A descriptive study of Orange County Latinas' breast cancer knowledge levels

Venus Zamarripa Valencia

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A DESCRIPTIVE STUDY OF ORANGE COUNTY
LATINAS' BREAST CANCER KNOWLEDGE LEVELS

A Thesis
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
Education:
Health Education

by
Venus Zamarripa Valencia
June 2005
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ABSTRACT

Breast cancer is the most commonly diagnosed cancer among Hispanic women. Breast cancer is the leading cause of cancer death among Hispanic women (American Cancer Society, 2003). The objective of this thesis is to focus on determining breast cancer knowledge levels of Orange County Latinas and their compliance with early detection methods.

The research design of this study utilized a self-reported survey to obtain information from participants. A total of 47 Latinas participated in the research study. The majority of participants (98%) knew that the earlier breast cancer is detected the better chances of survival you have. The majority of participants (57%) knew that women 40 and older should have a mammogram. Many women surveyed did not know the recommended age to begin doing a breast self-exam, only 20% answered correctly. The data of this study may not be representative of the knowledge levels of Latinas in other communities.
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CHAPTER ONE

INTRODUCTION

Introduction

In 2000, approximately 35.3 million Hispanics comprised about 12.5% of the total United States population. Breast cancer is the most commonly diagnosed cancer among Hispanic women. Breast cancer is also the leading cause of cancer death among Hispanic women. An estimated 1,600 deaths from breast cancer were expected to occur among Hispanic women in 2003. In 2003, about 11,000 new cancer cases were expected to be diagnosed among Latinas in the United States (American Cancer Society, 2003).

Early detection is a key aspect of decreasing the mortality rates from breast cancer. Although several studies suggest that breast self-exams (BSE) do not increase breast cancer detection or decrease breast cancer morbidity and mortality (Madan et al., 2000). Early detection and prompt treatment still offers the greatest chance of long-term survival.
Statement of the Problem

According to the American Cancer Society's Cancer Facts and Figures for Hispanics/Latinos 2003-2005, an estimated 11,000 Hispanic women were expected to be diagnosed in 2003.

Breast cancer is frequently diagnosed at a later stage in Hispanic women than when found in non-Hispanic women. It has been well documented that Latinos have limited access to health services due to poverty, lack of English proficiency, low literacy skills, unfamiliarity with the health system, distrust, and other socioeconomic and environmental factors that put them at risk for underutilization of health care services.

In California, a large proportion of the Latino population is foreign-born, which increases barriers for them in accessing health services. In addition to unfamiliarity with the English language and health care systems, Latino immigrants may have the additional burden of dealing with their undocumented legal status.

AmongLatinas, lack of access to care has been reported as a more powerful predictor of lack of screening than language, ethnicity, and cultural factors. Although, many Latinas receive screening for cancer, differences
among Latino subgroups exist. Women with low levels of income and education, little English language proficiency, and low degrees of acculturation report lower rates of utilization of breast and cervical cancer screening than women with high levels of income, education, acculturation, and English language proficiency (Otero-Sabogal et al., 2003). For this reason, I chose to study the current knowledge levels of Latinas in Orange County, California.

Purpose of the Study

To assess the current knowledge levels of Orange County Latinas in regards to breast cancer knowledge, that is what do they know about risk factors, early detection methods and their self-efficacy towards compliance with breast cancer early detection methods. Self-efficacy refers to the condition that a person experiences as feeling competent to perform a desired task. Perceived self-efficacy is defined as people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives. Self-efficacy beliefs determine how people feel, think, motivate themselves and behave. Such beliefs
produce these diverse effects through four major processes. They include cognitive, motivational, affective and selection processes.

A strong sense of efficacy enhances human accomplishment and personal well being in many ways. People with high assurance in their capabilities approach difficult tasks as challenges to be mastered rather than as threats to be avoided (Bandura, 1994).

In Orange County California, cancer incidence rates have increased from 1,608 in 1996 to 1,859 cases in the year 2000. That number is expected to rise due to the increasing Latino community in Orange County. According to the U.S. Census 2000, of the 2,846,289 Orange County residents, 30.8% are Hispanic/Latino.

Orange County is one of the nation's fastest growing urban centers, with a population that includes increasing numbers of the working poor and medically indigent. Santa Ana is one of two cities in Orange County that has the largest Latino populations, with Latinos representing 68% of the city's population.

For many Orange County residents living in poverty, lack of education, lack of knowledge about the healthcare system, and lack of knowledge about which programs they
may be eligible for, add to their difficulty in accessing necessary healthcare services.

The incidence and death rates from breast cancer increase with age (American Cancer Society, 2003). One in eight women in the U.S. will develop breast cancer in her lifetime, but low-income women and women of color are dying in disproportionate numbers because of the barriers that they face while fighting the disease (Singh et al., 2003).

Breast cancer is a disease that knows no ethnic, socioeconomic, age, gender or cultural boundaries. In addition to socioeconomic status, acculturation seems to be an important predictor of screening behaviors among Latinas. Although breast cancer is generally associated with older women, 5% to 7% of cases occur in women 35 years and younger, and these cancers tend to be more aggressive than cancers in older women. The majority of the 211,300 new cases of breast cancer in 2003 occurred in women over age 65 (Smith et al., 2003). The incidence of breast cancer is four times greater in older women compared to younger women (Kimmick et al., 2000). In 1999, an estimated 19,910 women and 145 men in California were diagnosed with the disease.
Among the estimated 4,640 people who died from breast cancer in California in 1999, a disproportionate number were poor, older women with inadequate or no medical insurance. Latinas are overrepresented in this group (American Cancer Society, 1999). Lack of trust in the health care system and misconceptions about risk factors or causation, especially those that inappropriately reduce a woman's perception of susceptibility, have also been identified as barriers. For example, the failure to recognize age as a risk factor is a serious concern when it results in older women underestimating their risk of getting these diseases (Lewis et al., 2002).

Medically uninsured women typically have low access to preventive health care, including information on breast self-examination, cancer screening and nutrition/healthy lifestyles. They often seek medical care only under extreme conditions and in emergency room settings. Once an indigent woman is diagnosed with breast cancer, it is more likely to be at an advanced stage of the disease, when prognosis is poor and treatment options are limited.
CHAPTER TWO
LITERATURE REVIEW

Introduction

In 2000, approximately 35.3 million Hispanics comprised about 12.5% of the total United States population. Among Hispanic women, breast cancer is the most commonly diagnosed cancer. Breast cancer is also the leading cause of cancer death among Hispanic women. An estimated 1,600 deaths from breast cancer occur among Hispanic women in 2003. In 2003, about 11,000 new cancer cases are expected to be diagnosed among Latinas in the United States (American Cancer Society, 2003).

