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Exploring Iranian Women's Perceptions Regarding Control and Prevention of Breast Cancer

Eileen Thomas

University of Colorado, eileen.thomas@americansentinel.edu

Socorro Escandón

University of New Mexico

Minoor Lamyian

Tarbiat Modares University, lamyianm@yahoo.com

Fazlolah Ahmadi

Tarbiat Modares University

Sam Mohammad Setoode

Khodadoost Hospital

See next page for additional authors

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Abstract

The purpose of this study was to explore Iranian women's perceptions, behaviors, and beliefs related to breast cancer screening, breast cancer, and follow up care. A qualitative descriptive inquiry with both individual and focus group interviews was conducted in Tehran with 31 Farsi-speaking women, age 35 to 65 years of age. A constant comparison method of analysis assisted the researchers in gaining an understanding of factors that influence Iranian women's perceptions regarding the control and prevention of breast cancer. Findings suggest that insufficient knowledge regarding breast cancer and breast cancer screening is a significant factor among this population. Breast cancer programs are needed in Iran that address women's religious beliefs and spiritual needs.

Keywords

Breast Cancer, Screening, Iranian Women, Qualitative Research, Constant Comparison Analysis

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Authors

Eileen Thomas, Socorro Escandón, Minoor Lamyian, Fazlolah Ahmadi, Sam Mohammad Setoode, and Shokoofe Golkho

Exploring Iranian Women's Perceptions Regarding Control and Prevention of Breast Cancer

Eileen Thomas

University of Colorado, Aurora, Colorado, USA

Socorro Escandón

University of New Mexico, Albuquerque, New Mexico, USA

Minoor Lamyian

Tarbiat Modares University, Tehran, Iran

Fazlolah Ahmadi

Tarbiat Modares University, Tehran, Iran

Sam Mohammad Setoode

Khodadoost Hospital, Shiraz, Iran

Shokoofe Golkho

AL.ZAHRA University, Tehran, Iran

The purpose of this study was to explore Iranian women's perceptions, behaviors, and beliefs related to breast cancer screening, breast cancer, and follow up care. A qualitative descriptive inquiry with both individual and focus group interviews was conducted in Tehran with 31 Farsi-speaking women, age 35 to 65 years of age. A constant comparison method of analysis assisted the researchers in gaining an understanding of factors that influence Iranian women's perceptions regarding the control and prevention of breast cancer. Findings suggest that insufficient knowledge regarding breast cancer and breast cancer screening is a significant factor among this population. Breast cancer programs are needed in Iran that address women's religious beliefs and spiritual needs. Key Words: Breast Cancer, Screening, Iranian Women, Qualitative Research, Constant Comparison Analysis.

Breast cancer is the most common type of cancer and the second leading cause of cancer-related death among women worldwide (American Cancer Society, 2005). Breast cancer survival rates are dependent on access to and utilization of early detection services. Despite lower breast cancer incident rates in ethnic minority women, the majority of breast cancer deaths will occur disproportionately among ethnic minority groups (Pickle, Feuer, & Edwards, 2001). According to the World Health Organization (WHO, 2005a, 2005b), the primary way to control breast cancer mortality is with early diagnosis and treatment. According to WHO, each year there is a 1-2% increase in the incidence of the disease worldwide and about half of these new cases occur in developing countries (International Agency for Research on Cancer, 2008; WHO, 2005a). Most

Iranians live in densely populated urban areas. The capital city of Iran is Tehran. The population of Tehran metropolitan area including the city and some of its suburbs and surrounding areas is approximately 12 million of which approximately 50% is female (Iranian Society of Travel Agents, 2007). Breast cancer in Iran remains the most common type of cancer among women, unfortunately there is only a regional cancer reporting system in this country. Currently there is no national database that accurately presents cancer data for Iranian women. In addition, there are multiple errors in the reporting of Iranian cancer data, which results in underreporting the number of breast cancer cases and deaths (Mousavi et al., 2007). Iranian experts report that the prevalence of this disease is elevated in Iran and breast cancer occurs 10 years younger in Iranian women than their European counterparts (Harirchi, Karbakhsh, Kashefi, & Momtahn, 2004). Experts believe the cause of higher mortality of the disease in Iran is delayed diagnosis and argue that mortality and breast cancer outcomes in developed countries depend on early diagnosis because the outcome of the disease is dependent on the stage of the cancer at diagnosis (Montazeri et al., 2008).

