ABSTRACT

THE HEALTH BELIEFS, PERCEPTIONS
AND BREAST CANCER SCREENING
AMONG FEMALE UNIVERSITY STAFF

By Charisao Srisuthipornsakul

Breast cancer is the most common non-skin cancer among women in the United States. Approximately 40,170 females will lose their lives from the disease. The National Cancer Institute (NCI) estimated that 192,370 females were expected to be diagnosed with breast cancer in 2009. National Cancer Institute (2009) also explained that treatment is more likely to work well when cancer is found early. The NCI recommends women reduce risks that could lead to breast cancer and diligently engage in routine breast cancer screening.

Many women are aware of the recommendation to begin breast cancer screening at age 40—but many are not. Assessing women's health beliefs regarding breast cancer and breast cancer screening allows clinicians to provide appropriate education to encourage women to practice healthy behaviors. This study uses The Health Belief Model Scales to measure beliefs related to breast cancer and to identify health beliefs regarding breast cancer screening among female university employees in Wisconsin. This study examines the factors of health motivation, barriers of mammography, and benefits of mammography as measured on survey questions in the Champion Breast Cancer Health Belief tool to determine which factors predict frequency of mammography. This tool was developed using the health belief model, a useful tool for examining motivations for engaging in or not engaging in health behaviors.

A convenience sample of 107 female university employees working at the University of Wisconsin-Oshkosh was surveyed. Demographic characteristics are reported. Stepwise method of the multiple regression analysis was used to analyze all variables. The four variables were found to be significant with the adjusted R square = 0.432; $F= 10.722$, $p<0.0005$. The model explained 43.2% of variance in Years Since Last Mammography variable. These variables included: (a) I have regular health check-ups even when I am not sick, (b) Having a routine mammogram or x-ray of the breast would make me worry about breast cancer, (c) Having a mammogram or x-ray of the breast would take too much time, and (d) Having a mammogram or x-ray of the breast would be embarrassing.

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by

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To my wonderful mom and dad, Nanuda and Natin Srisuthipornsakul. Thank you for giving me unconditional love, guidance, constant support and encouragement. You have raised your only child to be strong and successful. Thank you for always believing in me and being right by my side. I would not have come this far without both of you. Thank you for everything!

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CHAPTER I

INTRODUCTION

Breast cancer is the most common non-skin cancer among women in the United States and it is second only to lung cancer in causing cancer deaths in women (American Cancer Society, 2009). It is also more common as women age. The National Cancer Institute (2009) estimated that 192,370 cases of females are expected to be diagnosed with breath cancer in 2009, and approximately 40,170 of females will lose their lives from the disease. In the state of Wisconsin alone, 38,486 females were diagnosed with breast cancer from 1995 through 2004 (Jones, Williamson, Creswell, Strickland, & Remington, 2009). The incidence of breast cancer is highest in Whites, but African Americans have higher mortality rates than any other racial or ethnic group in the United States (National Cancer Institute [NCI], 2009).

Age is also a factor in breast cancer. Thus the screening recommendations are for women over 40 to be screened. In the US from 2002-2006, the median age of breast cancer diagnosis was 61 years of age. Approximately 0.0% was diagnosis under the age of 20; 1.9% between the age of 20 and 40; 10.5% between 35 and 44; 22.5% between 45 and 54; 23.7% between 55 and 64; 19.6% between 65 and 74; 16.2% between 75 and 84; and 5.5% were 85 years and older (NCI, 2009).

It is estimated that 8.1 billion dollars is spent each year on the breast cancer treatment in the United States (NCI, 2009). Although the cause of breast cancer is unclear, several risk factors such as age, gender, genetic risk factors, or family history, may contribute to an increased risk of developing cancerous breast cells (American Cancer Society [ACS], 2009). In addition, women should be aware that the following

hormonal factors may contribute to an increased risk of breast cancer: beginning menstruation before age 12, experiencing menopause after age 55, having the first child after age 30, or not having any children (NCI, 2009).

Women become aware of breast cancer either by screening mammogram or by noticing signs. The most common signs of breast cancer are a lump in the breast; abnormal thickening of the breast; or a change in the shape or color of the breast (National Breast Cancer Awareness Month, 2009). When a woman palpates a lump in her breasts, it does not necessarily mean she has developed breast cancer. However, it is crucial to prompt women to seek an evaluation by their healthcare providers.

In addition, the following signs and symptoms can indicate breast cancer: a nipple turned inward into the breast; nipple discharge; or the skin of the breast, areola, or nipple may be scaly, red, or swollen. The breast may have ridges or pitting so it looks like the skin of an orange (NCI, 2009). The problem with waiting for these signs is that, when present, they usually signify the breast cancer has progressed to an advanced stage. In all cancers, if the disease if discovered in the advanced stages, there is reduced survival. Mammography catches breast cancer earlier than breast self-exam (BSE) or clinical breast exam (CBE).

Breast cancer screening can help to detect and treat breast cancer early before the condition progresses. The NCI (2009) recommends females use mammography, clinical breast exam, and self-breast exam as screening tools. According to the ACS (2009), women age 40 and above should have a screening mammogram done once a year. After age 40, CBE should be completed by a healthcare professional in addition to mammogram in order to detect more tumors than mammography alone (ACS, 2009).

Many research studies have been done on the knowledge of breast cancer and breast cancer screening behaviors. However, there have been limited studies on the health beliefs and perceptions of breast cancer screening among the general female population in the past decade. Due to a focus on racial and ethnic health disparities, there were relatively few articles that survey women about their beliefs without targeting a specific minority group. The health beliefs of the overall population of women in Wisconsin have rarely been studied. Understanding women's beliefs about breast cancer is important because screening behaviors can be predicted by health beliefs.

Lippert, Eaker, Vierkant, and Remington (1999) conducted a random telephone survey of women age 40 and above living in rural Wisconsin. The aim of the study was to examine the relationship between family history of breast cancer and compliance with mammography screening guidelines. The authors found that family history was not a significant factor in compliance with mammography screening. Knowledge of guidelines, intentions to have screenings, and recommendations from providers, however, had a significant impact on compliance with guidelines (Lippert et al., 1999).

Hay, McCaul, and Magnan (2006) conducted a meta-analysis of 12 prospective studies that measured worry about breast cancer and breast cancer screening behaviors among 3342 high-risk and general population women. The authors discovered that greater worry predicts a greater likelihood of screening. Therefore, breast cancer worry may motivate women to adhere to screening behaviors (Hay et al., 2006).

Schueler, Chu, and Bindman (2008) summarized a systematic quantitative review of literature related to factors associated with screening mammography. The authors found that physician access barriers and not having primary care providers were

highly associated with not obtaining mammography. Past screening behaviors had a big impact on receipt of mammography and Pap test (Schueler et al., 2008).