A substantial percentage of cancer deaths that occur in U.S. women and often even the cancers themselves are preventable (Seltzer, 2000). In order to effectively address environmental causes of breast cancer, we all must be aware of how the disastrous effects of poverty and racism put women in affected communities at a disproportionate risk of disease, including breast cancer. Access to health care, lack of insurance, and the concentration of polluting industries in communities of color and low-income neighborhoods all contribute to women
of color suffering a disproportionate impact of breast cancer.

Several well-established risk factors are associated with the development of breast cancer, primarily age and female sex. Family history is highly significant in a first-degree relative (i.e., mother, sister, and daughter) especially if the cancer has been diagnosed premenopausally. Women who have premenopausal first-degree relatives with breast cancer have a three- to fourfold increased risk of developing breast cancer than women who do not. Having several second-degree relatives with breast cancer may further increase the risk of developing breast cancer, but this risk has not been quantified. It is important to note that most women with breast cancer have no identifiable risk factors. Approximately, 8 percent of all cases of breast cancer are hereditary. About one half of these cases are attributed to mutations in two breast cancer susceptibility genes, BRCA1 and BRCA2. Hereditary breast cancer commonly occurs in premenopausal women and is more frequently bilateral than nonhereditary breast cancer (Apantaku, 2000).

But breast cancer screenings can help save those lives. Early breast cancer detection can also help reduce
the severity of the disease and eliminate it from spreading to other areas of the body. Often people don't seek screening simply because they don't know of its benefits--that finding precancerous cells means doctors can stop cancer before it starts (Murray, 1999).

Variations in cancer risk factors or screening behaviors between Hispanics and other population groups may be due to cultural difference and socioeconomic factors (American Cancer Society, 2003). Screening tests can detect some cancers early, at a stage when it is often highly curable. Screening can actually prevent some cancers from occurring through the identification and removal of precancerous lesions. Screening can greatly improve the chances of cure, may extend life, reduce the extent of treatment needed, and improve the quality of life for cancer patients.

Early detection is a key component of strategy to reduce mortality from breast cancer. All women in the United States should be screened for breast cancer. Screening should consist of mammography, breast self-examination, and examination by a health care provider. Although, mammograms are an excellent tool not all cancers
are identified and therefore, it is important to also do breast self-exams monthly.

Breast cancer screening has long been recognized for its value in improving survival and quality of life for individuals affected by the disease (Katapodi et al., 2004). While the importance of mammography in reducing mortality in women between the ages of 40 to 75 is well documented, controversy exists as to its benefit in women older than 75 years. Screening mammograms at any age, including those in elderly patients, enable detection of tumors at a significantly earlier stage (Yarbrough, 2004).

Ethnic differences in screening are less pronounced than they were a decade ago, but they do persist in some regions and groups. Women in rural areas are less likely to be screened. Disparities in mammography use, characterized by socioeconomic factors, such as education and income, remain barriers to mammography use. Whereas most women who have had a recent mammogram, a substantial proportion of women, especially older women, are not having regular mammograms (Legler et al., 2002).

Several different sociodemographic characteristics (e.g., low income, lower levels of formal education, race, ethnicity, culture, insurance status, and age)
characterize populations with lower rates of breast cancer screening. Barriers include knowledge, beliefs, and attitudes (such as not knowing how often mammograms are needed and the ages for which mammograms are recommended), lack of provider recommendation, and health care system factors, e.g., lack of regular source of primary care (Katapodi et al., 2004).

Access-enhancing interventions may serve as a bridge between health care settings and the environment in which women reside. In some cases, access enhancement means bringing the service to women e.g., mobile mammography vans (Katapodi et al., 2004). In a 2000 survey, the prevalence of mammography use in the previous 12 months among Hispanic women 40 and older was 65.4%, which was higher than in previous years (American Cancer Society, 2003). Barriers to cancer screening among Hispanics include fear of cancer, embarrassment, or a lack of knowledge about cancer. In a study conducted in 1996 by Hubbell et al., Latinas were more likely than Anglo women to believe that factors such as breast trauma and breast fondling increased the risk of breast cancer, less likely to know that symptoms such as breast lumps and breast discharge could be indicative of breast cancer, and more
likely to believe that mammograms were necessary only to evaluate breast lumps.

Understanding the factors that promote re-attendance in breast screening is important for the development of health promotion interventions aimed at improving the effectiveness of breast cancer screening. Despite evidence that regular mammography screening can reduce breast cancer mortality, many women fail to receive mammography or adhere to recommended guidelines for routine ongoing screening (Mandelblatt et al., 1999). Although Hispanics' use of breast cancer screening services has been investigated, to date there have been no published studies of distinct Hispanic populations in different areas of the country. It is crucial to stress the risks of not getting a mammography; research has shown that this is the most effective method at motivating women to get a mammogram. Getting screened is inherently frightening since it exposes one to the risk of discovering cancer.

In addition pinpointing knowledge levels and stages of motivation, determining what stops people from getting screened, whether its concerns about time required, monetary expense, lack of transportation, fear of finding
out they have cancer or lack of awareness of cancer prevention. Often people don't seek screening simply because they don't know of its benefits—that finding precancerous cells means doctors can stop cancer before it starts (Murray, 1999). These beliefs may reflect the moral framework from which Latinas interpret disease, and are important for the development of culturally competent cancer control strategies.

According to participants of one study, women were asked what strategies might work in encouraging other women like them to seek out opportunities to be screened for breast or cervical cancer. Hispanic women most often mentioned reaching out to other Hispanic women through community organizations (e.g. church, social clubs) or key, influential members in their community mentioned by 49% of women interviewed (Mc Garvey et al., 2003).

Hispanic women are traditionally the least likely of racial and ethnic groups to use preventive services such as Pap tests, mammography, and clinical breast exams (American Cancer Society, 2003). Deficits in knowledge about cancer risks, symptoms, and preventive behaviors are most pronounced among members of the lower socioeconomic class, minorities, and older adults (Lerman et al., 1989).
Reluctance regarding early detection practices may also reflect a general fear of dependence. Lacking knowledge about the benefits of screening, a woman may not see the need for it. Early breast cancer detection significantly impacts a person’s chance of survival. Late detection of breast cancer often results in poorer outcomes for the patients and higher mortality rates. Therefore, it is essential to construct outreach activities specifically tailored for this group that will increase breast cancer screening rates among Latinas in Orange County.