This study was conducted from 1383 to 1384 (Iranian/Persian/Jalali calendar) or from 2004 to 2005 (Gregorian calendar). The purpose of this qualitative descriptive study was to explore Iranian women's perceptions and beliefs related to breast cancer screening, breast cancer, and follow up care and to identify factors that explain Iranian women's behaviors related to breast cancer screening and treatment. The purpose of this article is to describe how these Iranian women viewed breast cancer prevention and control, categories identified in the parent study (Lamyian, Hydarnia, Ahmadi, Faghihzadeh, & Aguilar-Vafale, 2007).

Background

According to a study conducted by Montazeri, Ebrahimi, Mehrdad, Ansari, and Sajadian (2003), about 70% of Iranian women will die of breast cancer because of delayed diagnosis. During the last 30 years, several research studies have addressed women's mammography screening behaviors. However, individual or intrapersonal level perspectives of Iranian women in efforts to gain an understanding of Iranian women's perceptions regarding the importance of breast cancer screening have not been widely explored. This paper contributes to the literature by addressing the perceptions and beliefs regarding breast cancer prevention and control of 31 Iranian women living in the city of Tehran. The study was reviewed and approved by the Experimental Community of Tarbiat Modares University.

I (first author-Iran) was the principal investigator on this study and am currently an assistant professor in the department of Reproductive Health & Midwifery at the University of Tarbiat Modares. My research interest includes Iranian women's health behaviors, including women's breast cancer screening behaviors. During my clinical practice, I have seen many Iranian women die from breast cancer because of delayed diagnosis. I was interested in finding out why some Iranian women participate in breast cancer screening while many women in Iran avoid screening or delay seeking treatment once diagnosed with breast cancer. I established the Iranian Women's Health Society in 2007, a Non Governmental Organization (NGO) developed to encourage and educate women and health planners about early breast cancer detection.

For the past decade, my research (first author-United States) has been focused on racial and ethnic minority women's breast cancer screening beliefs and behaviors. I have completed five qualitative studies that focused on women's breast cancer screening behaviors. A few years ago, I had the opportunity to work with nurses who were doing similar research with women in South Korea. When Dr. Lamyian contacted me to help with data analysis for her study, I was excited and very interested because this would allow me the opportunity to see if there are similarities in women's breast cancer screening beliefs and behaviors from a global perspective (i.e., United States, South Korea, and Iran).

Because breast cancer remains the most common type of cancer and the second leading cause of cancer related death among women worldwide, I believe efforts should be made to address breast cancer screening from a global perspective. I have completed five qualitative research studies that were focused on ethnically diverse women's breast cancer screening behaviors and one qualitative study that explored men's knowledge of breast cancer in men. Dr. Escandón (second author-United States) worked with me to review and analyze the categories and themes and spent considerable time editing this article. Dr. Escandón has conducted research with racially and ethnically diverse populations and has extensive experience in qualitative research analysis. The remaining Iranian authors were involved in recruiting, data collection, and analysis of the Farsi transcripts.

Methodology

Design

I (first author-Iran) undertook an exploratory qualitative descriptive design because there is limited data regarding the breast cancer screening behaviors of women in Iran. Qualitative designs are particularly well-suited for an exploratory study for which previous literature is limited. A qualitative descriptive, exploratory approach was selected because this type of inquiry is appropriate when the goal of the research is to provide a summary or "picture" of the participants' perceptions, experiences, or beliefs pertaining to specific phenomena, particularly when the literature is limited regarding similar experiences among a specific population group. As stated earlier, the purpose of this study was to explore Iranian women's perceptions, behaviors, and beliefs related to breast cancer screening, breast cancer, and follow up care. Unfortunately, Iranian women's perceptions, behaviors, and beliefs related to breast cancer have not been widely explored.

