

Breast Cancer Knowledge and Early Detection among Latina Women with a Family History of Breast Cancer along the US-Mexico Border

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Introduction

General

- Breast cancer is the most commonly diagnosed cancer and the leading cause of cancer related death among women worldwide
- The highest age-adjusted breast cancer incidence rate worldwide was reported for North America, including Mexico, at 99.4 new cases per 100,000 women per year
- U.S.-Mexico border states suffer from disproportionately higher breast cancer rates than the interior of either country
- Age-adjusted incidence and mortality rates of breast cancer are significantly higher in the northern Mexican border states compared to the southern part of the country
- In 2005, among U.S. Hispanics, breast cancer mortality rates were higher in the border state of New Mexico than all other U.S. states (see Figure 1)

U.S. Latinas

- Latina women are the only racial/ethnic group for which the breast cancer mortality rate is higher than that for lung cancer
- U.S. Latinas are approximately 20% more likely to die from breast cancer than their non-Hispanic white counterparts
- Mexican Women
- Breast cancer is the second most frequent malignant neoplasm among women, affecting younger women more often
- Among women 25-74 years old, the age-adjusted breast cancer mortality rate more than doubled over the 30-year time period of 1966-1996, from 7.6 deaths per 100,000 to 15.1 deaths per 100,000, respectively

Family History

- Family history has been shown to substantially increase both a woman's lifetime risk of developing breast cancer and of developing the disease at an earlier age
- First-degree relatives of women with breast cancer have more than 3 times the risk of developing breast cancer when compared to the general population

Cross-border Utilization

- Patterns of U.S.-Mexico cross-border utilization of healthcare have been previously reported
- While some studies have examined patterns of utilization along contiguous border communities, there is a paucity of information on utilization of cancer prevention screening services

Figure 1. Regional Variation in Breast Cancer Mortality among U.S. Latinas (Source: NCI, SEER)

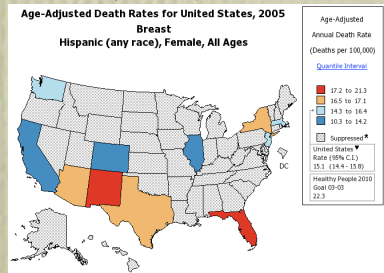
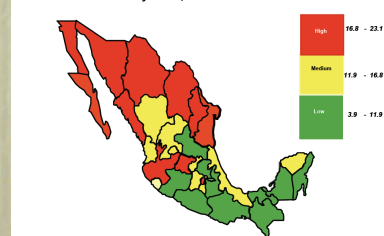


Figure 2. Regional Variation in Breast Cancer Mortality among Mexican Women (Source: INEGI/CONAPO)



Methods

Setting

- The present study was conducted in four areas along the U.S.-Mexico border:
 - Three counties in New Mexico: Doña Ana, Grant, and Luna
 - One city in Mexico: Ciudad Juarez, Chihuahua.
- The U.S.-Mexico border stretches across four U.S. and six Mexican states, with an estimated 11.5 million inhabitants

Study procedures

- This cross-sectional analysis assessed levels of knowledge of breast cancer, attitudes, and use of preventive screening methods of Latina women with and without a family history of breast cancer
- A total of seven community health centers/hospitals, two in each of the New Mexico counties and one in Ciudad Juarez, took part in the study
- Staff members at each participating institution identified 1428 women who made appointments for routine medical care between August 2006 and March 2007 and who met basic study eligibility requirements. Study participants (n=476) were randomly selected from this group of women patients.
- All study procedures were approved by the Institutional Review Boards at New Mexico State University, Ben Archer Health Center Inc., Hidalgo Medical Services, and Hospital de la Familia FEMAP/SADEC

Eligibility

- Women had to be age 40 or older
- Not presently be on radiation or chemotherapy treatment for cancer
- Not pregnant
- Unable to provide written informed consent

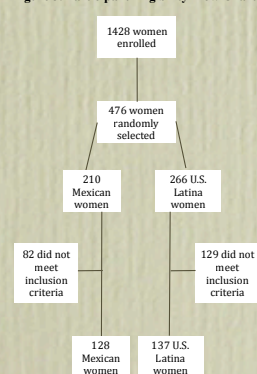
Instrument

- Interviewer-administered questionnaire
- Obtained information on sociodemographic variables, participants' knowledge of breast cancer and preventive screening procedures, attitudes toward breast cancer, and previous breast cancer prevention practices

Data Analysis

- The original sample consisted of 476 women
- We excluded 211 women who were either younger than 40 years of age, because mammogram screening is not routinely recommended for women under age 40, or did not know their family history of breast cancer
- Included in this analysis were 265 women
- Statistical analyses used included frequencies, mean values, and cross-tabulation with Pearson's chi-square statistic and Fisher's exact test