The development of educational strategies aimed at breast cancer prevention and control for this ethnic group could impact the overall burden of this disease in this population (Fitzgibbon et al., 2003). It is important to have tailored educational messages for minority groups. A lower utilization of cancer screening tests can be attributed to the diagnosis being made at an advanced stage of cancer. Women must learn and incorporate the behavior into their healthcare routines because the earlier lumps are detected, the sooner they can be evaluated and treated.
Motivating a woman to perform a simple, potentially life-saving behavior remains a challenge (Gasalberti, 2002). Mass media cancer education campaigns have been implemented to promote widespread access to information about these early detection behaviors. Among American, non-Hispanic white women, there has been a decrease in mortality that has been attributed in part to this increase in early stage detection and prevention messages. Comparable shifts have not been seen in minority women (Robins-Sadler et al., 2001).

Investigators at a medical center in Denver, Colorado noticed an unexpected number of Latina women among the younger patients presenting with breast cancer at their institution. This intrigued the investigators and they researched the possibility that ethnicity could influence the severity of the disease and the age at which it first appears (Walling, 2002).

The results were very interesting compared with other patients, Latina patients were significantly more likely to present at a young age, to have more advanced disease (38 percent had stage III or stage IV disease compared with 29 percent of other patients), and to have bilateral lesions (22 percent compared with 8 percent of other
patients). Five-year survival was also significantly worse in Latina patients (63 percent compared with 83 percent of other patients). Only 20 percent of nonwhite younger women had a positive family history of breast cancer, compared with 50 percent of white women.

The authors conclude that Latinas comprise a disproportionate share of young patients with breast cancer and have a more aggressive disease process. This conclusion correlates with data from other studies. The authors did not believe that access to medical attention was a significant factor because most of their patients had Medicaid or used clinics for uninsured patients. The authors were concerned that cultural issues could influence the use of self breast-examination and decisions about seeking care and selecting treatment.

Because mammography is not recommended for young women, the authors called on all physicians to be alert for breast disease in young Latinas and to educate these patients about self breast-examination and the importance of early presentation if they detect breast masses. These patients were predominately of Mexican descent and could have different risks than other Spanish-speaking groups. Nevertheless, the presentation of advanced disease in
young women for whom we have no effective screening is very troubling.

It is counter-intuitive that a group of women with relatively early menarche, high fertility rates, low family history of breast cancer, and non-Western diet should have high rates of breast cancer, especially young women. While the epidemiologists seek risk factors and screening tools, family physicians must be especially careful to monitor breast disease in Latina women and to have a higher level of suspicion for cancer when a mass is found (Walling, 2002).

Wide ranges of factors contribute to the high rate of mortality among economically disadvantaged women. Indigent women who receive their medical care at overcrowded, understaffed county clinics and hospitals must frequently endure long delays between the clinical discovery of a suspicious mass and the scheduling of a biopsy and/or definitive treatment. Discouraged and afraid, many women do not return for treatment. Follow-up is often difficult due to patients' lack of telephone service and/or a permanent address. Low-income patients who may be immigrants or members of racial/ethnic minority groups often do not receive breast cancer education and
treatment information in their preferred language, at an appropriate literacy level and/or in a culturally sensitive format. Without fully understanding their treatment options, these women are significantly challenged to arrive at prudent and timely decisions regarding their medical care.

Health care practitioners may also lack awareness, skill and experience to address the unique cultural issues, which breast cancer patients and their families face. While a breast cancer diagnosis is devastating news to anyone, it may evoke particular fear in poor, immigrant women from less developed countries where breast cancer survival rates are considerably lower. Undocumented immigrants may also be reluctant to enter breast cancer treatment, fearing they will be reported to the INS and deported (http://www.winabc.org/programs/breast-buddy-underserved.htm, 2004).

Indigent women may lack experience as self-advocates and be reluctant to ask their health care providers questions, seek second opinions and play an active role in their treatment and recovery process.

Poor women with breast cancer are frequently isolated from reliable sources of social and psychological support,
making it difficult for them to arrive at decisions regarding treatment options and follow through with treatment regimens. Concerns about missing work, not being able to care for their children during and after surgery and the lack of transportation may influence treatment decisions and compromise patients' timely medical care and compliance with treatment protocols (http://www.winabc.org/programs/breast-buddy-underserved.htm, 2004).

Nonetheless, it remains unclear whether the decrease in the death rate is due to greater proportions of patients who were diagnosed with early-stage disease or due to improvements in treatment. Therapeutic advances clearly have been making an impact on the survival of women with early-stage breast cancer. Despite the clear advances that are being made in the adjuvant treatment of breast cancer, a favorable effect of new therapies on the survival of patients with metastatic disease has not been established.

However, several studies have suggested that newer therapies are improving survival rates. Improvement in survival over time would suggest that, in aggregate, new
therapies are helping women with recurrent disease live longer (Giordano et al., 2004).

In an effort to promote breast cancer early detection, health professionals attempt to bring an individual’s perceived risk of developing breast cancer in line with her actual risk. Presumably, a more realistic perceived breast cancer risk will motivate the initiation and maintenance of health-protective behaviors at a level that is appropriate for the individual’s level of risk. Along these lines, breast cancer early detection programs focus their efforts on ongoing public education about risk factors that increase a woman’s probability of developing the disease.

However, evidence is conflicting as to whether educational interventions that aim to change perceptions of risk can improve subsequent cancer screening. There is some indication that women do not understand the meaning of terms and phrases that are commonly used in breast cancer prevention messages, such as “risk factors” and “at risk.” The term “risk” has a different meaning for different groups of people, namely the experts and the public. Studies that explored perceived breast cancer risk suggest that lay women hold a different set of
beliefs about the causes, curability, and risk factors of breast cancer than health care experts (Katapodi et al., 2004).

Educational interventions that aim to improve breast cancer screening have been based on theoretical models that attempt to explain how and why individuals adopt a health-protective behavior. The majority of these models adopt a decision-making perspective that is focused on a cost-benefit analysis of consequential outcomes. Examples of such theoretical models are the Health Belief Model, the Self-Regulatory Model, the Theory of Reasoned Action, and the Protection Motivation Theory.

One of the principal variables in these models is the individual's perceived susceptibility to the disease. Perceived susceptibility or perceived risk in these models refers to one's belief about the likelihood or probability of harm, namely the probability that a health problem will be experienced if no precautions or behavioral changes occur. At a fundamental level, these models assume that the decision to adopt a self-protective behavior is reached through an analysis of susceptibility, potential actions, potential costs, and anticipated outcomes.
Although, there is no agreement as to how these variables influence health related behavior, theoretical models combine these variables in some explicit or empirically derived equation to predict the adoption of a health-protective behavior (Katapodi et al., 2004).

Clinical breast examination (CBE) is widely used and its effectiveness in assessing symptomatic women for breast diseases in the primary care setting is not questioned. However, little is known about its effectiveness in detecting breast cancer in asymptomatic women, its risks and benefits, and its influence on outcomes such as stage at diagnosis, mortality, and quality of life in women with breast cancer. Between 3% and 45% of cancers detected by CBE were missed by mammography (Albert et al., 2003).