Sample

The sample recruited to participate in individual and group interviews was comprised of 31 female citizens of Tehran, age 35 to 65 years old. This sample included 21 women at high risk for breast cancer and 10 women with a history of breast cancer. High risk was defined as having a family history of breast cancer. History of breast cancer was determined by women's self-report of breast cancer. Table 1 provides a demographic description of the study sample. All of the women spoke Farsi and the

interviews were conducted by the principal investigator whose native language is Farsi. So as not to create bias, participants, both lay and professionals, were recruited from agencies not affiliated with members of the research team place of employment. For example, I (first author-Iran) did not recruit or personally interview women at clinics affiliated with Tehran University.

Table 1. *Participant Demographic Characteristics*

Characteristic	% of women (n = 31)
<i>Age (years)</i>	
Mean	46.0
Median	40.4
<i>Marital status</i>	
Married	87.1
Single/divorced/widowed	12.9
<i>Education</i>	
Primary school	19.3
School diploma	64.5
Higher education	16.2
<i>Occupation</i>	
Does not work outside the home	45.2
Employed outside home	54.8
<i>Religion</i>	
Muslim	100.0

Data Collection

Data were obtained from Iranian women who participated in individual and focus group interviews. Additionally, individual interviews were held with health care professionals who clarified concepts and assisted the researcher in developing subsequent questions for participants. Interview settings included offices, clinics, private homes, and academic settings. Data collection and analysis took place over an eight-month period between 1383 and 1384 (Iranian/Persian/Jalali calendar) or between 2004 and 2005 (Gregorian calendar). Recruitment and interviews took place at locations approved by the Experimental Community of Tarbiat Modares University and Iranian government.

Participants were first asked demographic questions in order to obtain a description of the sample. Open-ended interview questions were used with the goal of allowing the participants to relate perceptions of their breast cancer diagnosis or their perceptions about breast cancer. Questions were designed to discover beliefs about Iranian women's perceived ability to control their disease and personal perceptions that might have an impact on the outcome of breast cancer among this population. Examples of questions included: 1) What are your views about the control and prevention of breast cancer? and, 2) What are your main concerns about women's health care in Iran? Each interview lasted between 30 to 180 minutes, with an average time of 90 minutes.

Immediately following the interview, the researcher recorded her personal observations and thoughts. Interviews were audio tape recorded, transcribed, checked for accuracy, and analyzed before the next interview was conducted. Once data from six interviews were analyzed, the researcher sought to substantiate the initial findings by conducting interviews with physicians, midwives, nurses, and other healthcare workers familiar with the phenomenon (Strauss & Corbin, 1998b). Data collection continued until the Iranian authors found that further interviews were not adding to the findings and that participants were repeating what was already found in the previous interviews (Eaves, 2001). Unlike procedures for destroying data in the United States, in accordance with the participants' cultural beliefs, it was necessary to revisit participants with the sole purpose of erasing the audio tape recordings in their presence.

Data Analysis

A constant comparison method of analysis, which is primarily used within the grounded theory method (Strauss & Corbin, 1998a) was employed in attempts to understand the hidden nature and uniqueness of health seeking behaviors of Iranian women (Streubert & Carpenter, 2003). This method of analysis involves continually comparing and organizing data in further probing efforts to clarify, substantiate and elaborate an experience or phenomenon (Patton, 2002). Using an open-ended approach encourages individuals to tell of their experiences thereby facilitating concepts and relationships in raw data to be discovered, organized, and compared. Findings from this study describe Iranian women's' perceptions concerning the barriers faced in breast cancer prevention and control.

Each transcript was reviewed line by line and coded using open coding techniques by members of the Iranian research team. As codes were identified during subsequent reviews, they were compared to the previous codes. The first stage of the analysis process was repeated several times to assure consistency and credibility of the data. This method of analysis maximizes the words and language of the participants and allows the researcher to develop and organize codes revealed from the data.

During the second stage of analysis, initial codes were reviewed and organized into groups or categories. Codes and categories were then compared between all interviews, from the first interview transcript to each subsequent interview transcript. This method of analysis connected developing categories with emerging relationships between categories. Constant comparison of the data was performed throughout the entire analysis process.