Schueler et al. (2008) also concluded that African American and Latina women were more concerned about cost, mammography safety, and pain. Having no insurance was an important factor to White and Chinese women. Additionally, women who had less access to health care providers were less likely to undergo mammography. Therefore, primary care providers are a key person to increase mammography screening behaviors by encouraging women to follow recommended screening guidelines.

Women will not perceive cancer screening as a beneficial procedure if they believe that the disease is uncontrollable and could lead to death. Based on the Health Belief Model (HBM) screening behavior will be predicted by women's perceptions about breast cancer derived from their knowledge about the disease (Farmer, Reddick, D'Agostino, & Jackson, 2007). Thus, it is significant for healthcare providers to provide thorough education about breast cancer and the importance and benefits of early-detection screening.

Significance for Advanced Nursing Practice

Nurse practitioners (NPs) have the responsibility to encourage compliance with recommendations for screenings by educating patients, performing screening exams or referring patients for screening exams. To better inform patients, NPs must be aware of perceptions among patients in order to inform and tailor educational messages to

promote age-appropriate health screenings including CBE, BSE, and mammography in order to detect breast cancer at the earliest possible stage.

Nurse practitioners are in a key position to significantly enhance knowledge, alleviate fear, dispel myths, and correct misperceptions about breast cancer and breast cancer screening. Therefore, it is essential for advanced practice nurses to have solid knowledge of potential patient perceptions of breast cancer including screening practices in order to educate patients appropriately.

Problem Statement

Finding from a nationwide sample reported that one third of the women who were at high risk of developing breast cancer did not receive appropriate screening based on their level of risk (Katapodi, Dodd, Lee, & Facione, 2009). Thus, examining women from a variety of settings, including the population of University employees will help to identify women's health beliefs about the benefits and barriers of breast cancer screening and allow for interventions to improve the rate of women receiving appropriate screenings. Furthermore, health care providers will be able to recognize patient perceptions of breast cancer and implement needed recommendations to improve breast cancer screening rate and ensure early breast cancer detection.

Purpose of the Study

The purpose of the study was to identify health beliefs of breast cancer screening among female university staff and how those beliefs relate to breast cancer screening behavior.

Research Questions

The research questions are:

1. What are the health beliefs of breast cancer screening among female university staff?
2. How do the health motivation, barriers of mammography, and benefits of mammography on the champion survey tool affect breast cancer screening rates?
3. How do health motivation, barriers and benefits of mammography affect number of years since last mammogram screening?

Definitions of Terms

Conceptual Definitions

Health: The general condition of the body or mind with reference to soundness and vigor (dictionary.com, 2010).

Beliefs: Something believed; an opinion or conviction (dictionary.com, 2010)

Perceptions: The act or faculty of apprehending by means of the senses or of the mind; cognition; understanding (dictionary.com, 2009).

Breast cancer: Cancer that forms in tissues of the breast, usually the ducts (tubes that carry milk to the nipple) and lobules (glands that make milk). It occurs in both men and women, although male breast cancer is rare (NCI, 2009).

Screening: Checking for disease when there are no symptoms. (NCI, 2009).

University Employees: Female individuals working at university.

Operational Definitions

Health Beliefs: individual's belief of health-behavior.

Perceptions: Information obtained from the Health Belief Model scales for measuring beliefs related to breast cancer (Champion, 1999).

Breast cancer screening: As used in this study, includes mammography.

University Employee: Female individuals currently employed at the University of Wisconsin Oshkosh with age range of 40 and above.

Assumptions

1. All participants will answer the web-based questionnaires honestly.
2. Females will be the only participants answering the questionnaire.
3. The Health Belief Model scales for measuring beliefs related to breast cancer is an accurate tool to measure perceptions of breast cancer screening in university employees.

Summary

Because breast cancer is not preventable, women are strongly urged to take action regarding controllable risks of breast cancer such as limiting alcohol consumptions and maintaining a healthy weight. Performing breast cancer screening on a regular basis allows individuals to detect breast cancer early, which is beneficial in treatment outcome. Additionally, examining women from a variety of settings, including the population of University employees will help to identify women's health beliefs about the benefits of-and barriers to-breast cancer screening. This will allow health care

providers to tailor specific and appropriate education and provide needed recommendations in order to reduce the risk of breast cancer and to detect breast cancer early.

CHAPTER II

THEORETICAL FRAMEWORK AND LITERATURE REVIEW

This chapter consists of the theoretical framework of the Health Belief Model (HBM) and a review of the research studies that have been conducted on the health beliefs regarding breast cancer screening behaviors among females.

Theoretical Framework

The Health Belief Model (HBM) was developed in the 1950s by a group of social psychologists to explain the reason why a limited number of individuals engage in prevention programs to prevent and protect against disease (Glanz, Rimer, & Lewis, 2002). The HBM was a value-expectancy theory; therefore, the interpretations were as follows: (a) the desire to avoid illness or to get well (value), and (b) the belief that a specific health action available to a person would prevent (ameliorate) illness (expectation) (Glanz et al., 2002).

Others have studied concepts form the health belief model in research and determined the health belief model is valid. Health behavior will take place when a threat is recognized (Champion, 1999). The health seeking behavior is manipulated by the individual's perception of a threat that occurred as a result of a health problem (Polit and Beck, 2008).

An individual's perception regarding vulnerability to illness and effectiveness of medical care were examples of factors that help to determine whether or not that individual will seek care (McAlearney, Reeves, Tatum, & Paskett, 2007). In addition, the

individual's belief that the disease is serious and that the detrimental consequences of the disease will affect one's life enable the individual to consider engaging in behaviors that promote health (Farmer et al., 2007).

Azaiza and Cohen (2006) explained that the Health Belief Model (HBM), adjusted to be incorporated in the breast cancer screening, proposes that the following factors play an important role in the individual's perception about breast cancer screening: (a) perceptions of the severity of the health condition, (b) one's susceptibility, (c) benefits accruing from the examination, (d) barriers to performance, and (f) general health motivation. Sohl and Moyer (2007) also reported that the health belief model (HBM), which assesses perceptions of risk, benefits, severity, barriers, cues to action and self-efficacy, is directly related to the individual's behavior such as getting recommended mammography.

The Health Belief Model

The Health Belief Model (HBM) consists of the following six main variables: perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cue to action, and self-efficacy (Glanz et al., 2002). Individuals will take action to prevent, to screen for, or to control ill-health conditions if they perceive themselves as susceptible to the condition, if they believe consequences could potentially be serious, if they believe the course of action would reduce their susceptibility to or the severity of the condition, and if they believe that the anticipated barriers to taking the action are outweighed by the benefits (Glanz et al., 2002).