Ethnicity and race are factors that may influence the effectiveness of CBE, and their potential role will need closer scrutiny over the next decade. Age has been reported to have an important influence on the findings of CBE in some studies. The likelihood of an abnormal CBE is negatively associated with age, but positively associated with the presence of breast cancer.
Clinical breast examination is a systematically performed physical examination for detecting breast cancer if the tumor is palpable or is producing visible skin signs. CBE can detect lesions that are not detectable by mammography and can thus reduce false-negative findings and serve as an adjunct. The examination by itself is inexpensive and no special equipment is required. It is easy to perform and can be offered ubiquitously.

Professionals and lay examiners can be readily trained in this technique, and the person performing CBE can improve his or her skills by learning more about breast physiology and pathology. Our knowledge about breast cancer is evolving, but is still limited with respect to its etiology and biology, and with respect to its features in individual countries and cultures (Albert et al., 2003).

Physician recommendation is one of the strongest predictors of mammography use; the most frequent reason cited by women for failure to have mammography is that a physician did not recommend one; numerous interventions have been developed to enhance physician ordering or recommendation of screening mammography (Mandelblatt et al., 1999).
However, because of the large number of different interventions, numerous mechanisms of intervention action, and variability in study design, it is difficult to develop a cohesive recommendation to improving physician screening behaviors, particularly in high-risk patient populations. Interventions designed to enhance provider ordering or recommendations for mammography are all generally effective in increasing screening rates, regardless of approach.

Interestingly, strategies that targeted both patients and providers were not significantly more effective than those targeting providers alone. Thus, decisions on the ultimate selection of an intervention to improve mammography receipt that targets providers should depend on feasibility, resources, expertise, and cost effectiveness (Mandelblatt et al., 1999).

The data and diversity of Hispanic groups reinforce the position that ethno-regional characteristics should be clarified and addressed in cancer screening promotion efforts. The practical relationships among knowledge, attitudes, and cancer screening are not altogether clear and require further research.

A study conducted by Yale University in 2001 shows that emphasizing the risks of avoiding breast cancer
screening may be the best way to motivate women to get screened—at least for some ethnic groups suggest the results of their study (Schneider et al., 2001). But public health officials tend to stress that screening can help save a woman's life, rather than stress the risk of not getting screened, that is that failing to detect breast cancer early can cost a woman her life. Many women would rather avoid such unpleasantness unless they are reminded that the benefit of getting a mammography outweighs the risk of not getting one.

Over 750 women over the age of 40 participated in a study conducted by Yale University. Most of the women were black, white, or Hispanic. They were randomly selected to watch either a video emphasizing the benefits of getting a mammogram, or a video emphasizing the risks of not getting one. Some of these videos were also tailored along ethnic lines.

A random selection of women watched videos depicting women of their ethnicity, and conveying breast cancer statistics targeted to their ethnicity. The rest of the women watched videos depicting women of different ethnic backgrounds. The study participants were asked about their
mammography use 6 and 12 months after participating in the study.

Those who saw a multicultural (rather than ethnically targeted) video emphasizing the risks of not being screened were most likely to get mammograms over the next 6 months--if they were white or Hispanic, the researchers found. The mammography rates among black study participants did not change significantly throughout the study period. The effectiveness of the videos waned over the second half of the study period among white and Hispanic participants.

The researchers of the Yale University study were surprised by another study finding: the multicultural videos were better at persuading white and Hispanic women to receive mammograms than those tailored to ethnicity. Again, this finding did not apply to the black study participants. Future studies should tailor messages to women's specific concerns and beliefs about breast cancer and mammography, as well to as cultural and family issues, rather than simply targeting ethnicity, suggest the researchers. Black study participants may have been unresponsive to the videos because of difficulty accessing mammography services. Future studies with black study
participants should take a place in an environment that minimize such barriers, such as in mobile mammography clinics offering free screening, suggest the researchers at Yale University in 2001 (Schneider et al., 2001).

Breast cancer is a leading cause of death in older women, exceeded only by coronary artery disease and lung cancer. In fact, many studies find personally tailored interventions can be twice as effective as generic, one-size-fits-all interventions. To tailor cancer prevention messages, researchers must begin with general theories of behavior change, as well as specific theories about what motivates behaviors such as smoking and eating.

Behavior change researchers use a variety of theoretical models derived primarily from Albert Bandura's Social Cognitive Theory and the "Stages of Change Model," developed by Prochaska. Both theories put a person's motivation to change on a continuum of readiness. More than 80 percent of people are either not ready to change or are in the early stages of behavior change Prochaska has stated.

The majority of one-size-fits-all interventions are geared toward people who are prepared to take action. A tailored intervention works by speaking to people based on
the stage they're in, in an attempt to move them on to the next stage.

In both social cognitive theory and stages of change theory, one way to help motivate people, for example, is to increase their image of the benefits to changing. Then, as they move into action, a program must reduce the number of negative outcome expectations or "cons" they see to changing.

A tailored intervention means determining whom your target group is, finding out what they need to know and giving them information they need. With their insight into behavior change, motivation and survey research, program coordinators are well positioned to custom-fit messages to populations and test which delivery methods work best--phone calls, letters, in-person chats or various methods (Azar, 1999).

Another high-risk group, women who have low screening rates for breast cancer--the leading cause of cancer deaths for women--is the focus of a number of public education campaigns. These include a program run by the National Cancer Institute (NCI) and another coordinated by the Iowa Psychological Association (IPA).
Focusing in particular on African-American women, who have especially low rates of mammography, researchers have started asking participants into which stage of motivation they fit: 1) Precontemplators-- Have never had a mammogram, and have no plans for having one in the coming year; 2) Contemplators-- Have never had a mammogram, but plan to have one at some point; 3) Women of action-- Have had one or more mammograms, and may or may not plan to have one in the coming year; 4) Women of maintenance-- Have had more than one mammogram, and plan to have one in the coming year. This is the desired motivation stage. Using these stages of motivation, researchers will vary the educational message so that the message's tone matches the person. For the precontemplator it's "How small is the head of a pin? Not too small for a mammogram to find," with a focus on reducing women's fears about mammography-related discomfort. For the contemplator the message is "Small is better. Think small, think mammogram," with a strong emphasis on prevention. And for the maintenance woman it's, "Looking out for little things is smart. Keep on getting mammograms," with the accent on upkeep.