Figure 3. Participant Eligibility Flow Chart



Results

Table 1. Selected Sociodemographic Characteristics of Study Participants

Characteristic ^a	U.S. Latina Women (n=137)	Mexican Women (n=128)
Mean age, years (s.d.)	52.0 (8.8)	48.2 (6.7)
Mean education, years (s.d.)	10.8 (3.9)	8.0 (3.0)
Mean weekly income, USD (s.d.)	448.1 (356.2)	90.5 (29.3)
Marital Status, n (%)		
Single/Never married	14 (10.6)	12 (9.5)
Married/Living with intimate partner	93 (70.5)	96 (75.6)
Divorced/Separated/Widowed	25 (19.0)	19 (15.0)
Insurance Status, n (%)		
Insured	61 (46.6)	30 (23.4)
Uninsured	70 (53.4)	98 (76.6)
Family History of Breast Cancer, n (%)		
FH+	46 (33.6)	31 (24.2)
FH-	91 (66.4)	97 (75.8)

^aSample size for characteristics varies due to different proportion of missing data for each.

Figure 2. History of Screening Practices by Family History

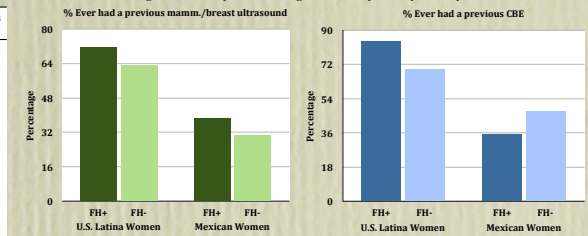


Table 3. Participants' Knowledge of Breast Cancer and Early Detection

Characteristic ^a	U.S. Latina Women		Mexican Women	
	FH+ (n=46)	FH- (n=87)	FH+ (n=31)	FH- (n=97)
	% Answered Correctly			
Can a woman have breast cancer without having symptoms or feeling ill	88.9	86.4	87.1	95.7
At what age do you think a woman is more likely to develop breast cancer	74.4	64.0 ^b	83.9	62.1
If breast cancer is found early it can be cured	89.5	97.7	100	100
A woman only needs a mammogram/breast ultrasound when they feel pain/feel a lump/have discharge	85.0	70.0 ^c	90.3	89.7
A mammogram/breast ultrasound will help you find breast cancer early	97.5	93.9	90.3	97.9
How often do you think a woman should have a mammogram/breast ultrasound	86.4	96.7 ^d	71.8	84.9
If you have a breast exam from a doctor there is no need to have a breast ultrasound/mammogram	93.2	77.3 ^e	96.2	93.0
After receiving two mammograms/breast ultrasounds where the results were normal, you don't need to have other exams done for at least five years ^f	81.1	84.2	76.9	88.2

^aSample size for characteristics varies due to different proportion of missing data for each.
^bU.S. Latinas were significantly different than Mexican women, p < 0.05
^cU.S. Latinas were significantly different than Mexican women, p = 0.001
^dU.S. Latinas were significantly different than Mexican women, p < 0.01

Table 4. Participants' Attitudes about Breast Cancer

Characteristic ^a	U.S. Latina Women		Mexican Women	
	FH+ (n=46)	FH- (n=87)	FH+ (n=31)	FH- (n=97)
	% Agreeing			
At my age I do not need to worry about breast cancer	7.0	20.7 ^b	16.7	35.1
In the next five years, I have a good chance of getting breast cancer	65.4	69.6	76.5	69.5
I am more likely to get breast cancer than Hispanic women who live in the U.S./Mexico	8.0	22.6 ^c	12.5	2.8
I would prefer not to know if I had breast cancer	4.9	16.4	3.2	8.4
I would be afraid to tell my partner/spouse that I have breast cancer because it would affect our relationship	12.5	13.7	13.3	10.7

^aSample size for characteristics varies due to different proportion of missing data for each.
^bU.S. Latinas were significantly different than Mexican women, p < 0.05
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Discussion

- Among both FH+ and FH- participants, U.S. Latinas were significantly more likely to have ever utilized preventive screening services compared to their Mexican counterparts
- In general, levels of knowledge and attitudes were similar among U.S. Latina and Mexican women
- Interestingly, Mexican women were more likely to believe that they did not need to worry about breast cancer at their age
- Although important, knowledge may not be a key factor in the disparities in breast cancer screening utilization among U.S.-Mexico border Latinas

Future Research

- Further investigation to determine the impact of perceptions of risk of breast cancer on screening utilization among border Latinas
- Assess structural factors of breast cancer screening utilization among Latina women residing along the U.S.-Mexico border

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