



# **Breast Cancer, Screening-Specific Emotions, and the Role of Culture**

**Patricia Flynn<sup>1</sup>, Hector Betancourt<sup>1,2</sup>,  
Jennifer Tucker<sup>1</sup>, & Matt Riggs<sup>3</sup>**

**<sup>1</sup>Loma Linda University, USA**

**<sup>2</sup>Universidad de La Frontera, Chile**

**<sup>3</sup>California State University, San Bernardino, USA**

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# Disparities in Breast Cancer Screening

Ethnic disparities in breast cancer diagnosis and screening behaviors exist among various ethnic groups in the United States.

Data from the 2003 California Health Interview Survey, including women from San Bernardino and Riverside Counties indicates the following inequalities for women aged 25 and older for clinical breast examinations and women 45 and older for mammography screening (1):

- ◆ Clinical Breast Exam in last 12 months: 59.4% Latino, 69.4% Anglo
- ◆ Never had a Mammogram: 18.6% Latino, 3.3% Anglo

Although disparities have been identified among various ethnic and SES groups, little is known about the *cultural* differences in the experiences of emotions about screening and screening outcomes.



# Emotions & Breast Cancer Screening

- Emotions such as anxiety have been found to influence compliance with self-breast exams (2). However, emotions as they relate to breast cancer screening tend to be clustered together, ignoring potentially important emotion-specific outcomes.
- New research (3) suggests investigating emotions based on two subcategories