Perceived Susceptibility

Perceived susceptibility occurs when one believes that they are susceptible to the particular health condition (NCI, 2009). Polit and Beck (2008) also described that this stage occurs when the individual believes that an illness is relevant or that a diagnosis is correct. Females often do not experience pain with breast cancer. However, they may have family members or friends who suffer from cancer. Therefore, they are aware of the possibility of developing breast cancer, which clearly represents the perceived susceptibility stage.

Perceived Severity

Perceived severity occurs when the individual believes that the condition has serious consequences (NCI, 2009). Additionally, perceived severity occurs when one perceives a threat of having the illness. Individuals are in a perceived severity stage when they recognize the consequences including undergoing radiation, mastectomy, or death.

Perceived Benefits

In addition to perceived susceptibility and perceived severity, perceived benefits to taking action and perceived barriers also play an important role in the HBM (Champion, 1999). Perceived benefits occur when the individual believes in the efficacy of the advised action to reduce risk or seriousness of impact (Glanz et al.,2002). In mammography screening, patients benefit from the screening by detecting breast cancer early and therefore, avoiding death (Champion, 1999).

Perceived Barriers

Perceived barriers refer to negative attributes related to the health action (Champion, 1999). This stage occurs when the individual believes that the costs of taking action outweigh the benefits (NCI, 2009). Champion (1999) also explained that patients might associate pain, cost, or fear of radiation with mammography screening.

Cue to Action

Additionally, cue to action occurs when the individual is exposed to factors that prompt the action. For instance, a reminder card from a physician's office is sent out annually to remind the patient to get a mammogram (NCI, 2009).

Self-Efficacy

Lastly, self-efficacy occurs when the individual is confident in their ability to successfully perform an action (NCI, 2009). Individuals are in this stage when they realize the benefits of practicing age-appropriate breast cancer screening and diligently engage in the screening process as recommended by their healthcare providers.

The Model Case Study

The model case study symbolizes the importance of breast cancer screening in women. A 45-year-old female comes in to the clinic with a chief complaint of a right breast lump palpated during her self-breast exam for the last couple of months. The patient has never had a screening mammogram done. Her mother was diagnosed with breast cancer at the age of 55. Based on the ACS breast cancer screening guideline (2009), the patient should have a mammogram done annually starting at the age of 40.

An advanced practice nurse (APN) sees the patient and performs clinical breast exam (CBE) and palpates a lump in her right breast and also notices an inverted right nipple. The APN talks with the patient while performing the assessment and discovers the patient's barrier to getting a mammogram. The APN is then able to tailor specific education to eliminate the patient's barrier to mammography. The patient is referred to an oncologist and later is diagnosed with breast cancer. She is scheduled for both chemotherapy and radiation. She successfully completes her treatment and fully recovers without any complications.

Literature Review

Breast cancer is the most common non-skin cancer among women in the United States (ACS, 2009). Powe, Underwood, Canales, and Finnie (2005) explained that nurses are a key to providing knowledge, correcting misperceptions, and alleviating fears related to breast cancer. Therefore, it is crucial for healthcare providers to have a solid understanding of the condition and to be able to assess the individual's beliefs and perceptions about breast cancer. This allows them to tailor specific education and motivate patients to engage in breast cancer screening as recommended to prevent breast cancer.

This review of literature will focus on research regarding knowledge of breast cancer and current screening recommendations and the separate concepts of health beliefs, motivation, barriers of mammography, and benefits of mammography and their impact on mammography behavior in US populations-with particular attention to the few studies done on university populations and those done in the region.

Perceptions and Knowledge of Breast Cancer

Katapodi et al. (2009) studied perceived cancer risk, identified the percentage of women with inaccurate risk perceptions, and examined the influence of perceived and objective risk on breast cancer screening behavior. They recruited 184 multicultural English-speaking women in a metropolitan area on the west coast of the United States who have never been diagnosed with cancer to participate in the study. The two perceived risk scales, verbal and comparative, and the Gail model were used to assess perceived breast cancer risk (Katapodi et al., 2009). The authors found that the majority of women who are at high risk to develop breast cancer did not have a correct perception of their breast cancer risk.

Therefore, these women underestimated the risk of developing breast cancer and were less likely to adhere to provider's recommendations for breast cancer prevention. Additionally, individuals who have inaccurate perceptions of their health risks most likely will not participate in health screening programs. Katapodi et al. (2009) also agreed with Powe et al. (2005) that healthcare providers are the individuals who fill the gaps in knowledge of breast cancer and provide education about appropriate screening methods.

Alkhasawneh (2007) found that nurses play an important role in increasing women's awareness of breast cancer and early-detection screening methods. The purpose of the study was to examine Jordanian nurses' knowledge and early detection of breast cancer. 395 female nurses working in seven governmental and three private hospitals in Jordan participated in the study. Participants completed a 24-question knowledge test regarding risk factors associated with breast cancer and methods of

early detection (Alkhasawneh, 2007). The author determined that it is important for providers to assess and understand women's perceptions and knowledge about breast cancer and various screening methods. Another finding in this study was that healthcare provider knowledge about breast cancer screening plays an important role in patients' education. Thus, identifying patients' health beliefs and perceptions about breast cancer screening allows providers to plan individualized education and recommendations and tailor them to patients' needs.

Demographic factors-such as age, ethnicity, and prior exposure to cancer-have an impact on how individuals perceived breast cancer and early screening behavior. Azaiza and Cohen (2006) recruited 568 Arab women, aged 20-60, who belonged to three different religious groups to examine the relationship between health beliefs and participation in breast cancer screening. Participants answered telephone surveys regarding attendance for mammography screening and clinical breast examination, and health beliefs. Azaiza and Cohen (2006) found that women with a family history of breast cancer have better perception of susceptibility, which resulted in attending breast cancer detection screening early.

Screening Recommendations

Although there is a more recent controversy, prior to the fall of 2009, the U.S. Preventive Services Task Force (USPSTF) and the ACS were in agreement on the recommendation that breast cancer mammography screening should begin at 40. In the fall of 2009, the USPSTF reversed their decision, now recommending screening for women in their 40s be based on individual choice and risk. This will be addressed later

in this paper as a limitation of the current study. According to the ACS (2009), women age 40 and above should have a screening mammogram done once a year.

Menon et al. (2007) explained that the Transtheoretical Model (TTM) could be incorporated into the research study to conceptualize mammography behavior as a sequence of stages. Women who were in the contemplation stage have tendency to perceive themselves to be at risk for breast cancer, have adequate knowledge and confidence to obtain a mammogram, and perceive benefits of the screening (Menon et al., 2007). Therefore, they are likely to engage in screening behavior. On the other hand, women who were in precontemplation stage had lower beliefs for susceptibility, benefits, self-efficacy, and knowledge about breast cancer screening (Menon et al., 2007). Hence, providers are able to assess and identify individuals' perceptions about breast cancer screening in order to promote the good habit of routine breast cancer screening which will lead to fatality reduction.