Researchers find that at least half of precontemplators seek a mammogram after receiving tailored
messages. Armed with an understanding of what deters each person from screening and of messages that can motivate behavior change, psychologists then design a campaign of letters, phone calls and personal visits--usually at least two of these means are used--to correct misperceptions and help people surmount barriers. A person who fears the pain involved might receive a campaign letter or phone call explaining exactly what kind of pain to expect and how to manage it. And a person who fears testing positive for cancer might receive a letter or personal visit explaining that early discovery is a lifesaver. The messages can get quite specific. Other strategies include telling people about screening locations near them, or if they're low-income, that screenings are covered by Medicare and Medicaid. The messages may seem simple, but for many people, the difference between hearing them and not hearing them is the difference between getting screened and not getting screened.

Research suggests that a combination of letters and phone calls works just as well as personal visits for motivating screening, and is more cost effective. Researchers state that there's nothing as effective as having campaign staff talk to women directly at community
churches, shopping centers and supermarkets. A collaborative approach holds more promise than just getting information to women or physicians alone states researcher (Murray, 1999).

While incidence of breast cancer is slightly lower for Mexican-American women than non-Hispanic whites (13.5 and 15.8 per 100,000, respectively), mortality rates for Hispanics are still quite high. These trends may be due to Hispanic women using cancer screening less frequently and allowing greater intervals between screenings than do women in other groups. A good deal of recent research and intervention development has focused on trying to understand and improve cancer screening among Hispanic women. The primary thrust of these efforts has been on identifying practical and conceptual barriers to screening and developing educational and motivational campaigns to encourage women to use cancer screening.

However, the relationship between patient knowledge, attitudes and beliefs and their cancer screening behavior is not straightforward. These factors have not been consistently shown to be specifically associated with low adherence to cancer screening, nor has patient knowledge
and motivation been found to reliably predict cancer screening behavior (Hunt et al., 2002).

We are left with the questions: Are breast cancer rates for Hispanic women representative for Mexican American women? Have studies researched the differences in cancer screening rates among Hispanic community members? What factors, other than patient knowledge, may also contribute to the low rates of cancer screening among Hispanic women?

Regular mammography screening has demonstrated effectiveness in reducing breast cancer mortality. Most identified factors influencing women's mammography decisions can be classified as variables from the Health Belief Model, which purports that perceptions about benefits and barriers associated with a health behavior, perceived personal risk and severity of the relevant health threat, and various cues to action work together to influence a person's likelihood of taking a preventive health action.

Among factors correlated with mammography status are women's beliefs about breast cancer and the ability of mammography to detect early breast cancer and perceived barriers to mammography screening, such as cost, concern
about radiation exposure, or fear of finding cancer (Skinner et al., 1994).

Those who have lived in the United States for many years and are well adapted to mainstream American lifestyles, behaviors, and values are more likely than recent immigrants to adhere to breast cancer screening guidelines (Otero-Sabogal et al., 2003). This could explain the high knowledge levels of breast cancer health compared to the varied self-efficacy survey results.

Perhaps, they were new immigrants and they were not aware of the breast health services that are available in the community. Surveys of women throughout the United States have documented low rates of adherence to mammography recommendations and the practice of clinical breast examination among women of all ethnicities, with the lowest rates seen among African-American and Hispanic women (Strecker et al., 2002).

A "general outlook on life founded on the belief that life events are inevitable and that one's destiny is not in one's own hands" is a suggested cause of screening noncompliance for Latinos. Latinas were likely than Anglo women to believe that factors such as breast trauma (71% vs. 39%) and breast fondling (27% vs. 6%) increased the
risk of breast cancer; they were less likely to know that symptoms such as breast lumps (89% vs. 98%) and bloody breast discharge (69% vs. 88%) could indicate breast cancer; and they were more likely to believe that mammograms were necessary only to evaluate breast lumps. Latino ethnicity and acculturation levels were significant predictors of these beliefs. These findings imply that breast cancer control programs should address these differences to provide more culturally sensitive and individualized interventions (Mayo et al., 2003). This study did not ask participants to indicate the number of years of residence in the United States.

Hypothesis

This thesis research will center on "A descriptive study of Orange County Latinas to determine knowledge levels of breast cancer and their compliance with early detection methods." I expect to find that participants in this study will have high knowledge levels of breast cancer and will be very compliant with early detection methods because of the high visibility of breast cancer promotion in Orange County by the Susan G. Komen.
Foundation, the American Cancer Society, YMCA Encore Plus, and the Orange County Cancer Detection Partnership.
CHAPTER THREE

METHODOLOGY

Introduction

In this thesis I will be utilizing a quantitative approach in my research methodology. The data will be collected utilizing a cross sectional survey design. This design typically makes use of survey approach to collect information on the attitudes, behaviors, opinions, or lives of various groups, either total populations or subgroups sampled from those populations (Worthen et al., 1997). The survey questions included demographic data, knowledge assessment, and self-efficacy questions. The participants will complete a self-administered survey.

Sample

In this study, breast cancer knowledge, attitudes, and screening behaviors of a convenience sample of Hispanic/Latina women living in Orange County was assessed. I chose to focus on Latina/Hispanics in Orange County because this is the group that I am most familiar with. No priority population was selected for this study. I am employed in a position where I work closely with
Latinas and see first hand the vast differences in knowledge and beliefs. For this study no comparison or control group is involved. A limitation of the study is that sampling of participants will come from a convenience sample of individuals. In a convenience sample participants are selected based upon the basis of accessibility. Participants were drawn from participants who were attending health education presentations to which the researcher has access.

Data Analysis Procedure

Data was collected using a self-administered survey and a descriptive analysis of the research utilizing the program Statistical Package for the Social Sciences (SPSS). Descriptive statistics were computed for all variables included in this study.

Similar Research Methods

Outreach to underserved populations for breast and cervical cancer screening is by definition a difficult task due to a variety of barriers enumerated in the previous chapter. When the target population is also a minority group, the challenges are exacerbated. Several
Behavioral factors could contribute to the morbidity and mortality associated with breast cancer among Latinos. They participate in breast cancer screening and associated breast health behaviors less often than other women in the United States. In addition, they are less confident in early detection methods.

Traditional strategies such as mass media education programs to encourage BSE have not been successful with less educated Latino women. It is possible that culturally appropriate interventions could encourage compliance with behaviors consistent with good breast health. Recent strategies for cancer control have promoted the development of integrated behavioral interventions to reduce cancer incidence, morbidity, and mortality.

Mujeres Felices por ser saludables is a randomized intervention project designed to modify dietary/breast health behaviors among Latino women of age 20-40 years. The decision to develop an integrated intervention was based on observations that Latino women have limited access to information and are a difficult to reach population, and that interventions targeting multiple behaviors among Latino women have proven effective.
(Fitzgibbon et al., 2003). The National Association of Community Health Centers Latina Breast & Cervical Cancer Initiative aims to provide community and migrant health centers with the innovative tools and the capacity needed to provide culturally and linguistically appropriate services to this population. Enhancing health center capacity, building community consortia, and launching Spanish-language media campaigns at the local level may assist health centers to increase the early detection and treatment of breast and cervical cancer among uninsured and underserved women served by health centers nationwide. The center aims to increase the level of knowledge regarding the benefits of mammography screenings and Pap smears, and to increase the utilization rates of mammography screenings and Pap smears among Latinas 50 and over (http://www.nachc.com/programs/latina.asp).

