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Acknowledgement: This study is funded by Qatar National Research Foundation (QNRF), NPRP 09–261–3–059

## BACKGROUND

- Breast cancer is the most common cancer among women in the State of Qatar and the incidence rate is rising.
- Early detection through breast cancer screening (BCS) activities [breast self examination (BSE), clinical breast examination (CBE), and mammography] has been shown to decrease mortality rates by 25-30% with proper treatment.
- Previous findings indicate women in Qatar are often diagnosed with breast cancer at advanced stages and their awareness of BCS services and participation rates in screening activities are low.
- In addition to lack of a physician's recommendation, studies have revealed that barriers to mammogram practice among Arab women include fear, low perceived risk of cancer or effectiveness of BCS, time, cost, preference for a female health professional, accessibility of the health care system and embarrassment
- Because cultural beliefs, values, and attitudes have been found to influence perceptions on cancer and BCS practice, these factors must be investigated among Arabic women in Qatar in order to design a socio-culturally appropriate intervention strategy that addresses the threat of breast cancer.



Although breast cancer screening guidelines are currently being revised to reflect Qatar's health context, the most recent guidelines were used for this study:

- Monthly breast self examination
- Clinical breast exam for women aged ≥35 every 1-2 years;
- Mammogram for women aged ≥40 every 1-2 years.

## STUDY AIMS

This study aims to gain information on Arabic speaking women's practice of breast cancer screening, and their knowledge, cultural beliefs and values regarding breast cancer and its screening for early detection and treatment.

The primary outcomes measured for this paper include (a) participation rates in BCS of Arabic women living in Qatar, and (b) the relationship between Arabic women's BCS practice and selected socio-demographic factors, and their beliefs, values, and attitudes towards BCS. We hypothesize that there is a relationship between Arabic women's beliefs, values, and attitudes and their BCS practices.

## METHODS

**Based upon Kleinman's Explanatory Model:**

- "[people's] beliefs about sickness...including their treatment expectations ...affect the way individuals think about and react to sickness and choose among and evaluate the effectiveness of the health care practices available to them" (Kleinman, 1980, p. 38).
- It has also been argued that effective communication between physician and patient must address culturally sensitive concerns to adequately influence decision-making and behaviors by patients.

- A multi-center, cross-sectional quantitative survey of 1,063 (87.5% response rate) female Qatari citizens and Qatari Arabic-speaking residents, 35 years of age or older, was conducted in from March to July 2011 in various populated regions in Qatar.
- Data collection was obtained from interviews using a structured survey questionnaire. Interviews were conducted in Arabic by seven female nurses fluent in Arabic and English.
- Descriptive statistics (mean, standard deviations for interval variables and frequency) and Chi-Square tests were performed to determine associations between dependent and categorical predictors.
- Simultaneous multivariate logistic regression analyses were used to further assess the association of pre-selected factors related to beliefs, values, attitudes and socio-demographics with binary dependent variables (e.g. practice of BSE, CBE and mammogram).
- Statistical significance levels were established at alpha = 0.05 level. Data analyses were conducted with SPSS 20.

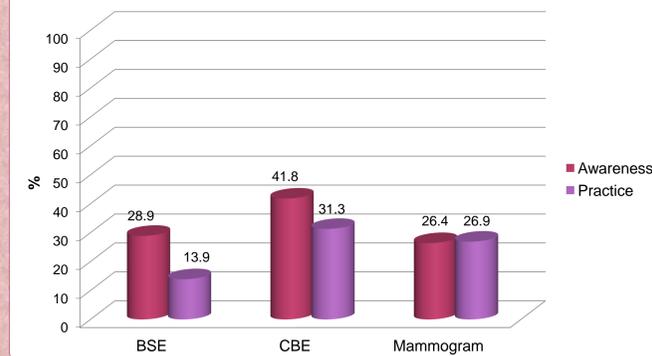
## RESULTS

- The study population was fairly homogenous in terms of marital status (78.9% married) and religion (98.2% Muslim).
- 33.3% had a university education, 36.6% of the married participants' husbands had a university education, and 65.9% were unemployed (89.3% of whom were homemakers).
- The majority of participants stated their health status is Good or Excellent. The majority also believed that cancer can be hereditary, due to unhealthy lifestyles or not breastfeeding, and that it is *not* contagious, *not* due to God's punishment, and *not* due to bad luck.
- The majority stated cancer is due to fate (96.8%), and less than half believed cancer is preventable (42.8%)
- The majority of participants report that they trust their HCP, feel their health care treatment is respectful, their health care needs are met, and their HCP is understandable.
- Although only 24.4% of the participants reported their doctors talked to them about breast cancer, most would make a mammogram appointment if their HCP recommended it.