## Screening-Specific Emotions

Feelings based on the test itself or the process of being screened

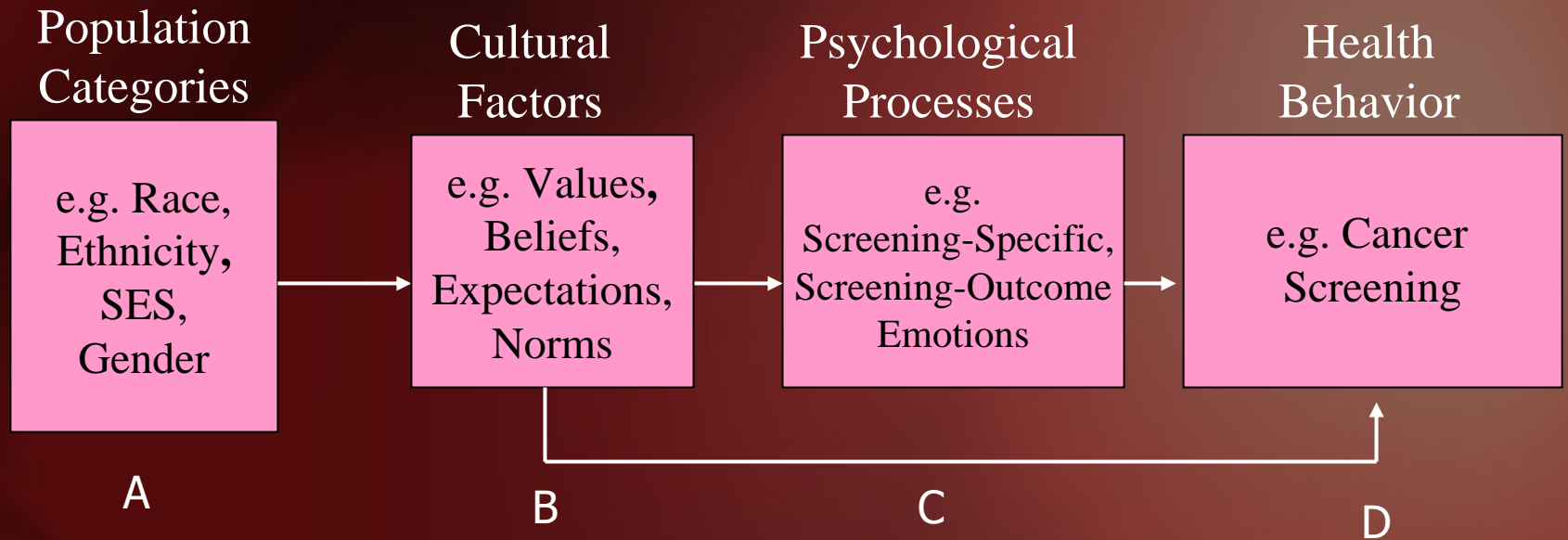
## Screening-Outcome Emotions

Sentiments about the **outcome** of the screening process

- These subtypes of emotions might have different implications for screening behaviors (3 & 4). The few researchers that have used this approach have found:
  - Screening-specific emotions influence noncompliance with regular SBEs while
  - General emotions about breast cancer are not related to SBE compliance (2).
- Currently, there is a lack of research on *cultural differences* in either type of screening emotion in relation to screening behaviors (3).

# Model for the Study of Culture

*Distal.....To more proximal determinants of behavior*



This research is guided by the postulates for the study of culture and behavior (e.g. Betancourt & Lopez, 1993) which has been adapted for the study of culture and health behavior (e.g. Betancourt & Flynn, 2007).

# Aims & Hypotheses

## Research Aims:

- To investigate screening-specific and screening-outcome emotions among Anglo and Latino women
- To test the associations among screening-specific and screening-outcome emotions in relation to breast cancer screening behaviors

## Hypotheses:

- There will be group differences in screening-specific and screening-outcome emotions among Anglo and Latino women
- Greater screening-specific and screening-outcome emotions will be negatively associated with frequency of self-breast exams and clinical breast exams

# Study Methodology

Adapted from methodology employed by Triandis and associates in studies of subjective culture (8). Qualitative interviews were conducted with Latino and Anglo women to identify elements of culture. Then, items were developed based on these interviews.

## Measures

### Ethnicity:

Women self-identified themselves as either Latino American or Anglo American

### Screening-Specific Emotions:

"Thinking about (having/doing) a (CBE/SBE) makes me anxious."

"When I think about (having/doing) a (CBE/SBE) I get scared."

### Screening Outcome Emotions:

"If Diagnosed with breast cancer I would feel . . ."

"Scared," "Sad," "Worried"

Responses to the emotion items were based on a Likert scale from 1, "Strongly Disagree" to 7, "Strongly Agree"

### Breast Cancer Screening:

#### Frequency of Self Breast Exams

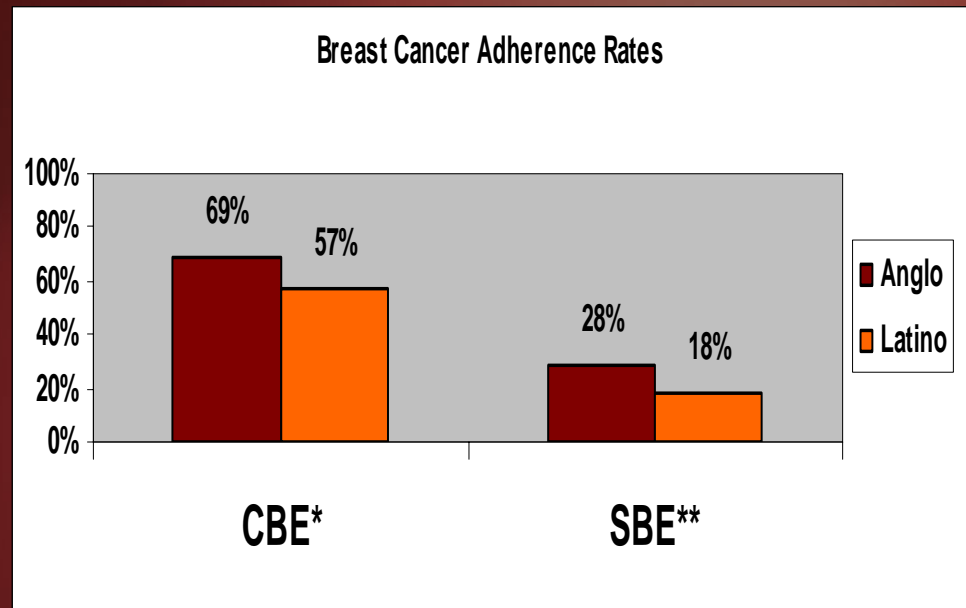
"How many self-breast examinations have you done in the last 12 months?"