Barriers and Benefits of Breast Cancer Screening

Farmer et al. (2007) also explained that African American women who perceived more benefits and few barriers to mammography screening have a tendency to follow recommended screening guidelines. Women will not perceive cancer screening as a beneficial procedure if they believe that the disease is uncontrollable and could lead to death. Based on the HBM, women's perceptions about breast cancer derived from the knowledge about the disease (Farmer et al., 2007). Thus, it is significant for healthcare providers to provide thorough education about breast cancer, signs and symptoms, and the importance and benefits of early-detection screening.

Lee-Lin et al. (2007) also agreed that a high level of perceived mammography barriers predicted a lower chance of having the mammogram screening. Chinese American immigrants believed that the barriers to breast cancer screening procedure included: forgetting, cost, lack of time, poor knowledge, lack of English ability, lack of symptoms, and lack of provider recommendation. Therefore, providers are in a key position to educate patients and dispel myths about breast cancer and screening techniques in order to promote healthy screening behavior tailored to each individual.

Farmer et al. (2007) also explained that benefits and barriers of mammography screening were correlated with current mammography screening in the study's group of older, low-income, African American women. The barriers to mammography screening may include increased worry about cancer, embarrassment, lack of time, pain, and cost. The benefits of mammography screening consist of feeling good about self, reducing worry about breast cancer and increasing opportunities of detecting breast lumps early which leads to better result (Farmer et al., 2007).

Schueler, Chu, and Smith-Bindman (2008) summarized a systematic quantitative review of literature related to factors associated with screening mammography. The authors found that physician access barriers and not having primary care providers were highly associated with not obtaining mammography. Past screening behaviors had a big impact on receipt of mammography and Pap test (Schueler et al., 2008). African Americans and Latina women were more concerned about cost, mammography safety, and pain. Having no insurance was an important factor to Caucasian and Chinese women. Additionally, women who had less access to health care providers were less likely to undergo mammography. Therefore, primary care providers are a key to

increasing screening mammography behaviors by encouraging women to follow recommended screening guidelines.

Summary

The Health Belief Model (HBM) is an excellent fit for addressing the health beliefs and perceptions of breast cancer screening among female university staff. The NCI (2005) recommends that health care providers to utilize this model when dealing with behaviors that evoke illness such as hypertension and high-risk sexual behavior. Champion (1999) also noted that the combination of an individual's perception of more benefits to screening and less barriers will promote breast cancer screening practice.

Several research articles clearly demonstrate the benefits of engaging in breast cancer screening in order to detect any breast abnormalities early, thus, avoiding death. Therefore, assessing and identifying university employees' health beliefs and perceptions of breast cancer screening will allow healthcare providers to tailor specific needs to appropriately educate and provide needed recommendations in order to reduce risks of breast cancer and detect breast cancer early.

CHAPTER III

METHODOLOGY

Introduction

The purpose of the study was to identify health beliefs of breast cancer screening among female university staff. This chapter included a description of the method used in the research study. The study design, sample and setting, description of instrument, data collection procedures including protection of human participants, data collection procedure and analysis were clearly identified.

Study Design

A non-experimental descriptive design was utilized in the study to identify the health beliefs and perceptions of breast cancer screening in female university employees currently employed at the University of Wisconsin-Oshkosh with the age range of 40 and above. The web-based questionnaires were emailed to all employees via a web based survey tool.

Sample and Setting

A convenience sample of participants included female employees currently employed at the University of Wisconsin-Oshkosh. The Human Resources department at the University of Wisconsin Oshkosh was not able to release the number of female employees. According to Winters (2003), there are approximately 1,197 full-time equivalent employees including faculty, academic staff, and classified staff at the

University of Wisconsin-Oshkosh. The author also stated that two thirds of the 3 million workers employed by urban colleges and universities were non-faculty support staff. The web-based questionnaires including electronic consent forms were sent to all employees via email. The consent form including the purpose of the study was clearly identified. The questionnaire was developed utilizing surveymonkey.com. Participants were informed that their participation was completely voluntary. The inclusion criteria for the study is as follows: (a) female university employee currently working at the University of Wisconsin Oshkosh, (b) age of 40 and above, (c) all ethnic groups, and (d) have never been diagnosed with breast cancer.

Several women did not complete the survey and were excluded from analysis. A total of 33 participants (30.84%) were excluded from the study. One participant did not meet the age requirement. 32 participants returned incomplete surveys with one or more responses missing from the history of cancer section, the health motivation, barriers and benefits of mammography sections.

Data Collection Instrument

The Health Belief Model Scales for measuring beliefs related to breast cancer (Appendix B) was utilized to measure participants' health beliefs and perceptions about breast cancer screening (Champion, 1999). Three experts who were familiar with the Health Belief Model and breast cancer screening assessed the revised scales for content validity (Champion, 1993). The scales were administered to a probability sample of 581 women who participated in a larger intervention study. The modified questionnaire consisted of 17 items. All items were measured on a 5-point Likert scale

with the following coding: strongly disagree (1); disagree (2); neutral (3); agree (4); and strongly agree (5).

The modified scales were divided into 3 sections including: health motivation, barriers of mammography, and benefits of mammography. Below is the internal consistency and test retest reliability of the tool.

Table 1

Health Belief Model Scales for Measuring Beliefs Related to Breast Cancer (Champion, 1999)

Categories	Alpha	Test/Retest
Health Motivation	0.83	0.67
Benefits (Mammography)	0.79	0.45
Barriers (Mammography)	0.75	0.65

A demographic questionnaire of age, gender, race/ethnicity, marital status, history of cancer, family history of breast cancer, and the time of last screening mammogram were incorporated (Appendix C).

Data Collection Procedures

Permission for the study was obtained from the University of Wisconsin Oshkosh Institutional Review Board. The consent form (Appendix D) including the purpose of the study was clearly identified and sent to all participants via email. Questionnaires were developed utilizing surveymonkey.com. All participants reviewed the consent form prior to completing the questionnaire. At the end of the consent form, participants were

prompted that they agree to participate in the study when they selected the next button. Participants were clearly informed that their participation was completely voluntary. All responses were anonymous. Completed questionnaires were retrieved via the web-based collection tool surveymonkey.com. The data collected is anonymous and contains no personally identifiable information.

