questions.

### Perceived risk of breast cancer

Strongly agree means you expect that you have the highest risk

Agree means you expect that you have risk more than not have risk

Not sure means you expect that you have risk and non-risk equally

Disagree means you expect that you have risk less than not have risk

Strongly disagree means you expect that you not have risk

1. I am in the high-risk group for breast cancer

                                                                                      

Strongly agree      Agree                      Not sure                      Disagree                      Strongly disagree

2. In this present environment I think I have a chance to get breast cancer

                                                                                      

Strongly agree      Agree                      Not sure                      Disagree                      Strongly disagree

3. As I get older I have more chance of getting breast cancer

                                                                                      

Strongly agree      Agree                      Not sure                      Disagree                      Strongly disagree

4. When I hear my friends or my relatives have got breast cancer it make me think that I have a chance to get breast cancer like them

                                                                                      

Strongly agree      Agree                      Not sure                      Disagree                      Strongly disagree

### Perceived severity of breast cancer

Strongly agree means you expect that the severity of breast cancer can occur surely

Agree means you expect that the severity of breast cancer can occur more than not occur

Not sure means you expect that the severity of breast cancer can or cannot occur equally

Disagree means you expect that the severity of breast cancer can occur less than not occur

Strongly disagree means you expect that the severity of breast cancer cannot occur

1. In my opinion, I feel breast cancer is a serious disease

                                                                                      

Strongly agree      Agree                      Not sure                      Disagree                      Strongly disagree

2. Breast cancer is as serious as AIDS

                                                                                      

Strongly agree              Agree              Not sure              Disagree              Strongly disagree

3. I think to get breast cancer means to die.

                                                                                      

Strongly agree              Agree              Not sure              Disagree              strongly disagree

4. I feel breast cancer would make my life worse

                                                                                      

Strongly agree              Agree              Not sure              Disagree              Strongly disagree

5. Breast cancer is a disease that has severe signs and symptoms

                                                                                      

Strongly agree              Agree              Not sure              Disagree              Strongly disagree

6. Breast cancer is a disease that makes patients suffer

                                                                                      

Strongly agree              Agree              Not sure              Disagree              Strongly disagree

### Perceived benefits of BCSP

Strongly agree means you expect that the benefits of BCSP can occur surely

Agree means you expect that the benefits of BCSP can occur more than non-benefit

Not sure means you expect that the benefits of BCSP can or cannot occur equally

Disagree means you expect that the benefits of BCSP can occur less than non-benefit

Strongly disagree means you expect that the benefits of BCSP cannot occur.

1. BSE/to have a mammography can help me regarding early detection of breast cancer

                                                                                      

Strongly agree              Agree              Not sure              Disagree              Strongly disagree

2. BSE/to have a mammography can reduce breast cancer anxiety

                                                                                      

Strongly agree              Agree              Not sure              Disagree              Strongly disagree

3. I believe that BSE/to have a mammography can find abnormalities in the breasts

                                                                                      

Strongly agree              Agree              Not sure              Disagree              Strongly disagree

4. BSE/to have a mammography can be practiced/checked in all free time that I want

Strongly agree      Agree      Not sure      Disagree      Strongly disagree

### Perceived barriers of BCSP

Strongly agree means you expect that BCSP can cause barriers for yourself surely

Agree means you expect that BCSP can cause barriers for yourself more than benefit

Not sure means you expect that BCSP can cause barriers for yourself and benefit equally

Disagree means you expect that BCSP can cause barriers for yourself less than benefit