#### Frequency of Clinical Breast Exams

"How many clinical breast exams have you had in the last 5 years?"

# Demographics & Screening Rates

	Latino	Anglo	Total
	<b>N=44</b> <b>53.7%</b>	<b>N= 38</b> <b>46.3%</b>	<b>N= 82</b>
<b>Age (M)</b>	<b>37.29</b>	<b>42.5</b>	<b>39.8</b>
<b>Education (M)</b>	<b>10</b>	<b>14.46</b>	<b>12.12</b>
<b>Income (%)</b>			
<b>0-14,999</b>	<b>54.1</b>	<b>24.2</b>	<b>40</b>
<b>15,000-24,999</b>	<b>8.1</b>	<b>21.2</b>	<b>14.3</b>
<b>25,000-39,000</b>	<b>18.9</b>	<b>21.2</b>	<b>20</b>
<b>More than 40,000</b>	<b>15.9</b>	<b>28.9</b>	<b>22</b>
<b>Latino Country of Origin (%)</b>			
<b>Mexico</b>	<b>80</b>	<b>--</b>	
<b>S. America</b>	<b>5</b>	<b>--</b>	
<b>Central America/ Caribbean</b>	<b>7.5</b>	<b>--</b>	
<b>Other</b>	<b>7.5</b>	<b>--</b>	