Data Analysis

The statistical computer software Statistical Package for the Social Sciences (SPSS) was utilized to examine the descriptive statistics (mean and frequency) data obtained from demographic information. Stepwise method of the linear multiple regression analysis was also used to determine the health motivations, barriers and benefits of mammography screening related to breast cancer.

Summary

The non-experimental descriptive design was incorporated in the research study to identify the health beliefs and perceptions of breast cancer screening in female university employees. The participants consisted of female university employees with the age of 40 and above, and currently employed at the University of Wisconsin Oshkosh. The Health Belief Model Scales for measuring beliefs related to breast cancer was utilized to measure participants' health beliefs and perceptions about breast cancer screening. Permission for the study was obtained from the University of Wisconsin Oshkosh Institutional Review Board. The consent form including the purpose of the study was clearly identified and sent to all participants via email.

All responses were anonymous. The researcher was not able to identify participants. Completed questionnaires were retrieved via the surveymonkey.com and the data collected was stored confidentially. The statistical computer software SPSS was utilized to examine the descriptive statistics (mean and frequency) data obtained from demographic information. The linear multiple regression analysis was also used to determine the Health Belief Model scales for measuring beliefs related to breast cancer.

CHAPTER IV

RESULTS AND DISCUSSION

Introduction

The purpose of the study was to identify health beliefs of breast cancer screening among female university staff and how those beliefs relate to breast cancer screening behavior. The Years Since Last Mammogram was an independent variable. Health Motivation, benefits and barriers of Mammography Screening were dependent variables in the study.

Demographic Data

The online questionnaires were sent out to all employees at the University of Wisconsin-Oshkosh. Out of 107 participants, 74 participants (69.16%) were included in the analysis. The participant age range was between 40 and 66 years of age with the mean age of 52.73 years old. Out of 74 participants, 71 (95.9%) were White. Three participants (4.1%) were interracial. 64 participants (86.5%) have never been diagnosed with any type of cancer. 10 participants (13.5%) had a history of non-breast cancer. There were 56 participants (75.7%) who had a mammogram within the last year. 12 participants (16.2%) had their last mammogram screening within the last 2 years. Three participants (4.1%) had a mammogram within the last 3 years. One participant (1.4%) had her mammogram screening within the last 5 years. Two participants (2.7%) had their mammogram within the last 6 years.

Table 2

Demographic Summary 1

Variables	Age	Years Since Last Mammogram
Mean	52.73	1.43
Min	40.00	1.00
Max	66.00	6.00

Demographic variables of age and cancer history are presented in table 3.There were 107 participants total.

Table 3

Demographic Summary 2

	Frequency (n=74)	Valid Percent
Age		
40	3	4.1
41	1	1.4
42	1	1.4
43	1	1.4
45	1	1.4
46	4	5.4
47	4	5.4
48	4	5.4
49	1	1.4
50	7	9.5
51	4	5.4

(table continues)

	Frequency (n=74)	Valid Percent
Age		
52	4	5.4
53	3	4.1
54	7	9.5
55	4	5.4
56	7	9.5
57	2	2.7
58	4	5.4
59	1	1.4
60	2	2.7
61	2	2.7
62	4	5.4
63	2	2.7
66	1	1.4
Race		
Caucasian	71	95.9
Mixed	3	4.1
Marital Status		
Divorced	7	9.5
Marital Status		
Married	59	79.7
Unmarried	8	10.8
History of Cancer		
Yes	10	13.5

(table continues)

	Frequency (n=74)	Valid Percent
History of Cancer		
No	64	86.5

Table 4

Demographic Summary 3

	Frequency (n=74)	Valid Percent
Years Since Last Mammogram		
1	56	75.7
2	12	16.2
3	3	4.1
5	1	1.4
6	2	2.7

Findings

Health Motivation

The multiple linear regression analysis was used to measure participants' beliefs of health motivation related to mammography screening. Out of the seven variables in the health motivation section, the only significant variable was "I have regular health check-ups even when I am not sick." Using the stepwise method, adjusted R square = 0.209; $F = 20.246$, $p < 0.05$. Significant variables are shown in Table 5. The model explained 20.9% of variance in Years Since Last Mammogram variable.

Therefore, women who believe that having regular health check ups even when they were not sick have fewer years between their last mammography screenings. Thus, these women were more likely to have mammography screening frequently.

Table 5

Health Motivation

Predictor Variable	Beta	p-value	Adjusted R Square	F
(Constant)	3.389			
I have regular health check-ups even when I am not sick.	-0.473	p=.00003<.05	0.209	20.246
(Other Variables: I want to discover health problems early; Maintaining good health is extremely important to me; I search for new information to improve my health; I feel it is important to carry out activities which will improve my health; I eat well balanced meals; I exercise at least 3 times a week. were not significant predictors in this model)				

Benefits for Mammography

Stepwise method of the multiple regression analysis was also selected to determine the benefits that were identified by participants for mammography screening. The following variable was found to be significant: “When I get a mammogram, I don’t worry as much about breast cancer” adjusted R square = 0.052; F = 0.065, $p < 0.0005$. Significant variables are shown in Table 6. Thus, women who got their mammography screening more often were less likely to be worried about breast cancer. The model only explained 5.2% of variance in Years Since Last Mammogram variable.

Table 6

Benefits for Mammography

Predictor Variable	Beta	p-value	Adjusted R Square	F
(Constant)	2.371			
When I get a mammogram, I don't worry as much about breast cancer.	-0.241	p=.02828<.05	0.052	5.011
(Other Variables: When I get a recommended mammogram, I feel good about myself; Having a mammogram or x-ray of the breast will help me find lumps early; Having a mammogram or x-ray of the breast will decrease my changes of requiring radical or disfiguring surgery if breast cancer occurs; Having a mammogram will help me find a lump before it can be felt by myself or a health professional were not significant predictors in this model)				

Barriers for Mammography

Stepwise method of the multiple regression analysis was selected to measure participants' beliefs of barriers for mammography screening. Three variables were found to be significant with the adjusted R square = 0.371; F= 15.3222, p<0.0005. The model explained 37.1% of variance in Years Since Last Mammogram variable.

The first significant variable was "Having a mammogram or x-ray of the breast would take too much time." Women who believed having a mammogram screening would take too much time were more likely to have more years since their last mammogram. Therefore, these women would get mammogram screening less frequently.

The second significant variable was “Having a routine mammogram or x-ray of the breast would make me worry about breast cancer.” Women who believed that having a mammogram would worry them were less likely to engage in mammography screening. Therefore, these women had more years since their last mammogram.

The last significant variable found was “Having a mammogram or x-ray of the breast would be embarrassing.” Even though some women believed that having a mammography screening would be embarrassing, they were more likely to get mammogram screenings frequently. This indicates that women experienced some embarrassment related to the mammogram they had but this did not prevent them from getting their recommended mammogram.