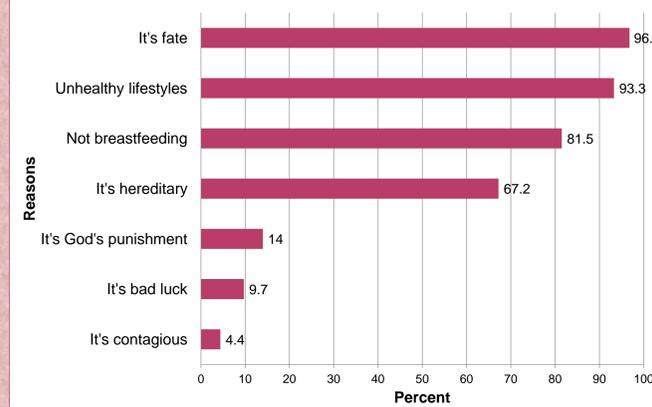
### Selected Demographic Characteristics of Participants (N=1,063)

Characteristic	No. (%) of Participants
<b>Age (years) (M=44.9, SD=8.4)*</b>	
35-39	365 (34.4)
40-49	399 (37.6)
50+	297 (28.0)
<b>Nationality</b>	
Qatari citizen	554 (52.1)
Non-Qatari resident	509 (47.9)
<b>Marital Status</b>	
Single	224 (21.1)
Married	839 (78.9)
<b>Religion</b>	
Muslim	1044 (98.2)
Christian	19 (1.8)
<b>Education Level of Participant</b>	
≤Primary/Intermediate	359 (33.8)
Secondary/Trade School	350 (32.9)
University	354 (33.3)
<b>Education Level of Participant's Husband (n=896)</b>	
≤Primary/Intermediate	276 (30.8)
Secondary/Trade School	292 (32.6)
University	328 (36.6)
<b>Employment Status of Participant</b>	
Employed	362 (34.1)
Unemployed	701 (65.9)

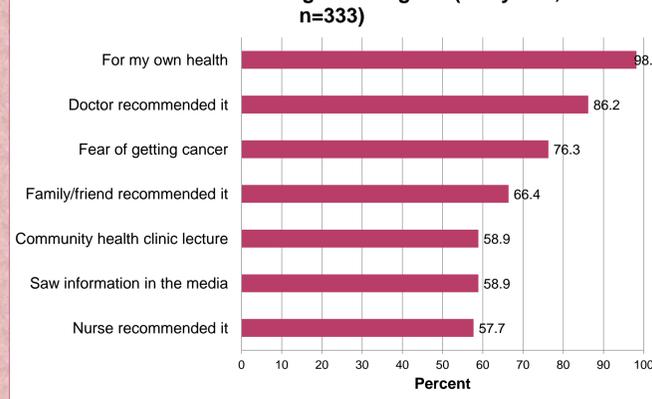
### BCS Awareness and Practice (n=1063)



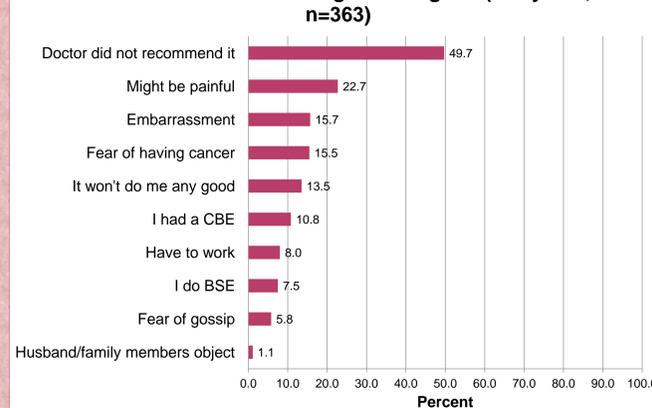
### Beliefs: Why do people get cancer?