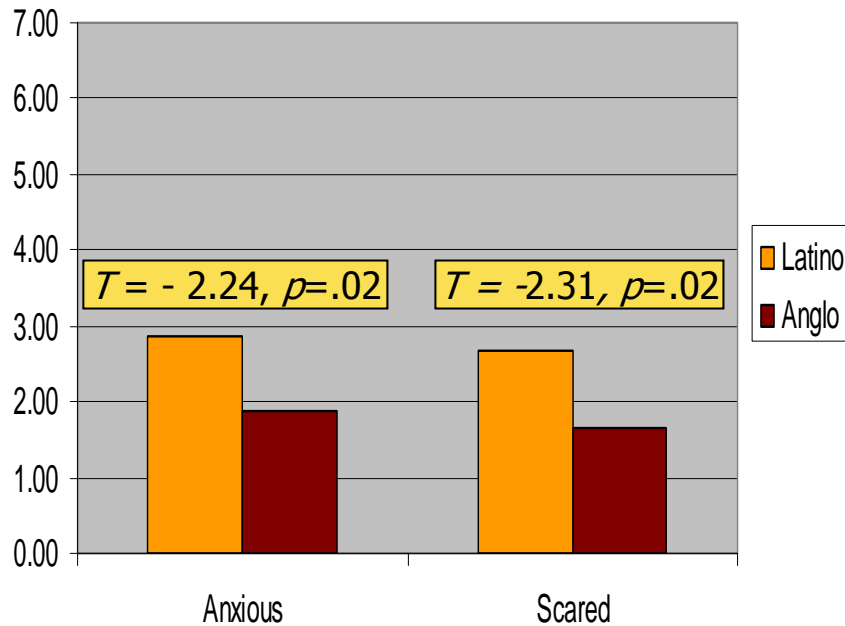


\*women 25 years+ having had at least 3 CBEs in the past 5 years

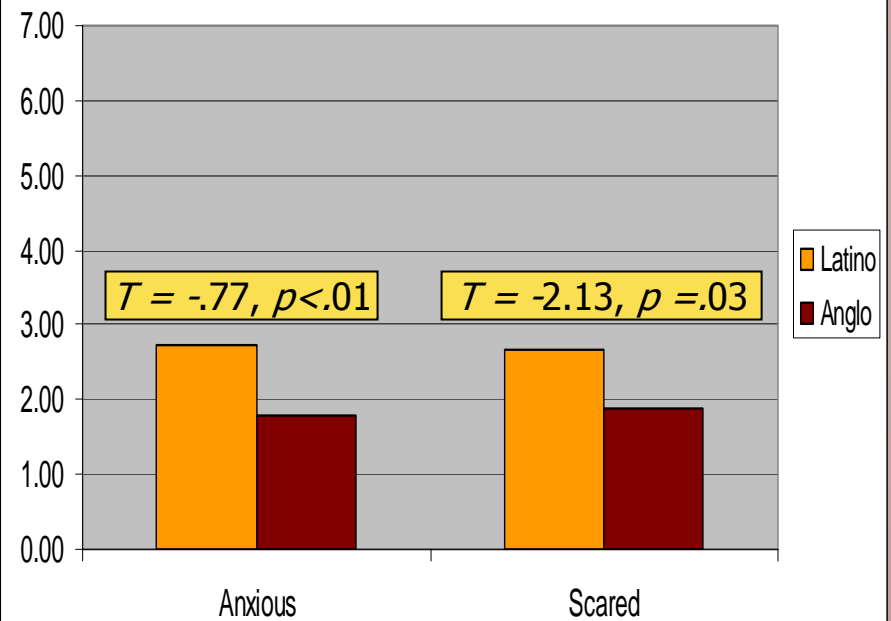
\*\*women 18+ having performed at least 12 SBEs in the past year

# Screening - Specific Emotions

"Thinking about having a CBE makes me..."