Table 7

Barriers for Mammography

Predictor Variable	Beta	p-value	Adjusted R Square	F
(Constant)	0.269			
Having a mammogram or x-ray of the breast would take too much time	0.827	p=.00001<.05		
Having a routine mammogram or x-ray of the breast would make me worry about breast cancer	0.472	p=.00033<.05		
Having a mammogram or x-ray of the breast would be embarrassing	-0.642	p=.00166<.05	0.371	15.322
(Variables: Having a mammogram or x-ray of the breast would be painful; Having a mammogram or x-ray of the breast would cost too much money were not significant predictors in this model)				

Health Motivations, Benefits, and Barriers for Mammography

Stepwise method of the multiple regression analysis was also used to analyze all variables. The four variables were found to be significant with the adjusted R square = 0.432; F= 10.722, p<0.0005. The model explained 43.2% of variance in Years Since Last Mammography variable. These variables included: (a) I have regular health check-ups even when I am not sick, (b) Having a routine mammogram or x-ray of the breast would make me worry about breast cancer, (c) Having a mammogram or x-ray of the breast would take too much time, and (d) Having a mammogram or x-ray of the breast would be embarrassing.

Table 8

Multiple Regressions: *Significant Variables*

Predictor Variable	Beta	p-value	Adjusted R Square	F
(Constant)	1.73			
I have regular health check-ups even when I am not sick	-0.284	p=.00467<.05		
Having a routine mammogram or x-ray of the breast would make me worry about breast cancer	0.405	p=.00130<.05		
Having a mammogram or x-ray of the breast would take too much time	0.687	p=.00013<.05		
Having a mammogram or x-ray of the breast would be embarrassing	-0.611	p=.00166<.05	0.432	14.87

(Variables: I want to discover health problems early; Maintaining good health is extremely important to me; I search for new information to improve my health; I feel it is important to carry out activities which will improve my health; I eat well balanced meals; I exercise at least 3 times a week; When I get a recommended mammogram, I feel good about myself; Having a mammogram or x-ray of the breast will help me find lumps early; Having a mammogram or x-ray of the breast will decrease my changes of requiring radical or disfiguring surgery if breast cancer occurs; Having a mammogram will help me find a lump before it can be felt by myself or a health professional; When I get a mammogram, I don't worry as much about breast cancer; Having a mammogram or x-ray of the breast would be painful; Having a mammogram or x-ray of the breast would cost too much money were not significant predictors in this model)

Discussion

In this study, the following barriers were found to be significant: (a) Having a mammogram or x-ray of the breast would take too much time predictably correlates with an increase in time since the woman's last mammogram, (b) Having a routine mammogram or x-ray of the breast would make me worry about breast cancer directly correlates with an increased time since last mammography, and (c) Having a mammogram or x-ray of the breast would be embarrassing, contrary to what would be expected actually is correlated with a decrease in time since the woman's last mammogram.

Farmer et al. (2007) agreed that the barriers to mammography screening may include increased worry about cancer, embarrassment, and lack of time. However, pain and cost were also found to be significant (Farmer et al., 2007). Kang, Thomas, Kwon, Hyun, and Jun (2008) also found that lack of time and embarrassment were barriers to mammography screening among Korean women. Therefore, it is important for healthcare providers to recognize the significance of correctly educating patients on the amount of time needed to complete a mammogram screening and stressing the importance of engaging in a routine screening per provider recommendations to detect any cell changes early. High cost, lack of information, fear, and pain were also discovered to be significant barriers (Kang et al., 2008).

In addition, Lee-Lin et al. (2007) explained that lack of time, forgetfulness, cost, poor knowledge, lack of English ability, lack of symptoms, and lack of provider recommendation are believed to be barriers to mammography screening among Chinese American immigrants (Lee-Lin et al., 2007). Hay et al. (2006) conducted a

meta-analysis of 12 prospective studies that measured worry about breast cancer and breast cancer screening behaviors among 3342 high-risk and general population women. The authors discovered that greater worry predicts a greater likelihood of screening. Therefore, breast cancer worry may motivate women to adhere to screening behaviors (Hay et al., 2006).

The significant benefit of mammography screening in this study showed that women experienced less worry when they had their mammogram screening. Farmer et al. (2007) explained that the benefits of mammography screening include reduced worry about breast cancer, feeling good about self, and increased opportunities to detect breast lumps early which leads to better results. Therefore, getting a recommended mammography screening on a regular basis decrease women's worry about breast cancer.

In this study, women who had regular health check ups even when they are not sick was the only significant health motivation variable. Schueler et al. (2008) summarized a systematic quantitative review of literature related to factors associated with screening mammography. The authors found that physician access barriers and not having primary care providers were highly associated with not obtaining mammography. Women who had less access to health care providers were less likely to undergo mammography. Therefore, primary care providers who encourage women to follow recommended mammography screening guidelines during their regular health check ups can greatly improve mammography screening rates and in turn reduce breast cancer rates.

Nevertheless, Petro-Nustas (2001) found that Jordanian women perceived barriers to mammography screening differently. The author explained that Jordanian women did not perceive having a routine mammogram as being painful, embarrassing, costly, or reducing their worries about breast cancer. In addition, this specific group of women believed that "feeling good about oneself after having a mammogram" and "the early discovery of the lump before it can be felt by the women herself or by her physician" were benefits of getting mammography screening. Among the health motivation statements, 98% of Jordanian women believed that maintaining good health and discovering health problem early were significant benefits of getting mammogram screening (Petro-Nustas, 2001).

Many similarities and differences in the health beliefs about mammography screening were found among different cultures. It is crucial for health care providers to be able to recognize these similarities and differences in order to successfully provide recommendations based on the patient's cultural background and beliefs to continuously increase mammography compliance and screening rate.

Summary

The descriptive statistic was used to analyze the demographic data. Out of 107 participants, 74 participants (69.16%) were included in the analysis. The stepwise method of linear multiple regression analysis was utilized to determine participants' health beliefs about breast cancer screening. When the data was analyzed separately by the categories of health motivation, barriers and benefits of mammography, significant variables were found in each category.

The significant variables were as follows: (a) I have regular health check-ups even when I am not sick, (b) When I get a mammogram, I don't worry as much about breast cancer, and (c) Having a mammogram or x-ray of the breast would take too much time; (d) Having a routine mammogram or x-ray of the breast would make me worry about breast cancer; and (e) Having a mammogram or x-ray of the breast would be embarrassing. Moreover, the data was analyzed altogether using stepwise method of the linear multiple regression analysis. Differences in significant variables were noted. The benefits of mammography in the study were not significant.