First, the Iranian authors reviewed and coded the transcripts in Farsi, then grouped the related codes to identify categories. The U.S. authors reviewed the codes (translated from Farsi to English by the principal investigator) and compared the codes to the categories identified by the Iranian authors. After numerous electronic messages (over 18 months) sent for clarification and elaboration between Eileen Thomas and Socorro Escandon (U.S. first authors) and Minoor Lamyian (Iranian first author), all the authors were in agreement with the six core categories that emerged from the data. See Table 2 for examples from the raw data, categories, and category definitions. The U.S. authors did not have access to the original codes, as the codes were developed from transcripts transcribed verbatim and written in Farsi from the original transcripts.

Table 2. *Examples-Raw Data, Categories, and Category Definitions*

Raw Data	Categories	Category Definition
<i>I'm not worried about breast cancer. I had the belief since childhood that touching my breasts will cause breast cancer and it scares me. ...denial regarding the severity of the disease.</i>	Lack of Knowledge	(Lack of) the ability to understand breast cancer risk factors and the need for follow-up care after being diagnosed with breast cancer.
<i>We ourselves must do something. We must build self confidence in ourselves ...have to take an active role...</i>	Personal Functioning	The interaction between taking personal action and self-responsibility for one's own health.
<i>Feel defeated because of weakness [in my body for having breast cancer] ...do not have time to participate. I have not time for myself.</i>	Lack of Motivation	Participant experiences and ideas regarding what they perceived as factors that contribute to taking an active or inactive role in their health and healthcare.
<i>Not enough information is available. Topics of health information for women are not appropriate. Information regarding breast self-examination is not useful.</i>	Availability of Information	Breast cancer information received from health care workers, the media, and written health information.
<i>Superficial information [is given] to women. [Doctors] don't tell us enough No advice and referrals.</i>	Communication	Health information provided by the healthcare system.
<i>[If] husband would support me, I would feel comfortable. ...not being able to get assistance from their spouse.</i>	Support	Personal, social and cultural support

Rigor

The collection and analysis of qualitative data is largely a subjective one, involving the researcher as a person who, like those studied, brings his or her own values and interpretations to the process (Salsali & Parvizi, 2003; Streubert & Carpenter, 2003). Therefore, emergent ideas were authenticated towards assuring that findings represented

the perspectives of the participants. Peer debriefing and member checks, which are common methods of establishing authenticity, were used. Peer debriefing involved a review of the transcripts and codes by a group of peer experts experienced in qualitative research methods. Peer experts, consisting of three nursing and health education specialists and three women from the community (who did not participate in the study) supported the rigor of the study by reading and discussing data to validate emergent categories and themes (Salsali & Parvizi; Streubert & Carpenter).

Constant comparison analysis enhanced and confirmed the interpretation of the data. Credibility was enhanced by continuous and prolonged engagement with the participants. Field notes helped to capture and document immediate insights and thoughts regarding the interview sessions, which helped to ensure credibility of the data collection, note variations in the data and in the interpretation process. Finally, participants were asked to review the interpretation of the data.

Findings

The participants shared experiences regarding specific barriers faced in breast cancer prevention and control in Iran. Categories identified were: 1). Lack of Knowledge, 2). Personal Functioning, 3). Lack of Motivation, 4). Availability of Information, 5). Communication, and 6). Support. These six categories formulated the core category of Breast Cancer Control Behavior within the conceptual Health-Oriented Thought Theory (Lamyian, Hydarnia, & Ahmadi, 2007).

Three major factors that affect women's behavior concerning breast cancer screening were identified: a). attitudes, beliefs, and feelings, b). social network experiences, and c). accessibility of services (Lamyian et al., 2007). Data from these six categories describes the barriers these women faced in dealing with their own breast cancer prevention and control experiences.

Core Category One: Lack of Knowledge

Lack of knowledge. Is defined as the ability to understand breast cancer risk factors and the need for follow up care after being diagnosed with breast cancer. Inaccurate perception of risk primarily related to a lack of knowledge that involved three areas of concern: refusal to comply with physician recommendations for follow up treatment, denial regarding severity of the disease, and not taking an active role in breast cancer screening or treatment recommendations. Twenty-six of the 31 participants had a lack of knowledge regarding breast cancer risk factors.