Numerous studies have pointed out that differences in access to health care are related to differences in rates of utilization of cancer screening. The National Hispanic Leadership Initiative on Cancer (NHLIC) conducted a community education intervention among low income Hispanics in several cities in the United States. They administered a brief questionnaire to a convenience sample
of 70 women from six of these locations. They were all low-income, self-identified Mexican or Mexican-Americans, over 50 years of age, with no previous history of cancer. To assess cancer-screening knowledge, they asked how often women over 40 should have four types of cancer screening: mammography, clinical breast examinations, self-breast examinations, and pap/pelvic examinations. They found that knowledge of cancer screening recommendations was already quite high among the women who answered our questionnaire in the community programs. Nevertheless, 20% of those with high knowledge of the screening recommendations did not report adhering to them, indicating that knowledge alone many not assure adherent screening behavior.

The basis of this study’s results concluded that to increase screening utilization rates, it is not enough to reduce or eliminate the burden of financial barriers to cancer screening. Associated barriers for women within this study are seven attitudinal factors, including helplessness, denial, hopelessness, fear, and possessing a dislike and lack of trust in physicians are also important deterrents to screening. The results of this study may explain why free or low-cost screening intervention programs report low rescreening rates, despite the fact
that cost is not a barrier. Lack of knowledge about guidelines, availability of services, transportation, and language barriers may also explain why Latina women have lower screening rates than non-Hispanic women (Hunt et al., 2002).

The authors conclude that Latinas comprise a disproportionate share of young patients with breast cancer and have a more aggressive disease process. This conclusion correlates with data from other studies. The authors do not believe that access to medical attention was a significant factor because most of their patients had Medicaid or used clinics for uninsured patients. The authors are concerned that cultural issues could influence the use of self breast-examination and decisions about seeking care and selecting treatment (Biffl et al., 2001).
CHAPTER FOUR

FINDINGS AND RESULTS

Research Findings

A total of 47 Latinas participated in this self-reported survey when approached by the researcher at various sites. The participants were drawn from a convenience sample of attendees at health education presentations. Participants' ages ranged from 18 years old to 65+ years old with the majority (40.4%) of participants falling in the 45-54 year old range (see Table 1). The ages of the participants were as follows: 6.4% (n=3) 18-24 year old, 6.4% (n=3) 25-34 year old, 34.0% (n=16) 35-44 year old, 40.4% (n=19) 45-54 year old, 8.5% (n=4) 55-64 year old, 4.3% (n=2) 65+ year old.
Table 1. Age Distribution (n=47)

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-24</td>
<td>3</td>
<td>6.4</td>
<td>6.4</td>
</tr>
<tr>
<td>25-34</td>
<td>3</td>
<td>6.4</td>
<td>12.8</td>
</tr>
<tr>
<td>35-44</td>
<td>16</td>
<td>34.0</td>
<td>46.8</td>
</tr>
<tr>
<td>45-54</td>
<td>19</td>
<td>40.4</td>
<td>87.2</td>
</tr>
<tr>
<td>55-64</td>
<td>4</td>
<td>8.5</td>
<td>95.7</td>
</tr>
<tr>
<td>65+</td>
<td>2</td>
<td>4.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>47</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Participants' highest level of education completed varied greatly with study participants. Twenty one percent (n=10) completed elementary school. 25.5% (n=12) completed junior high school. 46.8% (n=22) completed high school and 6.4% (n=3) completed college.

Table 2. Highest Level of Education Attained (n=47)

<table>
<thead>
<tr>
<th>Education</th>
<th>Frequency</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary School</td>
<td>10</td>
<td>21.3</td>
<td>21.3</td>
</tr>
<tr>
<td>Junior High School</td>
<td>12</td>
<td>25.5</td>
<td>46.8</td>
</tr>
<tr>
<td>High School</td>
<td>22</td>
<td>46.8</td>
<td>93.6</td>
</tr>
<tr>
<td>College</td>
<td>3</td>
<td>6.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>47</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Eighty-nine percent (n=42) of participants originated from the country of Mexico, 2.1% (n=1) El Salvador, 4.3% (n=2) Ecuador, 2.1% (n=1) "Other country in Central America" and 2.1% "Other country in South America".

Table 3. Country of Origin (n=47)

<table>
<thead>
<tr>
<th>Education</th>
<th>Frequency</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>42</td>
<td>89.4</td>
<td>89.4</td>
</tr>
<tr>
<td>Guatemala</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Honduras</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Columbia</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Puerto Rico</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Argentina</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ecuador</td>
<td>1</td>
<td>2.1</td>
<td>91.5</td>
</tr>
<tr>
<td>Peru</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>El Salvador</td>
<td>2</td>
<td>4.3</td>
<td>95.7</td>
</tr>
<tr>
<td>Other country in South America</td>
<td>1</td>
<td>2.1</td>
<td>97.9</td>
</tr>
<tr>
<td>Other country in Central America</td>
<td>1</td>
<td>2.1</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>47</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Participants in this study were only recruited from Orange County, CA. The majority of participants live in the city of Santa Ana, CA 51.1% (n=24), 17% (n=8) Anaheim, 8.5% (n=4) Garden Grove, 6.4% (n=3) Costa Mesa, 4.3% (n=2) Fountain Valley, (see Table 4).

Table 4. City of Residence (n=47)

<table>
<thead>
<tr>
<th>City of Residence</th>
<th>Frequency</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Santa Ana, CA</td>
<td>24</td>
<td>51.1</td>
<td>51.1</td>
</tr>
<tr>
<td>Anaheim, CA</td>
<td>8</td>
<td>17.0</td>
<td>68.1</td>
</tr>
<tr>
<td>Costa Mesa, CA</td>
<td>3</td>
<td>6.4</td>
<td>74.5</td>
</tr>
<tr>
<td>Orange, CA</td>
<td>2</td>
<td>4.3</td>
<td>78.7</td>
</tr>
<tr>
<td>Garden Grove, CA</td>
<td>4</td>
<td>8.5</td>
<td>87.2</td>
</tr>
<tr>
<td>Huntington Beach, CA</td>
<td>1</td>
<td>2.1</td>
<td>89.4</td>
</tr>
<tr>
<td>Yorba Linda, CA</td>
<td>1</td>
<td>2.1</td>
<td>91.5</td>
</tr>
<tr>
<td>Fountain Valley, CA</td>
<td>2</td>
<td>4.3</td>
<td>95.7</td>
</tr>
<tr>
<td>Westminster, CA</td>
<td>1</td>
<td>2.1</td>
<td>97.9</td>
</tr>
<tr>
<td>Tustin, CA</td>
<td>1</td>
<td>2.1</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>47</strong></td>
<td><strong>46</strong></td>
<td></td>
</tr>
</tbody>
</table>
The majority of participants' fell into the age 45-54 years old category, lived in Santa Ana Ca, and had at least completed high school. The survey was distributed to a convenience sample of 47 Latinas from Orange County, CA. The participants were drawn from attendees at health education presentations to which the researcher has access. Researcher asked attendees if anyone was interested in volunteering to answer an anonymous self-administered survey on breast cancer. The survey questions included demographic data, knowledge assessment, and self-efficacy questions. The survey questions were designed to be very simple in order to truly gauge participants' knowledge of breast cancer.