The significant variables discovered in this study shared many similarities with previous review of literatures. However, differences were also recognized in different cultural groups studied in previous research studies. Therefore, it is crucial for health care providers to be able to recognize these similarities and differences in order to successfully provide recommendations based on patient's cultural background and beliefs to continuously increase mammography compliance and screening rate.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

Breast cancer is an important health concern for women. Understanding women's breast cancer screening behaviors and motivations can help to better serve patients. Examining women in this population of University employees is useful for informing practitioners about the health beliefs and motivations of women. This will allow health care providers to tailor specific needs to appropriately educate and provide needed recommendations in order to reduce risks of breast cancer and detect breast cancer early.

Summary of Study and Study Findings

The purpose of the study was to identify health beliefs of breast cancer screening among female university staff and how those beliefs relate to breast cancer screening behavior. The Health Belief Model Scales for measuring health motivation, barriers and benefits for mammography screening were utilized in the study to assess beliefs regarding mammography screening among female university staff. The study findings showed that university staff was more likely to have mammography screening done frequently when they had regular health check-ups even when they were not sick. Belief in getting preventive care is an important factor. The fact that women who get preventive care also get screening mammograms is logical. How practitioners would reach those women who do not get regular check ups is an important consideration. Perhaps it is

important to promote both physical exams and mammograms when women come to the clinic for illnesses. Clinical reminder systems that inform clients of their prevention needs are important, but perhaps even more important is telling those women who are in for illness related visits about the need for prevention services as an important factor in improving mammography rates. Health care providers are already key to providing education and promoting mammography screening during annual physical exams. Adding the reminders during illness related visits may improve mammography screening for those women who don't get physicals.

Additionally, the findings demonstrated that mammography screening reduced worry among university staff who engaged in mammography screening frequently. Staff who perceived that having a mammogram would take too much time were less likely to get mammography screening frequently. Interestingly, female staff who believed that having a mammogram of the breast would be embarrassing were more likely to get mammogram screening more frequently. Hence, identifying patients' health beliefs and perceptions about breast cancer screening allows providers to plan individualized education and recommendations to tailor patients' needs. Additional care may need to be taken to reduce embarrassment for those getting mammograms although it is possible that embarrassment is a cultural factor that is not easily modified, but praising women for overcoming their embarrassment may increase their overall comfort with the process.

Implications for Practice

Nurse practitioners (NPs) have the responsibility for encouraging compliance with recommendations for screenings by educating patients, performing and or referring patients for screening exams and doing so during illness as well as prevention focused visits. Healthcare provider knowledge about patients' beliefs and knowledge of breast cancer screening plays an important role in patients' education. Thus, identifying patients' health beliefs and perceptions about breast cancer screening allows providers to plan individualized education and recommendations to tailor patients' needs. NPs are in a key position to significantly enhance knowledge, alleviate fear, dispel myths, and correct misperceptions about breast cancer and breast cancer screening in illness and prevention focused visits. From the results of this study and the additional analysis provided with the review of literature, this study can provide nurse practitioners with an understanding of the motivational factors and barriers to mammography. This will allow practitioners to better promote appropriate prevention screening practices.

Limitations

There were several limitations in this study. Prior to Fall 2009, the USPSTF and the American Cancer Society were in agreement on the recommendation that breast cancer mammography screening should begin at 40. However, the USPSTF reversed their decision in the fall of 2009 and initiate updated guidelines recommending women aged 50 to 74 years to undergo biennial screening mammography. In addition, the mammography screening for women age 40 and above should be based on individual choice and risk.

The second limitation in this study was the small convenience sample size of female university staff. Although 107 surveys were returned, only 74 surveys (69.16%) were utilized for data analysis due to incomplete surveys. Furthermore, the option for number of years since last mammogram was imperfect. There was not an option for participants who had never undergone mammography screening to answer number of years since their last mammography.

Recommendations

Recommendations for future studies may include: (a) looking at the reasons why women who believed that "having a mammography of the breast would be embarrassing" were more likely to get mammography screening more frequently, and (b) Looking at education level and comparing whether or not education background has an impact on mammography screening beliefs and frequencies.

Summary

Women will not perceive cancer screening as a beneficial procedure if they believe that the disease is uncontrollable and could lead to death. Based on the Health Belief Model (HBM) screening behavior will be predicted by women's perceptions about breast cancer derived from knowledge about the disease (Farmer et al., 2007). Sohl and Moyer (2007) reported that the health belief model (HBM), which assesses perceptions of risk, benefits, severity, barriers, cues to action and self-efficacy, is directly related to individual's behavior such as getting recommended mammography screening.

In this study, The Health Belief Model Scales for measuring health motivation, barriers and benefits for mammography screening were used to assess female university staff. This can assist health care providers in identifying university employees' health beliefs and perceptions about breast cancer screening and allow providers to tailor specific needs to appropriately educate to provide needed recommendations in order to reduce the risks of breast cancer and to detect breast cancer early.

APPENDIX A

Recruiting Letter

To All Female University of Wisconsin Oshkosh Employees,

I am a graduate nursing student at the University of Wisconsin Oshkosh in a Family Nurse Practitioner program currently conducting a study on the Health Beliefs of Breast Cancer Screening. If you are a university employee, female, and age 40 and above, I invite you to participate in this study.

The purpose of the study is to identify the Health Beliefs of Breast Cancer Screening among university employees. The potential benefits of the study may improve health care provider's understanding of the barriers to recommended mammograms, which may improve their ability to address the needs of all women.

Participation in the survey will take approximately 10 minutes. There are no anticipated risks other than the time it takes to answer the questions.

Please click on the following link if you wish to participate:

http://www.surveymonkey.com/s/LQ3ZFMT

Thank you,
Charisao Srisuthipornsakul
University of Wisconsin Oshkosh
Srisuc89@uwosh.edu
(920) 216-3901

APPENDIX B

Permission to Use Tool

INDIANA UNIVERSITY
SCHOOL OF NURSING
IUPUI

July 20, 2009

Ms. Charisao Srisuthipornsakul
975 Honey Creek Road
Oshkosh, WI 54904

Dear Ms. Srisuthipornsakul,

Thank you for your interest in my work. Enclosed please find a copy of the Health Belief Model questionnaire you requested. You have permission to revise the tool for your use as long as you cite my work and send me an abstract of your completed project.