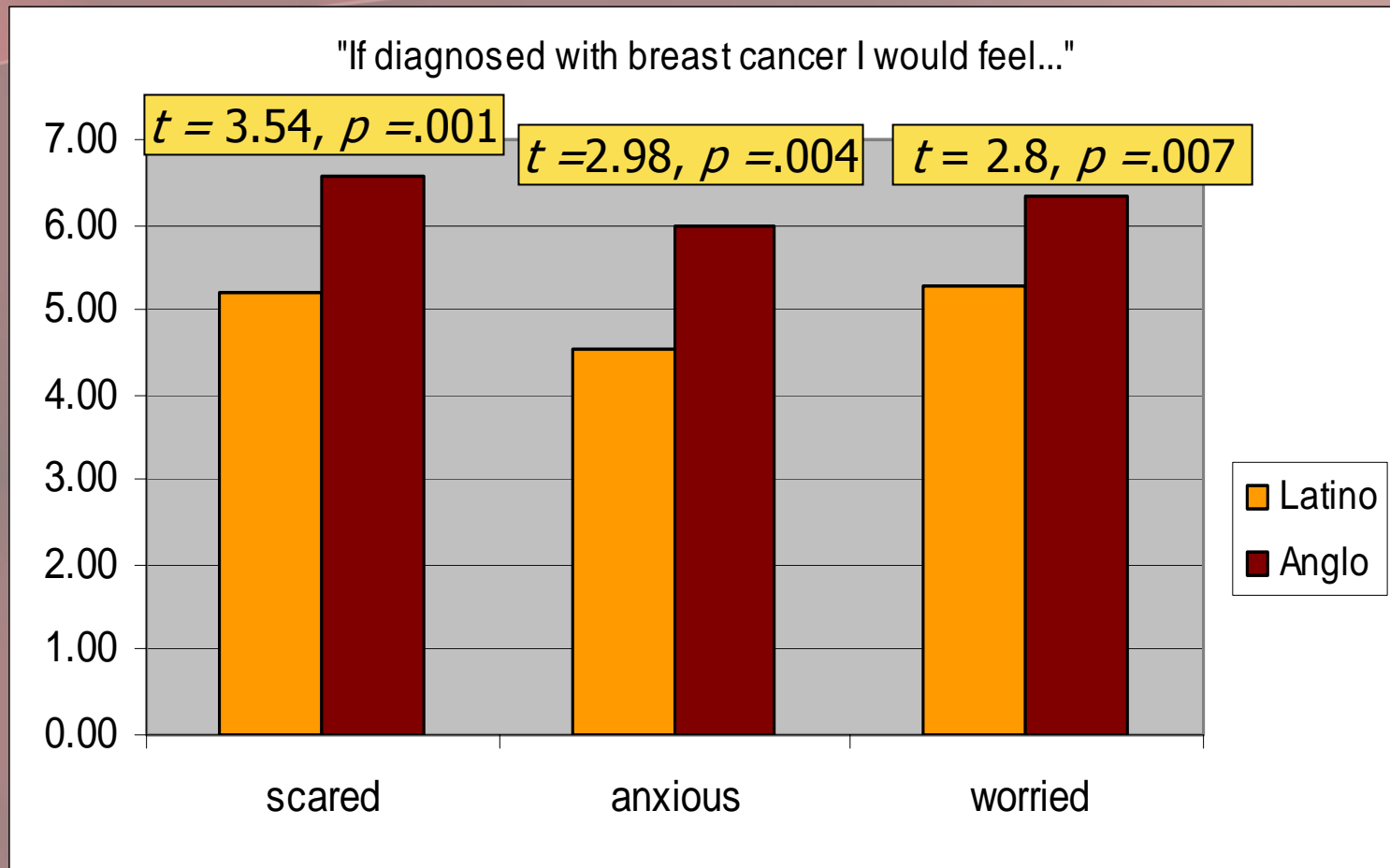


"Thinking about having a SBE makes me . . ."



T-tests indicated significantly higher levels of screening-specific emotions for Latinos than Anglos

# Screening-Outcome Emotions



In contrast, screening-outcome emotions were significantly higher for Anglos than Latinos.

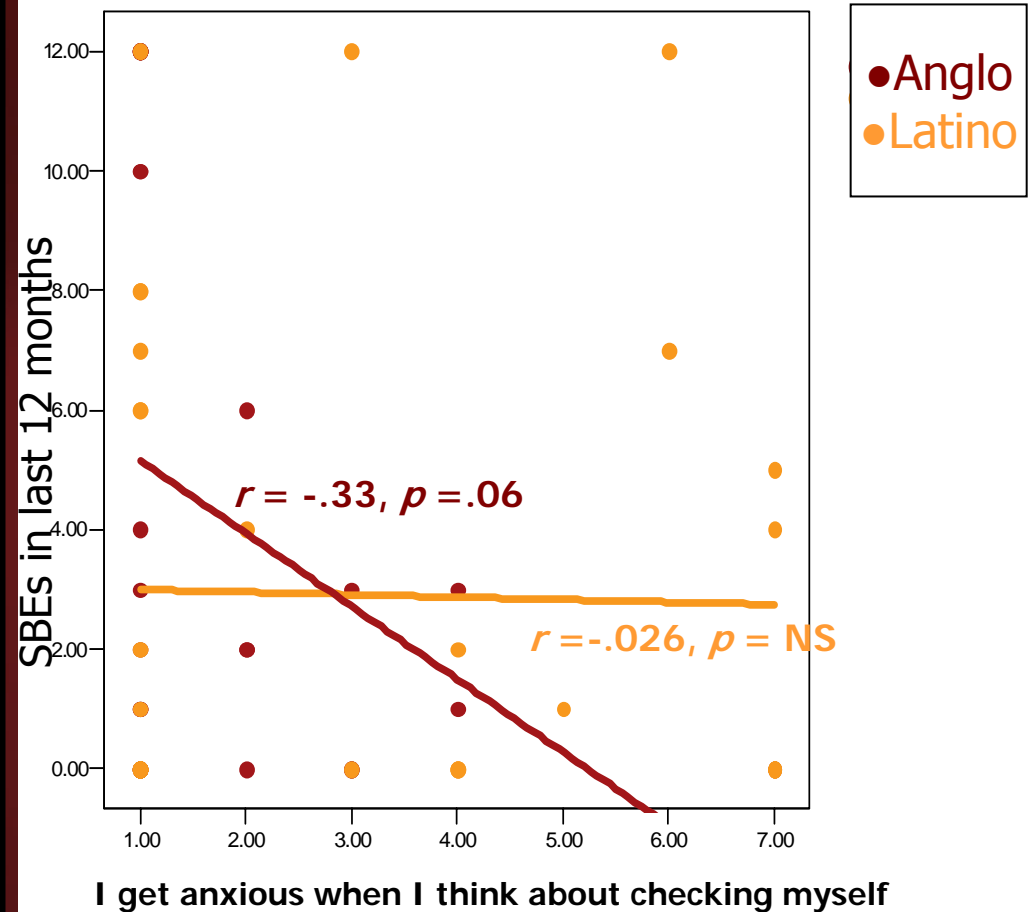
# Screening-Specific Emotions and their Relation to Screening Behavior