One participant with formal education stated: "We as Iranian women tend to ignore our health." This participant further explained that factors such as caring about others, preferring others to ourselves and believing that breast feeding protects women from breast cancer or no family history of breast cancer are reasons not to participate in breast cancer screening. For many of the participants, cultural issues and just not having routine checkups were the primary reasons given when asked why they did not participate in breast cancer screening. Another participant who happened to be a health care worker explained: "I am not worried about breast cancer at all because I do not think about it."

Concerning breast cancer screening, a young housewife reported “I do not pay attention to my breasts at all. I don’t know but I had the belief since my childhood that touching my breasts will cause breast cancer and it scares me.” Denying the possibility of developing breast cancer was a major factor, particularly among the educated women with no family history of breast cancer. One participant, a college graduate housewife reported: “I am not concerned about early diagnosis because breast cancer is not present in my family.”

Most women explained that they just do not have time to participate in screening or see their physician for follow up care. For example, a woman who happened to be an engineer stated: “I have no time for myself.” Another participant stated: “I think about it and I want to follow up, but I do not have time for it, I must think about my children first.”

Some women believe that screening and routine checkups are not necessary until you are older or unless you have pain. One woman said: “Usually when you get older, you must have your routine checkup, only when we have a pain or disorder do we think seriously.”

Core Category Two: Personal Functioning

Personal Functioning. Is defined as the interaction between taking personal action and self-responsibility for one’s own health. Nineteen (61%) of the participants mentioned lack of self-confidence and anxiety as factors or reasons for not participating in breast cancer screening or following up with treatment recommendations from their physician. Women explained that lack of confidence interfered with their decision-making and lack of self-efficacy leads to dysfunction or the perceived inability to take an active role in their health or health care decisions. The possibility of receiving chemotherapy, if diagnosed with breast cancer, was a major concern as well as the complications associated with chemotherapy. One participant with breast cancer stated: “Everything depends of your mood [emotional state], everyone can feel defeated because of weakness or fear but what are they waiting for? Who must help them? We ourselves must do something.” A 35 year old, recently married woman with breast cancer said: “People usually lose hope and think it is the end of the world, but I think mood [emotional state] and hope plays a key role, it depends on believing in ourselves.” Another participant, diagnosed with breast cancer at age 32 reported: “I don’t tell anyone about the illness because people will take pity on me.”

Participants disagreed about the relationship between health behaviors, positive self-image and empowerment. One woman explained: “Everyone who likes herself would care for her health, me for example, if I can keep myself healthy, I will maintain my value at home.” Another participant explained: “We must build self-confidence in ourselves. We must make decisions in all of our work, I mean we must know to what degree we accept ourselves and this will affect not only this disorder [breast cancer] but also our entire lives.”

Core Category Three: Lack of Motivation Related to Fear and Denial

Lack of motivation related to fear and denial. Is defined as participant experiences and ideas regarding what they perceive as factors that contribute to taking an active or inactive role in their health and healthcare. An inactive role was related to feelings of fear and anxiety, lack of motivation, and fatalism. An active role was related to positive personal beliefs, recognition of their behavior, and spirituality. Fear and anxiety were perceived as having different aspects and definitions described by the women after hearing the word “cancer” or hearing the diagnosis of “breast cancer.” Some of the women associated the word “cancer” with an untreatable illness or being a trouble for others. Other women were concerned with having the label of “cancer” in their family or social group and concerns of being a “cripple” was frightening to the women. The authors believe, that for these women, feelings of fear lead to feelings of hopelessness resulting from a lack of knowledge regarding breast cancer prevention and control. For example, one participant who had been diagnosed with breast cancer shared:

When they told me it is better to be screened for early diagnosis and control of the disease, to be honest, I was scared. I suggested that if they remove my breast I will be deformed. I will face problems all my life and my life will be destroyed, so I didn't have the surgery, I didn't want to know about the problems with my breasts.