Strongly disagree means you expect that BCSP cannot cause barriers for yourself

1. I feel to perform BSE/to have a mammography is intricate

Strongly agree      Agree      Not sure      Disagree      Strongly disagree

2. I feel ashamed to perform BSE/to have a mammography

Strongly agree      Agree      Not sure      Disagree      Strongly disagree

3. I am afraid to perform BSE/to have a mammography because I am afraid to find a breast mass

Strongly agree      Agree      Not sure      Disagree      Strongly disagree

4. I think BSE/to have a mammography can cause breast pain

Strongly agree      Agree      Not sure      Disagree      Strongly disagree

5. I think BSE/to have a mammography can cause discomfort

Strongly agree      Agree      Not sure      Disagree      Strongly disagree

6. I feel that I have no knowledge about BSE/mammography, so I don't perform BSE/to have a mammography

Strongly agree      Agree      Not sure      Disagree      Strongly disagree

7. I am not comfortable about the place to perform BSE/don't know or far from the place to have a mammography

Strongly agree

Agree

Not sure

Disagree

Strongly disagree

8. I don't have confidence to perform BSE correctly /don't confidence to have a mammography

Strongly agree

Agree

Not sure

Disagree

Strongly disagree

9. I have no time to perform BSE/to have a mammography

Strongly agree

Agree

Not sure

Disagree

Strongly disagree

## APPENDIX D

### STATISTICS USED IN THE RESEARCH

#### 1. Cronbach's alpha coefficient

$$\alpha = \frac{n}{n-1} \left\{ 1 - \frac{si^2}{st^2} \right\}$$

whereas  $\alpha$  = coefficient of consistency

$n$  = number of items

$si^2$  = summation of scores for each items

$st^2$  = the total variation of score

#### 2. Chi-Square Test

$$\chi^2 = \sum_{j=1}^r \sum_{j=1}^c \frac{(O_{ij} - E_{ij})^2}{E_{ij}}$$

whereas  $r$  = Row number

$c$  = Column number

$O_{ij}$  = Observe frequency in row  $i$  column  $j$

$E_{ij}$  = Expected frequency in row  $i$  column  $j$

#### 3. Cramer's V

$$V = \sqrt{\frac{\chi^2}{n(B-1)}}$$

whereas  $\chi^2$  = Chi-Square value from frequency table

$B$  = number of kinds (subgroup) of variable in lesser row or column

$n$  = number of the sample (sample size)



The level of association followed this criterion;

- V = 0 means no relationships between two variables (no association)
- V = .01-.25 means have some relation between two variables (weak association)
- V = .26-.55 means have moderate relation between two variables (moderate-association)
- V = .56-.75 means have high relation between two variables (strong association)
- V = .79-.99 means have very high relation between two variables (very strong association)
- V = 1 means have perfect relation between two variables (perfect association)

## APPENDIX E

## Part 3. Sub -aspects of knowledge of breast cancer and BSE.

Item of knowledge	Correct n (%)	Incorrect n (%)
1. Risk factors of breast cancer		
1.1 Eat food that contain high animal fat	170(56.7)	130(43.3)
1.2 Eat high carbohydrate foods	100(33.3)	200(66.7)
1.3 Use pills or estrogen hormones	184(61.3)	116(38.7)
1.4 Have mother and/or sister with breast cancer	192(64.0)	108(36.0)
1.5 Have a history of illness of breast cyst	199(66.3)	101(33.7)
1.6 Have a history of breast cancer	225(75.0)	75(25.0)
2. General knowledge of breast cancer		
2.1 Which method is usually detecting breast cancer	213(71.0)	87(29.0)
2.2 An early sign of breast cancer	202(67.3)	98(32.7)
2.3 The abnormal sign that you should come to see- the doctor	134(44.7)	166(55.3)
2.4 Breast cancer is usually found at which part- of breast	114(38.0)	186(62.0)
2.5 The most effective method to diagnose breast cancer	47(15.7)	253(84.3)
3. Knowledge about BSE		
3.1 The benefit of BSE	107(35.7)	193(64.3)
3.2 How often do should you perform BSE	112(37.3)	188(62.7)
3.3 Women should have first BSE at age	81(27.0)	219(73.0)
3.4 When is appropriate time to perform BSE	69(23.0)	231(77.0)
3.5 BSE is unnecessary for women in which group	138(46.0)	162(54.0)
3.6 The best position to performed BSE	90(30.0)	210(70.0)
3.7 How should you to do BSE in laying down- position	55(18.3)	245(81.7)
3.8 How to do BSE	98(32.7)	202(67.3)
3.9 Which part of hand do you use for BSE	146(48.7)	154(51.3)
4. Knowledge about treatment		
4.1 The way to treat breast cancer	87(29.0)	213(71.0)
4.2 Breast cancer can curable if...	149(49.7)	151(50.3)