Sincerely,

Victoria Champion

Victoria Champion, DNS, RN, FAAN
Associate Dean for Research
Edward W. and Sara Stam Cullipher Endowed Chair
Mary Margaret Walther Distinguished Professor

VC:dg

Enclosures

Center for Research and Scholarship 1111 Middle Drive Indianapolis, IN 46202-5107 (317) 274-4187 fax (317) 278-2021
Indiana University–Purdue University Indianapolis

APPENDIX C

The Modified Health Belief Model Scales for Measuring Beliefs Related to Breast Cancer

HEALTH BELIEF MODEL SCALES FOR MEASURING BELIEFS RELATED TO BREAST CANCER

Introduction: Scales were assessed for content validity by a panel of 3 nationally known judges familiar with the Health Belief modal and breast cancer screening. Scales were revised based upon analysis for content validity and administered to a probability sample of 581 women who were participants in a large intervention study. All scale items were measured on a 5 point Likert scale with the following coding: Strongly disagree (1); disagree (2); neutral (3); agree (4); and strongly agree (5). Scales were summated for analyses. The first table gives information on internal consistency and test retest reliability. The second table gives scale items. Results of criterion and construct validity for BSE related scales are reported in Nursing Research, Champion (1993) Instrument refinement for breast cancer screening behaviors.

	Alpha	Test/Retest	M	SD	# of Items
Susceptibility	.93	.70	2.54	.81	5
Seriousness	.80	.45	3.25	.68	7
Benefits (BSE)	.80	.45	3.88	.52	6
Barriers (BSE)	.88	.65	2.02	.60	6
Confidence	.88	.65	3.31	.57	11
Health Motivation	.83	.67	3.78	.59	7
Benefits (Mammography)	.79	.45	23.86	3.17	6
Barriers (Mammography)	.75	.65	11.02	3.26	5

HEALTH MOTIVATION

I want to discover health problems early.

Maintaining good health is extremely important to me.

I search for new information to improve my health.

I feel it is important to carry out activities which will improve my health.

I eat well balanced meals.

I exercise at least 3 times a week.

I have regular health check-ups even when I am not sick.

BENEFITS FOR MAMOMGRAPHY

When I get a recommended mammogram, I feel good about myself.

When I get a mammogram, I don't worry as much about breast cancer.

Having a mammogram or x-ray of the breast will help me find lumps early.

Having a mammogram or x-ray of the breast will decrease my chances of requiring radical or disfiguring surgery if breast cancer occurs.

Having a mammogram will help me find a lump before it can be felt by myself or a health professional.

BARRIERS FOR MAMMOGRAPHY

Having a routine mammogram or x-ray of the breast would make me worry about breast cancer.

Having a mammogram or x-ray of the breast would be embarrassing.

Having a mammogram or x-ray of the breast would take too much time.

Having a mammogram or x-ray of the breast would be painful.

Having a mammogram or x-ray of the breast would cost too much money.

APPENDIX D

Informed Consent Form

I understand that I am being asked to participate in a study that is conducted as a part of a graduate nursing research course at the University of Wisconsin Oshkosh. The purpose of the study is to identify health beliefs of breast cancer screening among university staff. Although I might not directly benefit from the study, the results may improve my health care provider's understanding of the barriers to recommended mammograms. This may improve their ability to address the needs of me and other women.

If I agree to participate in the study, I will be completing a demographic survey and a Health Belief Model Scales for measuring beliefs related to breast cancer survey. This study presents no risks to me other than the time it takes to answer the questions.

I may not participate in the study if I am younger than 40 years of age, male, or have previously been diagnosed with breast cancer.

I understand that my participation in this study is completely voluntary, and I may withdraw from the study at any time I wish.

I understand that all the data collected will be kept confidential. However, this information may be used in nursing publications or presentations.

If questions arise during the study, I can contact Charisao Srisuthipornsakul, University of Wisconsin Oshkosh College of Nursing.

The study has been explained to me. I have read and understand the consent form and all of my questions have been answered. I agree to participate in by clicking “next” box below.

APPENDIX E

Demographic Questionnaire

Demographic Questionnaire

Age

Gender

Race/Ethnicity

Marital status

History of any type of cancer? If yes, what type?

Family History of breast cancer

How long has it been since you had a mammogram?

- Less than 1 year
- More than 1 year but less than 2 years
- More than 2 years but less than 3 years
- More than 3 years but less than 4 years
- More than 4 years but less than 5 years
- More than 5 years

APPENDIX F

International Review Board Approval

THE UNIVERSITY OF WISCONSIN
OSHKOSH

December 29, 2009

Ms. Charisao Srisuthipornsakul
1221 Deerfield Parkway #203
Buffalo Grove, IL 60089

Dear Ms. Srisuthipornsakul:

On behalf of the UW Oshkosh Institutional Review Board for Protection of Human Participants (IRB), I am pleased to inform you that your application has been approved for the following research: Perceptions of Breast Cancer Screening in College Students.

Your research protocol has been classified as EXEMPT. This means you will not be required to obtain signed consent. However, unless your research involves **only** the collection or study of existing data, documents, or records, you must provide each participant with a summary of your research that contains all of the elements of an Informed Consent document, as described in the IRB application material. Permitting the participant, or parent/legal representative, to make a fully informed decision to participate in a research activity avoids potentially inequitable or coercive conditions of human participation and assures the voluntary nature of participant involvement.

Please note that it is the principal investigator's responsibility to promptly report to the IRB Committee any changes in the research project, whether these changes occur prior to undertaking, or during the research. In addition, if harm or discomfort to anyone becomes apparent during the research, the principal investigator must contact the IRB Committee Chairperson. Harm or discomfort includes, but is not limited to, adverse reactions to psychology experiments, biologics, radioisotopes, labeled drugs, or to medical or other devices used. Please contact me if you have any questions (PH# 920/424-7172 or e-mail: rauscher@uwosh.edu).

Sincerely,

Dr. Frances Rauscher

Dr. Frances Rauscher
IRB Chair

cc: Jill Collier
1710

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Charisao Srisuthipornsakul <srisuc89@uwosh.edu>Tue, Dec 29, 2009 at 8:58 PM

To: rauscher@uwosh.edu

Dr. Francis,

My name is Charisao Srisuthipornsakul. I am a graduate nursing student currently enrolling at the University of Wisconsin Oshkosh. I received an IRB approval email this morning and realized that the title of the research is incorrect.

The content in the IRB application is all correct. The only mistake is the title. The correct title is supposed to be: The Health Beliefs of Breast Cancer Screening among Female University Staff.

Please let me know what I need to do to correct the title of my research and if I can provide additional information. I also notified my chair, Dr. Jill Collier.

Thank you very much,
Charisao Srisuthipornsakul
(920) 216-3901

Frances Rauscher <rauscher@uwosh.edu> Mon, Jan 4, 2010 at 5:49 PM

To: Cynthia Maas <maasc@uwosh.edu>

Cc: Charisao Srisuthipornsakul <srisuc89@uwosh.edu>

Dear Charisao,

I will ask Cindy, whom I copied on this email, to make the change. Thanks for alerting us to the error.

Fran

REFFERENCES

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