Figure 1 shows the results of survey question, "Most lumps that are found in the breast are cancerous", participants were asked whether asked to respond, "Yes", "No", or "Don't Know" as their response to this question.

The majority of participants answered correctly 32% (n=15) of participants answered "Yes", 47% (n=22) of participants indicated "No" to this question, and 21% (n=10) of participants answered "Don't Know" to this question.
Figure 1. Participant responses to survey question, "Most lumps that are found in the breast are cancerous."

Figure 2 shows the results of survey question, "At what age is a mammogram recommended", participants were given the following responses to choose from "18-24 years old", "25-39 years old", "40 years old" or "Don't Know" as their response to this question.

The majority of participants 57% (n=27) answered "40 years old" as the recommended age for a mammogram the correct answer, 36% (n=17) of participants indicated that the recommended age is "25-39 years old", 2% (n=1) of participants indicated that the recommended age is "18-24 years old", and 4% (n=2) of participants answered "Don't Know".
Figure 2. Participant responses to survey question, "At what age is a mammogram recommended?"

Figure 3 shows the results of survey question, "At what age is it recommended for a woman to begin doing a breast self-exam every month", participants were given the following responses to choose from "16 years old", "20 years old", "25-39 years old", "40 years old" or "Don't Know" as their response to this question.

The majority of participants 30% (n=14) answered that the recommended age for a woman to begin doing a breast self-exam is "25-39 years old". This was an incorrect answer. Approximately 23% (n=11) of participants answered
the correct answer being that the recommended age for a woman to begin doing a breast self-exam should be at "16 years old", 19% (n=9) of participants answered "Don’t Know" to this question, 13% (n=6) answered that the recommended age is "20 years old", and 15% (n=7) answered that the recommended is "40 years old".

![Bar Chart]

16 years old 20 years old 25-39 years old 40 years old Don't Know

23% 13% 30% 15% 19%

Figure 3. Participant responses to survey question, “At what age is it recommended for a woman to begin doing a breast self-exam every month?”

Figure 4 shows the results of survey question, “A breast self-exam is a method to help detect breast cancer”, participants were given the following responses
to choose from "Yes", "No", or "Don't Know" as their response to this question.

The majority of participants 83% (n=39) answered "Yes" to the question "A breast self-exam is a method to help detect breast cancer", the correct answer, 11% (n=5) of participants answered "Don't Know" to this question, and 6% (n=3) of participants answered "No" to this question.

Figure 4. Participant responses to survey question, "A breast self-exam is a method to help detect breast cancer."

Figure 5 shows the results of survey question, "Breast cancer early detection is important because it is
easier to treat when detected early”, participants were given the following responses to choose from “Yes”, “No”, or “Don’t Know” as their response to this question.

The majority of respondents 94% (n=44) answered this question correctly by stating “Yes” to the question, “Breast cancer early detection is important because it’s easier to treat when detected early”, 2% (n=1) of respondents answered “Don’t Know” to this question, and 4% (n=2) of respondents answered “No” to this question.

![Bar Chart]

Figure 5. Participant responses to survey question, “Breast cancer early detection is important because it is easier to treat when detected early.”
Figure 6 shows the results of survey question, "Only women with a family history of breast cancer are at risk of getting breast cancer", participants were given the following responses to choose from "Yes", "No", or "Don't Know" as their response to this question.

The majority of respondents 87% (n=41) answered correctly to this question by stating "No", 6% (n=3) answered "Yes" to this question, and 6% (n=3) answered "Don't Know" to this question.

Figure 6. Participant responses to survey question, "Only women with a family history of breast cancer are at risk of getting breast cancer."
The next sets of questions were self-efficacy questions designed to assess the degree to which individuals see themselves as competent enough to accomplish a particular task. Self-efficacy beliefs can powerfully influence the level of accomplishment that one ultimately achieves (Pajares, 1996).

The first self-efficacy survey question asked participants, “How confident are you that you can perform a breast self-exam every month?” Participants were given the following responses to choose from “Very Confident”, “Somewhat Confident”, or “Not at all Confident” as their response to this question.

The majority of respondents 47% (n=22) are “Not at all Confident” in performing a breast self-exam every month, 36% (n=17) of respondents feel “Very Confident” about performing a breast self-exam every month, and 17% (n=8) of respondents feel “Somewhat Confident” in performing a breast self-exam every month.
Figure 7. Participant Responses to Survey Question, "How confident are you that you can perform a breast self-exam every month?"

The second self-efficacy survey question asked participants, "How confident are you in talking with your doctor about early breast cancer detection methods?" participants were given the following responses to choose from "Very Confident", "Somewhat Confident", or "Not at all Confident" as their response to this question.

The majority of respondents 53% (n=29) answered that they felt "Very Confident" in talking with their doctor about early breast cancer detection methods for breast cancer, 28% (n=9) of respondents felt "Somewhat Confident"
in talking with their doctor about early breast cancer detection methods, and 19% of respondents felt "Not at all Confident" in talking with their doctor about early breast cancer detection methods.

![Bar chart](image)

**Figure 8.** Participant responses to survey question, "How confident are you in talking with your doctor about early breast cancer detection methods?"

The third self-efficacy survey question asked participants, "How confident are you that you can find community resources for breast health services?" participants were given the following responses to choose
from "Very Confident", "Somewhat Confident", or "Not at all Confident" as their response to this question.

The majority of respondents 60% (n=28) felt "Not at all Confident" in finding community resources for breast health services, 28% (n=13) of respondents felt "Very Confident" in finding community resources for breast health services, and 13% (n=6) of respondents felt "Somewhat Confident" that they could find community resources for breast health services.