## APPENDIX F

## Part 4. Sub -aspects of individual perceptions.

Items	5.Strongly agree n(%)	4.Agree n(%)	3.Not sure n(%)	2.Disagree n(%)	1.Strongly disagree n(%)
<b>1.Perceived risk of breast cancer</b>					
1.1 I am in high-risk group for breast cancer.	28(9.3)	64(21.3)	112(40.7)	66(22.0)	20(6.7)
1.2 In this present environment I think I have a chance to get breast cancer.	29(9.7)	112(37.3)	102(34.0)	46(15.3)	11(3.7)
1.3 As I get older I have more chance of getting breast cancer.	29(9.7)	105(35.0)	110(36.7)	41(13.7)	15(5.0)
1.4 When I hear my friends or my relatives have got breast cancer it make me think that I have a chance to get breast cancer like them.	25(8.3)	107(35.7)	101(33.7)	55(18.3)	12(4.0)
<b>2. Perceived severity of breast cancer</b>					
2.1 Breast cancer is a serious disease.	90(30.0)	154(51.3)	33(11.0)	16(5.3)	7(2.3)
2.2 Breast cancer is as serious as AIDS	57(19.0)	124(41.3)	57(19.0)	51(17.0)	11(3.7)
2.3 To get breast cancer means to die.	21(7.0)	89(29.7)	72(24.0)	88(29.3)	30(10.0)
2.4 Breast cancer would make my life worse.	34(11.3)	148(49.3)	56(18.7)	48(16.0)	14(4.7)
2.5 Breast cancer is a disease that has severe signs and symptoms.	22(7.3)	138(46.0)	87(29.0)	46(15.3)	7(2.3)
2.6Breast cancer is a disease that makes patients suffer.	42(14.0)	156(52.0)	54(18.0)	38(12.7)	10(3.3)
<b>3.Perceived benefits of BCSP</b>					
3.1 BSE/ to have a mammography can help me regarding early detection breast cancer.	57(19.0)	164(54.7)	55(18.3)	20(6.7)	4(1.3)
3.2 BSE/ to have a mammography can reduce breast cancer anxiety	60(20.0)	178(59.3)	49(16.3)	10(3.3)	3(1.0)
3.3 I believe that BSE /to have a mammography can find abnormalities in the breasts.	52(17.3)	182(60.7)	52(17.3)	13(4.3)	1(3)
3.4 BSE/ to have a mammography can be practiced/checked in all-free time that I want.	51(17.0)	162(54.0)	63(21.0)	20(6.7)	4(1.3)
<b>4. Perceived barriers to BCSP</b>					
4.1 I feel to perform BSE/ to have a mammography is intricate	15(5.0)	44(14.7)	32(10.7)	149(49.7)	60(20.0)
4.2 I feel ashamed to perform BSE/ to have a mammography.	5(1.7)	29(9.7)	20(6.7)	164(54.7)	82(27.3)
4.3 I am afraid to perform BSE/ to have a mammography because I am afraid to find a breast mass.	10(3.3)	44(14.7)	40(13.3)	150(50.0)	56(18.7)
4.4 I think BSE/to have a mammography can cause pain.	6(2.0)	45(15.0)	46(15.3)	147(49.0)	56(18.7)
4.5 I think BSE/to have a mammography can cause discomfort	7(2.3)	57(19.0)	47(15.7)	140(46.7)	49(16.3)
4.6 I feel that I no have knowledge about BSE/mammography, so I don't perform BSE/to have a mammography.	22(7.3)	71(23.7)	46(15.3)	123(41.0)	38(12.7)
4.7 I am not comfortable about the place to perform BSE/don't know or far from the place to have a mammography	13(4.3)	41(13.7)	47(15.7)	162(54.0)	37(12.3)
4.8 I don't have confidence to perform BSE correctly/don't confidence to have a mammography.	25(8.3)	120(40.0)	78(26.0)	53(17.7)	24(8.0)
4.9 I no have time to perform BSE/to have a mammography.	12(4.0)	46(15.3)	33(11.0)	141(47.0)	68(22.7)

Table 1 Studies related to factors associated with breast cancer screening practices