### Reasons for Planning Mammogram (40+ years, n=333)



### Reasons for NOT Planning Mammogram (40+ years, n=363)



### Association between Selected Factors and BCS Practice

	Adjusted OR (95% CI)	P value
<b>Predictors of BSE Practice (n=1061)</b>		
Health Status (Wald $\chi^2(1)=6.87$ )		
Poor - Fair (reference)		
Good - Excellent	2.03 (1.20 – 3.44)	0.009*
Is there anything you can do to prevent cancer?		
No (reference)		
Yes	1.85 (1.29 – 2.67)	0.001*
Gender of HCP preference (Wald $\chi^2(1)=6.63$ )		
Male or no preference (reference)		
Female HCP	0.49 (0.29 – 0.85)	0.010*
Why do you think people get cancer – Cancer is hereditary?		
No (reference)		
Yes	1.68 (1.09 – 2.57)	0.018*
<b>Predictors of CBE Practice (n=1061)</b>		
Is there anything you can do to prevent cancer?		
No (reference)		
Yes	1.59 (1.21 – 2.10)	0.001*
Why do people get cancer – God's Punishment?		
No (reference)		
Yes	0.52 (0.33 – 0.83)	0.006*
Doctor is understandable		
No (reference)		
Yes	2.15 (1.55 – 2.98)	<0.001*
Gender of HCP preference (Wald $\chi^2(1)=6.46$ )		
Male or no preference (reference)		
Female HCP	0.56 (0.36 – 0.88)	0.011*
Why do you think people get cancer – Cancer is hereditary?		
No (reference)		
Yes	1.73 (1.27 – 2.36)	0.001*
<b>Predictors of Mammogram Practice (40+ years old, n=694)</b>		
Is there anything you can do to prevent cancer?		
No (reference)		
Yes	1.59 (1.11 – 2.26)	0.011*
Why do people get cancer – God's Punishment?		
No (reference)		
Yes	0.51 (0.28 – 0.95)	0.035*
Doctor is understandable		
No (reference)		
Yes	1.81 (1.18 – 2.79)	0.007
Why do you think people get cancer – Cancer is hereditary?		
No (reference)		
Yes	1.68 (1.14 – 2.48)	0.009*

## RESULTS (continued)

Participants were found to have:

- Low levels of awareness and participation rates in BCS (13.9% of participants reported performing a monthly BSE, 31.3% had a CBE within the last 1-2 years, and 26.9% of participants 40 years of age or older had a mammogram done within the last 1-2 years)
- Based on chi-square two-tailed testing, participants were significantly more likely to practice BCS if their doctor talked to them about breast cancer and was understandable, believed they were in good-excellent health and that cancer can be prevented. Participants were *less* likely to practice BCS if they reported they believe cancer is due to God's punishment or bad luck. Beliefs such as cancer is due to fate or unhealthy lifestyle were *not* significantly related to BCS practice.
- Based on multivariate logistic regression analysis, factors related to BCS practice indicate women with self-perceived good-excellent health, who believe cancer can be prevented and cancer is *not* due to God's punishment or bad luck were more likely to practice BCS.

Main reasons for *not* planning CBE, mammogram: fear, embarrassment.

## CONCLUSIONS

Consistent with Kleinman's explanatory model on health and disease, this study found several complex beliefs and attitudes towards BCS can influence Arab women's BCS practice in Qatar. Despite religious teachings that promote good health, the availability of health care services and gender-appropriate health care providers, BCS practices among Arabic speaking women remain low.

A variety of channels should be utilized to create culturally-appropriate intervention programs to raise awareness of breast cancer, BCS, and the benefits of early detection amongst Arabic-speaking women in Qatar. Awareness campaigns must be led by health care providers and emphasize that cancer can be prevented and treated if detected in its early stages. Ensuring sustainability requires culturally-appropriate, community support from respected elders, religious leaders and breast cancer survivors. Thus, we recommend collaboration between researchers, community leaders, health care professionals and policy makers to ensure the appropriateness and success of educational and outreach campaigns aimed at increasing screening uptake and reducing morbidity and mortality related to breast cancer among women in Qatar.

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