## Screening-Specific Emotions and SBE

	Anglo	Latino
Anxious	$r = -.33$ $p = .06$	$r = -.026$ $p = \text{NS}$
Scared	$r = -.059$ $p = \text{NS}$	$r = -.129$ $p = \text{NS}$

## Screening-Specific Emotions and CBE

Anxious	$r = -.324$ $p = \text{NS}$	$r = -.21$ $p = \text{NS}$
Scared	$r = -.41$ $p = .05$	$r = -.38$ $p = .05$



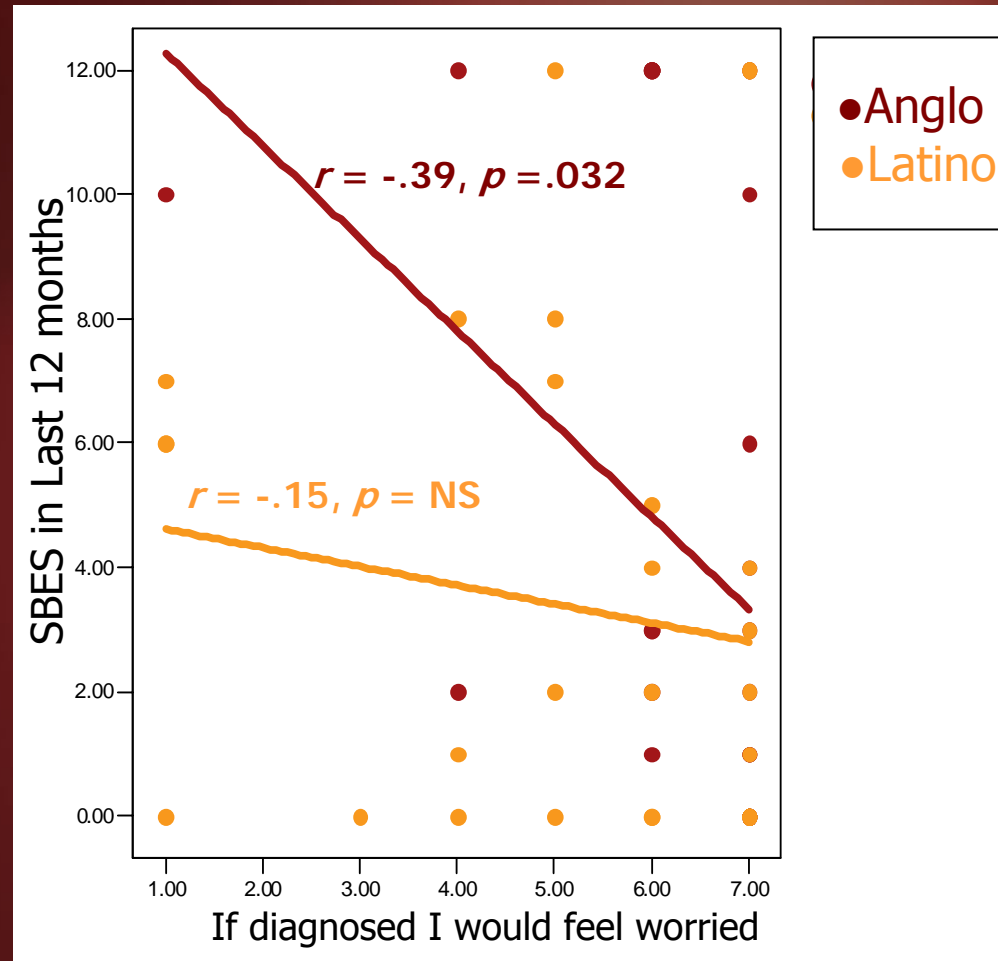
# Screening-Outcome Emotions and their Relation to Screening Behavior