Author	Population/ Sample	Sample size	Factors (Independent Variables.)	Screening activity (Dependent variables)	Results/recommendations
Jirojwong, S., & Manderson, L. (2001).	First generation Thai immigrant women aged 20 yrs. or older who had been in Australia ranged from 1 year to 29 years.	145	<ul style="list-style-type: none"> <li>-Social factors</li> <li>-Cultural</li> <li>-Information</li> </ul>	<ul style="list-style-type: none"> <li>-Pap-smear</li> <li>-BSE</li> </ul>	<ul style="list-style-type: none"> <li>-Social factors such as relatives or friends who had cancer as the cue to take cervical and breast cancer screening. Culture and traditional beliefs can influence cervical and breast cancer screening.</li> <li>-Information relating to perceived barriers to undertake regular cervical cancer and breast cancer screening and other health beliefs can be applied by health care personnel to increase Thai immigrant women's preventive health behaviors.</li> </ul>
Chatchaisucha, S., & Pongthawornkamol, K. (2001). In Thai	Baccalaureate-nursing students of the Faculty of Nursing Mahidol University, age 18-24 yrs. (healthy women)	581	<ul style="list-style-type: none"> <li>-Knowledge about breast cancer</li> <li>-Health beliefs related to BSE</li> <li>-Practice of BSE</li> </ul>	-BSE	<ul style="list-style-type: none"> <li>-Knowledge of breast cancer/BSE was significantly correlated with the frequency of practice of BSE (<math>r=0.24</math>, <math>p &lt; .01</math>). Being a practitioner of BSE was positively correlated with perceived benefits (<math>r=.16</math>, <math>p &lt; .01</math>) and negatively correlated with perceived barriers to BSE (<math>r=-0.2</math>, <math>p &lt; .01</math>)</li> </ul>

Table 1 (Continued).

Author	Population/ Sample	Sample size	Factors (Independent Variables)	Screening activity (Dependent variables)	Results/recommendations
Rutledge, D. N., Barsevick, A., Knobf, M.T., & Bookbinder, M. (2001).	Women from members of the General Federation of Women's Clubs of Pennsylvania, age 50 yrs. and older.	538	-Structural/ Demographic variables; age, education, residence, knowledge of breast cancer and detection methods, teaching history, encouragement, and risk index (family/medical history) -Predisposing variables; susceptibility, benefits/barriers, confidence, social norms and influence, and general health motivation	-Breast cancer detection behaviors; mammography, CBE, and BSE	-Common predictors of breast cancer screening behaviors include risk (family/medical history), knowledge, and general health motivation. - Women reported moderate/high adherence to recommendations for early detection of breast cancer. -Mammography behavior was predicted by older age, being encouraged by a doctor or nurse. -CBE predictors were greater knowledge and risk along with greater benefits, social norms, and health motivation. -BSE behavior was predicted by having had BSE technique checked, greater knowledge, greater risk, decrease barriers to BSE, and higher health motivation.
Ortega, A. D., Lopez, C. L., & Lopez, C. M. (2000).	Mexican women aged 12- 47 yrs.	149	-Information sources (video, leaflet, and teaching by demonstration)	-BSE	-With all three strategies (video, leaflet, and teaching by demonstration) were followed by an increase of approximately 30% in women' s knowledge of breast cancer and BSE as well as in their ability to detect lumps.

Table 1 (Continued).

Author	Population/ Sample	Sample size	Factors (Independent Variables)	Screening activity (Dependent variables)	Results/recommendations
Takakuwa, Ernst, Weiss, & Nick, (2000).	-White and Native American and African American women	400	-Knowledge -Income -Insurance	-BSE -Mammography	- Breast self-examination was more likely to be done by older women, those with a history of breast lumps, and those with family history of breast cancer. Women with lower income and without private insurance were less likely to be knowledgeable and practice preventive measures for detecting breast disease (BSE and mammography).
Hailey, B. J., Carter, C.L., & Burnett, D.R. (2000).	Women with and without a first-degree relative with breast cancer (FDR). Women who had an FDR = 25, women who did not (comparison group) = 26)	51	-Attitude -Knowledge	-Breast cancer screening behavior	-Women in FDR group had more negative attitudes about breast cancer (including more anxiety about breast cancer), viewed their risk for getting breast cancer as greater (although they underestimated the actual risk), and were more likely to engage in appropriate screening behavior.
Borrayo, E.A., & Guarnaccia, C.A. (2000).	U.S.-resident women of Mexican descent who were either Mexican born (n=76) or U.S. born (n=103) age 50 and older.	179	-Belief of breast cancer -Health professional's motivation	-BSE	- The Mexican-born women instead reported significantly more belief ( $p < .01$ ) that breast cancer is a serious illness (mean = 2.08, SD = .53) and more belief ( $p < .001$ ) that they were personally susceptible (mean = 1.98, SD = .55) to this illness.

Table 1 (Continued).