Figure 9. Participant responses to survey question, "How confident are you that you can find community resources for breast health services?"
Discussion of Findings

The majority of women surveyed lived in the city of Santa Ana. Santa Ana is a highly dense Latino community; Latinos make up approximately 76% of residents (U.S Census, 2000). The majority of study participants were from Mexico (88%). This would lead me to recommend that interventions aimed at the Latina community in Santa Ana should be specifically tailored to meet the needs of the Mexican community.

The majority of participants (94%) know that breast cancer early detection is important because it is easier to treat when detected early. The majority of participants (47%) know most lumps that are found in the breast are not necessarily cancerous. The majority of participants (83%) know that a breast self-exam is a method to detect breast cancer. The majority of participants (57%) know that the recommended age for a mammogram is 40 years of age. The majority of participants (87%) are aware that breast cancer does not only affect women with a family history of cancer. The majority of study participants (70%) did not know the recommended age to begin conducting a breast self-exam, only 30% answered correctly.
The self-efficacy scale items were rated on a 3-point scale ranging from very confident to not at all confident. When asked 3 self-efficacy questions to determine participants' beliefs about their capabilities to produce an effect, 36% of survey participants felt "Very Confident" in performing a breast self-exam, 28% of survey participants felt "Very Confident" that they could find community resources that offered breast health services, and 53% of survey participants felt "Very Confident" in talking with their doctor about early breast cancer detection methods.
CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

Conclusion

The majority of participants in this study knew that most lumps that are found in the breast are not necessarily cancerous. The majority of the participants were aware that the recommended age for a mammogram. The majority of study participants were aware that a breast self-exam is a breast cancer early detection method. The majority of participants were aware that breast cancer early detection is important because it's earlier to treat when detected early.

A shift in the way participants answered the questions occurred in the self-efficacy portion of the survey. The majority of study participants were “not at all confident” in performing a breast self-exam every month. Although, the majority of participants felt “very confident” in talking with their doctor about early breast cancer detection methods. The response to the last self-efficacy question allows for an opportunity to community agencies to provide targeted intervention activities to this community. When study participants were asked, “How
confident are you that you can find community resources for breast health services?” the majority of participants (60%) answered “somewhat confident.” I would have expected that a major portion of participants would have answered “very confident” to the question, “how confident are you that you find community resources for breast health services?” instead of the 60% of the participants that answered “somewhat confident.” This could also be because of my own bias as an individual that works for a County health department and who collaborates with many of the Orange County breast health service providers. I am aware of what agencies are doing in the community but that doesn’t necessarily mean that they are reaching the right population.

Limitations of Study Design

A limitation of this study was that it was conducted with a convenience sample of Latina women. A second limitation of this study was that the number of participants was a small number of Latinas from Orange County. A third limitation of this study is that no acculturation questions were included to determine whether the number of years of living in the United States had
affected their knowledge levels. The data of this study thus may not be representative of the knowledge levels of the Latina community. Latinas in this study reported higher rates of breast cancer knowledge than other studies have found about Latinas.

Future Research and Recommendations

Future researchers may want to study a Latinas decision-making approach when choosing to perform breast cancer early detection screenings. From this study the majority of participants were well informed about the risk factors and breast cancer early detection methods, although, the majority of women in this study were not very confident (46.8%) in that they could perform a breast self-exam every month.

If Orange County Latinas are well aware of the detrimental effects of breast cancer, then, why are the breast cancer incidence rates for Latinas in Orange County so high? This study was only conducted on a very small sample of the Latina community in Orange County Ca, so it is not representative of Latinas in general. Conducting the same research in several different counties may present different results.
A second recommendation for a future study would be to look into the personal lives of Latinas and see what external factors deter them away from performing monthly breast self-exam. Is it because of cultural taboos about touching the body? Is it because they do not have time? Is it simply that they do not know what they are looking for when they perform a breast self-exam? There are many questions that have yet to be answered.

The population of Orange County continues to change as more and more immigrants make Orange County their permanent place of residence. It is crucial that health and social service agencies keep programs up to date to meet the needs of the ever-changing population. To keep up with the changing dynamics of the population they will need to have specialized or targeted interventions to ensure that educational messages reach these intended pockets of the community.

In order to find those hard to reach women, it will be vital for programs to link together. A reduction in cancer mortality and in the incidence of cancer can be achieved through a unified effort on the part of physicians, other healthcare professionals, health policy experts, government, the health insurance industry, the
media, educational institutions, and women themselves (Seltzer, 2000). It is important to have physicians, nurse practitioners, and physician assistants, etc. take the time to explain to women the who, what, where, and how.

We should all be doing our part in the fight against breast cancer, after all, it is the greatest threat against women. What then can we do to help reduce the morbidity and mortality of breast cancer among Latina women if the problem is not a lack of breast cancer knowledge among this population? What factors, other than patient knowledge, may also contribute to raise the rates of cancer screening among Hispanic women? These are questions that need to be answered.
APPENDIX

SURVEY INSTRUMENT
BREAST CANCER KNOWLEDGE SURVEY

Do not write your name on this form.

Please circle the letter that best answers each question.

1. How old are you?
   a) 18-24
   b) 25-34
   c) 35-44
   d) 45-54
   e) 55-64
   f) 65+

2. What is the highest level of education completed?
   a) Less than Elementary School
   b) Elementary School
   c) Junior High School
   d) High School
   e) College

3. What is your country of origin?
   a) Mexico
   b) Guatemala
   c) Honduras
   d) Nicaragua
   e) Columbia
   f) Puerto Rico
   g) Argentina
   h) Ecuador
   i) Peru
   j) El Salvador
   k) Other country in Central America
   l) Other country in South America

4. In what city do you live in?

5. Most lumps that are found in the breast are cancerous.
   a) Yes
   b) No
   c) Don't know

6. At what age is a mammogram recommended?
7. At what age is it recommended for a woman to begin doing a breast self-exam every month?
   a) at 16 years old
   b) at 20 years old
   c) at 25-39 years old
   d) at 40 years old
   e) Don't know

8. A breast self-exam is a method to help detect breast cancer.
   a) Yes
   b) No
   c) Don't know

9. Breast cancer early detection is important because it's easier to treat when detected early.
   a) Yes
   b) No
   c) Don't know

10. Only women with a family history of breast cancer are at risk of getting cancer.
    a) Yes
    b) No
    c) Don't know

11. How confident are you that you can perform a breast self-exam every month?
    a) Very confident
    b) Not at all confident
    c) Somewhat confident

12. How confident are you in talking with your doctor about early breast cancer detection methods for breast cancer?
    a) Very confident
    b) Not at all confident
    c) Somewhat confident
13. How confident are you that you can find community resources for breast health services?
   a) Very confident
   b) Not at all confident
   c) Somewhat confident

   Thank you!
REFERENCES


Hunt, L.M., Longworth, J.D., & De Voogd, K.B. (2002). If I needed it, they would have sent me: Cancer screening,


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