## Screening-Outcome Emotions and SBE

	Anglo	Latino
Worried	$r = -.39$ $p = .03$	$r = -.15$ $p = NS$
Scared	$r = -.38$ $p = .03$	$r = -.22$ $p = NS$
Anxious	$r = -.03$ $p = NS$	$r = -.15$ $p = NS$

## Screening-Outcome Emotions and CBE

Worried	$r = -.19$ $p = NS$	$r = -.13$ $p = NS$
Scared	$r = -.13$ $p = NS$	$r = -.12$ $p = NS$
Anxious	$r = -.03$ $p = NS$	$r = -.18$ $p = NS$





# Conclusions



Guided by the model for the study of culture, findings revealed differences in the intensity of screening-related emotions among the Anglo and Latino women

- For Anglo women, the outcome of a breast cancer diagnosis was particularly anxiety provoking
- Meanwhile, Latinos indicated more negative emotions in relation to the process of having a screening exam

## Emotions and Screening Behaviors

- Despite greater screening-specific emotions among Latino women, their association with the frequency of SBEs were not very strong which may be a result of the relatively low SBE rates among this population
- On the other hand, both screening-specific and screening-outcome emotions were found to be associated with fewer SBE and CBE frequency for Anglo women

## Future research

- Could benefit from investigating cultural variables such as time-orientation and fatalism, which may further explain ethnic variations in screening-related emotions and breast cancer screening behaviors

## Intervention

- Intervention efforts with Anglo women may benefit from addressing screening-outcome emotions whereas efforts that target Latino women may be more effective when addressing emotions relevant to the process of screening

# References

1. California Health Interview Survey (2005). From "Ask CHIS" database at: <http://www.chis.ucla.edu/main/DQ2/output.asp?page=bar>
2. Lindberg, N. M. & Wellisch, D. (2001). Anxiety and Compliance Among Women at High Risk for Breast Cancer. *Society of Behavioral Medicine, 23*, 298-303.
3. Consedine, N. S., Magai, C., Krivoshekova, Y.S., Ryzewicz, L. & Neugut, A. I. (2004). Fear, Anxiety, Worry, and Breast Cancer Screening Behavior: A Critical Review. *Cancer, Epidemiology, Biomarkers & Prevention, 13*, 501-510.
4. Consedine, N. S., Magai, C., & Neugut, A. I. (2004). The contribution of emotional characteristics to breast cancer screening among women from six ethnic groups. *Preventive Medicine, 38*, 64-77.
5. Bobo, J. K., Dean, D., Stovall, C., Mendez, M. & Caplan, L. (1999). Factors that may discourage annual mammography among low-income women with access to free mammograms: A study using multi-ethnic multiracial focus groups. *Psychological Reports, 85*, 405-416.
6. Betancourt, H. & Lopez, S. (1993). The study of culture, race, and ethnicity in American Psychology. *American Psychologist, 48*, 629-637.
7. Betancourt, H. & Flynn, P. (2007). The study of culture, health behavior, and delivery of services. *Manuscript submitted for publication.*
8. Triandis, H. C. (1972). *The analysis of subjective culture*. New York: Wiley.