Author	Population/ Sample	Sample size	Factors (Independent Variables)	Screening activity (Dependent variables)	Results/recommendations
					<p>The U.S. born reported higher BSE performance the previous month than the Mexican-born women and also were significantly (<math>p &lt; .001</math>) more motivated (mean = 2.62, SD = .43) to engage in other health behaviors than Mexican-born women (mean = 2.41, SD = .48).</p> <p>-Recent screening for both breast and cervical cancers was associated with knowledge of cancer risk factors and perceptions of surviving cancer. In addition, education, household income, and smoking status also were correlated in comprehensive screening.</p>
<p>Pearlman, D.N., Clark, M.A., Rakowski, W., &amp; Ehrlich, B. (1999)</p>	<p>Women age 50 to 75 yrs.</p>	<p>950</p>	<ul style="list-style-type: none"> <li>- Knowledge of cancer risk factors</li> <li>- Perceptions of surviving cancer</li> </ul>	<ul style="list-style-type: none"> <li>-Breast cancer screening</li> <li>-Cervical cancer screening</li> </ul>	
<p>Kengkhetkit, B., Rabieb, P., &amp; Aemruksa, S. (1999). In Thai.</p>	<p>-Thai women age 30-39 yrs. (100 nurses; non risk group, 100 outpatients from general unit; non risk group, and 100 outpatients from a breast unit; risk group)</p>	<p>300</p>	<ul style="list-style-type: none"> <li>-Educational level</li> <li>-Knowledge</li> <li>-Received information</li> <li>-Individual-perception</li> </ul>	<p>-BSE</p>	<p>-Nurses who had not performed BSE were fewer (14%) than outpatient (31%) and outpatients from the general unit (52%). Knowledge, to received information, individual perception, and educational level is related with the behaviors to performed BSE.</p>

Table 1 (Continued).

Author	Population/ Sample	Sample size	Factors (Independent Variables)	Screening activity (Dependent variables)	Results/recommendations
Remennick, L. (1999).	Russian Immigrant women in Israel, age over 35 yrs.	620	<ul style="list-style-type: none"> <li>-Knowledge and attitude</li> <li>-Cognition and awareness</li> </ul>	<ul style="list-style-type: none"> <li>-Breast self-examination (BSE)</li> <li>-CBE</li> <li>-Mammogram</li> </ul>	<p>-Women who had no regular primary care providers showed the lowest cancer awareness and minimal screening activity. Knowledge and attitudes towards cancer showed weak associations of borderline significance with BSE. Higher awareness and the recognition of personal cancer risks were positively related to the history of mammography. Three explanations of the gap between cognition and practice are: 1) immigrants have low health motivation, reflecting their downward social mobility and preoccupation with resettlement problems, 2) low self-efficacy and external locus of control over health typical for ex-Soviet citizens, and 3) communicative and other cultural barriers to health care services.</p>



Table 1 (Continued).

Author	Population/ Sample	Sample size	Factors (Independent Variables)	Screening activity (Dependent variables)	Results/recommendations
Rajaram, S. S., & Rashidi, A. (1999).	Asian-Islamic women in U.S.A, age over 50 yrs.	39	-Religious -Socio-cultural	-Breast cancer screening practices	-Religious relationships to health promotion and illness prevention. Islamic tenets that facilitate breast cancer screening include cleanliness, prevention and individual responsibility in health promotion, diet and eating habits, and exercise, and those that hinder screening practice to BSE include patient-physician communication and beliefs about cancer and cancer prevention and recommendations to increased knowledge and practice of breast cancer screening within religious and socio-cultural context are provided.
Wagle, A., Komorita, N.I., & Lu, J.Z. (1997).	Women aged 55 yrs. and older; having routine examination at a small Midwestern gynecologic clinic	22	-Social support	-BSE	-Social support was found to be significantly related to the frequency of BSE ( $r=0.45$ , $p < 0.05$ ), but not to the accuracy of BSE ( $r=0.28$ ). The results also indicated that these women had lower social support scores compared with younger women.

Table 1 (Continued).

Author	Population/ Sample	Sample size	Factors (Independent Variables)	Screening activity (Dependent variables)	Results/recommendations
Champion, V. & Menon, U. (1997).	Low-income African American women ages between 45 and 64 yrs.	328	<ul style="list-style-type: none"> <li>-Predisposing variables (perceived susceptibility, benefits, barriers, confidence, knowledge, physician's recommendation, demographic characteristics, and past experience, as well as health care and insurance information)</li> </ul>	<ul style="list-style-type: none"> <li>-BSE</li> <li>-Mammography</li> </ul>	<ul style="list-style-type: none"> <li>-Variables that significantly predicted either frequency or proficiency of BSE included perceived susceptibility, benefits, confidence, knowledge, barriers, and having a regular physician, and having thought about BSE</li> <li>- Variables that significantly predicted mammography utilization include perceived barriers, mammography suggested by health-care professionals, recent thoughts about mammography, and regular medical doctors.</li> </ul>
Ford, M., et al. (1997).	Professional nurses	63	<ul style="list-style-type: none"> <li>-Knowledge</li> <li>-Clinical skills</li> <li>-Change in routine practice</li> <li>-Numbers of patients screened, referred, and diagnosed</li> <li>-Trainee satisfaction with the course</li> <li>-Barriers to implementing in routine practice.</li> </ul>	<ul style="list-style-type: none"> <li>-Breast cancer screening</li> </ul>	<ul style="list-style-type: none"> <li>-Outcome was positive in all six-evaluation areas.</li> <li>-This unique training enhances breast cancer prevention, screening practices and early detection.</li> </ul>

Table1 (Continued).

Author	Population/ Sample	Sample size	Factors (Independent Variables)	Screening activity (Dependent variables)	Results/recommendations
Wood, R.Y. (1996).	African-American women $\geq$ 60 years of age. English speaking, and able to read English.	62	-Video self-instruction kits -Knowledge about breast cancer	-BSE proficiency	-The self-instruction programs had significant and positive impacts on the two BSE proficiency measures skill demonstrations ( $t=7.32$ , $p < 0.0001$ ) and lump detection using a simulation ( $t=4.23$ , $p < 0.0001$ ). -Knowledge about breast cancer scores also improved from pretest to posttest.
Pearlman, D.N., Rokowski, W., Ehrlich, B., & Clark, M. A. (1996)	1) Black, 2) Hispanic, and 3) Non-Hispanic white women	-	-Race	-Mammography -CBE -Pap-smear -Breast self-examination (BSE)	-Race is a factor influencing mammography use.
De-Grasse, C. E., O'Conor, A. M., Perrault, D. J., Aitken, S. E., & Joannis, S. (1996)	Women aged 50-69 yrs. residing in Ottawa-Carleton	384	-Knowledge -Encouragement	-Mammogram -BSE	-Increased knowledge and more encouragement can encourage women to do mammograms and BSE.
Yi, J. K., & Prows, S. L. (1996)	Cambodian women age 18 yrs. or older in Houston, Texas	216	-Perceived barriers -Income -Written-language acculturation -Knowledge -Education	-Breast cancer screening practice	- The five variables are significant predictors of ever having had a clinical breast examination.

Table 1 (Continued).

Author	Population/ Sample	Sample size	Factors (Independent Variables)	Screening activity (Dependent variables)	Results/recommendations
Nichols, B., Misra, R., & Alexy, B. (1996)	Women and men age 18-80 yrs., able to read and understand English.	172 (83 male and 89 female)	<ul style="list-style-type: none"> <li>-Race</li> <li>-Educational level</li> <li>-Marital status</li> <li>-Annual household income</li> <li>-Knowing someone with cancer</li> </ul>	<ul style="list-style-type: none"> <li>-BSE</li> <li>-Mammography</li> <li>-Pap smear</li> <li>-Testicular self-examination (TSE)</li> <li>-Rectal examination</li> </ul>	<ul style="list-style-type: none"> <li>-Race was significantly related to all sub-scales scores on the Attitudes toward Cancer Detection Scale.</li> <li>-Level of education was positively related to scores on attitudes toward BSE, mammography, pap smear, and rectal examination.</li> <li>-Married women were more likely to have had mammogram.</li> <li>-Annual household income was significantly related to scores on mammography, pap smear, rectal examination, testicular self-examination (TSE), and the beliefs about Cancer Detection Scale.</li> <li>-Knowing someone with cancer was significantly related to scores on BSE, pap smear, and TSE.</li> </ul>
Perez-Stable, E.J. Sabogal, F., & Otero-Sabogal, R. (1995)	Latino men and women, and Anglo men and women	<ul style="list-style-type: none"> <li>-798 Latinos (398 men and 408 women),</li> <li>-436 Anglos (214 men and 222 women)</li> </ul>	<ul style="list-style-type: none"> <li>-Forgetfulness</li> <li>-Lack of transportation</li> <li>-Long wait for appointments</li> <li>-Need for child care</li> </ul>	<ul style="list-style-type: none"> <li>-Cancer screening test</li> </ul>	<ul style="list-style-type: none"> <li>Latinos were significantly more likely to cite forgetfulness, lack of transportation, long wait for appointments, and need for childcare as reasons for not having cancer-screening test.</li> </ul>

Table 1 (Continued).

Author	Population/ Sample	Sample size	Factors (Independent Variables)	Screening activity (Dependent variables)	Results/recommendations
Philips, J.M., & Wilbur, J. (1995)	African-American women	154	<ul style="list-style-type: none"> <li>-Level of education</li> <li>-Marital status</li> <li>-Social influence</li> <li>-Knowledge of BSE and intention to do BSE in the future</li> <li>-Income</li> </ul>	<ul style="list-style-type: none"> <li>-Breast cancer screening guidelines (BSE, PBE, mammogram)</li> </ul>	<ul style="list-style-type: none"> <li>-Variance factors in monthly BSE included level of education, marital status, social influence, knowledge of BSE, and intention to do BSE in the future.</li> <li>-Age group, previous instruction on mammography, income, and perceived barriers related to mammography explained 15 % of age-related mammography compliance.</li> <li>-Marital status, previous information on PBE, and intrinsic motivation explained 42% of the variance in yearly PBE.</li> </ul>
Lu, Z.J. (1995).	Chinese women age 18-70 yrs.	174	<ul style="list-style-type: none"> <li>- Susceptibility</li> <li>- Seriousness for breast cancer</li> <li>- General efficacy for BSE</li> <li>- Specific efficacy of BSE for oneself</li> <li>- Competence</li> <li>- Comfort</li> <li>- Control</li> </ul>	-BSE	<ul style="list-style-type: none"> <li>-Approximately 50% had no opinion on perceived susceptibility to and seriousness of breast cancer; nevertheless, &gt;80% recognize the efficacy of BSE. Perceived competence significantly accounted for 10% of the variance on BSE frequency (p&lt;0.001). The correlation coefficients were not statistically significant for perceived susceptibility (0.06), perceived seriousness (0.09), perceived general efficacy of BSE (0.16), or perceived comfort(0.13).</li> </ul>

Table1 (Continued).

Author	Population/ Sample	Sample size	Factors (Independent Variables)	Screening activity (Dependent variables)	Results/recommendations
Benedict, S., Williams, R.D., & Baron, P.L. (1994)	Gr.1 Women with benign breast biopsies and gr.2 women with no histories of breast disease	-gr. 1 = 238 -gr. 2 = 243	-Benign breast biopsy may be unduly afraid about the results of future detection practices.	-Breast cancer detection practices (mammogram, CBE, BSE).	-Benign breast biopsies associated with increased breast cancer detection practices. Women who have undergone breast biopsy may need support and encouragement.
Bostick, R.M., Sprafka, J. M., Virnig, B. A., & Potter, J. D. (1994).	Men and women age 25-to-74 yrs.	4,915	-Income -Education -Positive family history of breast cancer	-Mammography -BSE	-The predictors of mammography use are; higher income, higher education, and a positive family history of breast cancer. Higher income is a strong predictor of having a mammogram. -There were no strong predictors of ever having had a BSE. -The most consistent predictors of participation in cancer screening examinations across all cancer screening test is education; higher education is a predictor of having each kind of cancer screening test.
Kurtz, M.E., Given, B., Given, C.W., & Kurtz, J.C. (1993)	Working women $\geq$ 35 years of age at their worksite environments in the Lansing, Michigan, tri-country area.	3,737	-Factors (discomfort, desire for control over health, perceived importance, perceived efficacy, and lack of knowledge)	-BSE -CBE -Mammography	-The variables discomfort, perceived efficacy, and desire for controls over health were significant for all three screening behaviors. Perceived importance was identified as a fourth variable for mammography and CBE, and lack of knowledge was fourth variable for BSE. A correlation

Table 1 (Continued).

Author	Population/ Sample	Sample size	Factors (Independent Variables)	Screening activity (Dependent variables)	Results/recommendations
Coleman, E.A., Lord, J.E., Bowie, M., & Worley, M.J. (1993).	Women in Arkansas.	1,300	-A statewide breast cancer screening project (included a brief discussion of normal anatomy of the breast and expected changes in the breast, breast cancer statistics, risk factors, a video on BSE, and demonstration and practice of BSE using the Mamma Care method; basic palpation technique)	-BSE	showed that women who had more frequent physician examinations were more likely to be in compliance with American Cancer Society guidelines for mammography, and CBE ( $r=0.13$ , $p<0.001$ ; $r=0.17$ , $p<0.001$ , respectively). -The results showed a significant increase in the reported frequency of BSE for the women who were taught BSE during the project ( $\chi^2 105.79$ , $df 8$ , $p<0.001$ ). Seventy-two (36%) were practicing monthly BSE after being taught in contrast to only 27 (14%) who did monthly BSE more than once a year found a breast lump or mass since they had attended the BSE training. Lump detection was related positively to BSE practice in that none of the women who reported BSE practice as never or only once a year had found a lump.

Table 1 (Continued).

Author	Population/ Sample	Sample size	Factors (Independent Variables)	Screening activity (Dependent variables)	Results/recommendations
Patistea, E., Chliaoutakis, J., Darviri, C., & Tselika, A. (1992).	Greek female health care professionals working in the primary care centers of the city and the greater Athens area. aged from 22-64 yrs.	268	<ul style="list-style-type: none"> <li>-Knowledge</li> <li>-Marital status</li> <li>-Number of years of health education</li> </ul>	-BSE	<ul style="list-style-type: none"> <li>-Frequency of BSE; those health care professionals who reported performing BSE regularly were found to have higher scores of knowledge than those who did not.</li> <li>Level of knowledge; health care professionals with higher scores on knowledge were found to practice BSE more frequently.</li> <li>-Marital status; married women reported more positive BSE behavior than women belonging to other marital status groups. The group of unmarried women having breast cancer was more likely to practice BSE regularly.</li> <li>-Number of years of health education; scores of knowledge were higher among those professionals who had received more years of health education.</li> </ul>



Table1 (Continued).

Author	Population/ Sample	Sample size	Factors (Independent Variables)	Screening activity (Dependent variables)	Results/recommendations
Nemcek, M. A. (1989).	Black women age 25-60 yrs.	95	<ul style="list-style-type: none"> <li>-Age</li> <li>-Risk</li> <li>-Belief</li> <li>-Breast cancer knowledge</li> </ul>	<ul style="list-style-type: none"> <li>-BSE</li> </ul>	<ul style="list-style-type: none"> <li>-The majority of women (67%) failed to follow the American Cancer Society (ACS) recommendations and reported practicing BSE less frequently than every month. Age was significantly associated with frequency of BSE practice. Older women were found to practice BSE more frequently than the younger women (<math>\chi^2_{4df} = 12.81, p &lt; 0.01</math>). Women without prior exposure to breast disease tended to practice BSE least frequently (<math>\chi^2 = 12.04, p &lt; 0.01</math>). Belief that health professionals control a person's health, a powerful other locus of control, was strongest in women who practiced BSE least frequently (<math>H = 9.43, p = 0.01</math>). Breast cancer knowledge scores were found to be uniformly low with women answering only 57% of the questions accurately.</li> </ul>
Krischer, J. P., Cook, B., & Weiner, R. S. (1988).	First and second-order female relatives of newly treated breast cancer patients.	-	<ul style="list-style-type: none"> <li>-Race</li> <li>-Having been taught BSE</li> <li>-Income</li> </ul>	<ul style="list-style-type: none"> <li>-Breast cancer screening practice</li> </ul>	<ul style="list-style-type: none"> <li>-Breast cancer screening practices correlated with race, having been taught BSE, and income.</li> </ul>

Table 1 (Continued).

Author	Population/ Sample	Sample size	Factors (Independent Variables)	Screening activity (Dependent variables)	Results/recommendations
Rutledge, D.N. (1987).	Women age ≥ 18 yrs., able to read and write English, not having had treatment for breast cancer or breast lumps in the past year.	93	<ul style="list-style-type: none"> <li>- Perceived benefits of BSE</li> <li>- Perceived barriers</li> <li>- Perceived level of social support</li> <li>- Social network properties</li> </ul>	<ul style="list-style-type: none"> <li>- Frequency of BSE practice.</li> </ul>	<ul style="list-style-type: none"> <li>- High-perceived benefits of BSE were significantly associated with higher frequency of BSE practice.</li> <li>- Low perceived barriers were significantly related to frequency of BSE practice.</li> <li>- No significant relationships between BSE frequency and perceived severity of breast cancer, perceived level of social support, and social network properties.</li> </ul>