Another participant reported, “I'm even scared of the name [cancer], so I didn't follow up so everybody can call me cancerous. Let it come and when it does, I will do my best.” Yet another participant, diagnosed with breast cancer at age 32 addressed the fear from a different perspective:

How doctors and other health care workers who publicly discuss the disease [breast cancer] must not be scary. They picture it [breast cancer and mastectomies] as monstrous. You know, some doctors do not tell us we have cancer, instead they say it's better to have a biopsy to find out if it is cancer and if the biopsy shows something, it is ok because cancer has a treatment. You see, treatment will give us a higher mortality and if there was fear, it will disappear.

One participant who was a health care worker stated: “...personally because I have a kidney problem, I don't pay much attention to my breasts, I didn't have any gynecologic problem at all and so I didn't go for a breast examination.”

Participants voiced feelings of fear in different situations and different contexts that a cancer diagnosis can cause labeling of a family, cultural group or a society as “cancerous.” Participants also expressed fear of being untreatable or fear of being a burden to others, fear of the word “cancer”, fear of being a cripple, and pseudo fear induced by doctors or other health care workers. For the women in this study, fear was identified as a major factor in avoiding breast cancer screening or follow up treatment. Lack of motivation related to health promotion and disease prevention and fear related to breast cancer and breast cancer treatment was expressed by 22 (70%) of the women. Low self-confidence and feelings of hopelessness related to believing they would not be able

to “fight the disease,” fear of the cancer spreading to other parts of the body, or being too busy with work both in and outside the home were reasons women shared for not participating in screening or not following up with a physician’s treatment plan and demonstrate underlying factors that contributed to these women’s lack of motivation.

Some women considered routine examinations as a way to decrease fear and explained: “Routine examinations in the long term will save time, lower health care costs and pain as well.” For these women, taking an active role in controlling breast cancer meant a new chance on life, and they recognized that an early diagnosis would result in “good feelings.” Physicians can play a major role in encouraging women to actively participate in their treatment regimen and decrease feelings of hopelessness and depression regarding their diagnosis by discussing breast cancer in positive rather than fatalistic terms. For example, one woman explained: “Your state of mind is a key factor. When they told me that I might have breast cancer, I asked myself, what if the worst happens. They will remove one of my breasts, like when you have a tooth removed. Then I relaxed and told myself, it’s going to be ok.”

Core Category Four: Availability of Information

Availability of Information. Is defined as breast cancer information received from health care workers, the media, and written health information. Successful treatment resulted in a long happy life for one participant who has now been cancer free for the past nine years. She stated: There is not enough education available for women to learn about breast cancer and the information that is available is not complete.” In addition, media and written health information about breast cancer is not available for Iranian women. Seventeen (55%) of the participants reported that useful information about breast cancer is not available in this society; that information regarding breast self-examination is not useful; and that the topics of health information for women are not appropriate. Women stated that the media, especially television and radio, need to address breast cancer control in a way that is appropriate for the population that needs to be addressed. Participants identified a lack of connecting religious laws with health and health care and the limited amount of literature available related to health care issues do not stress the importance of screenings for women. These women believe the media’s responsibility and duty is to provide adequate health information for half of the population (women) in their society. One participant stated: “We have a day as Woman’s Day in our country but there is not enough work dedicated to health care for women.” Another stated: “I wish we could learn about these things in mosques or Quran reading meetings. We go to these meetings a lot and they tell us that we have a religious duty to maintain our health.”

Core Category Five: Communication

Communication. Is defined as health information provided by the health care system. Participants viewed lack of communication as a major factor regarding women’s participation in breast cancer screening or follow up treatment. Other factors that contribute to the high rate of mortality related to breast cancer in Iran were over crowded clinics and doctor offices, scheduled times to visit a physician, inaccurate diagnosis, providing superficial information, and loss of medical records. According to the

participants, physicians often do not encourage routine physical examinations and do not inform patients of their rights. When a diagnosis is questionable, physicians often provide inadequate care. One woman expressed her frustration with the clinic she visits by stating: "Clinics can play an important role in giving good information to people, but they don't tell us enough. When I visit the clinic and ask what to do, they say nothing; there is nothing you can do." Several women stated that physician advice and referrals would help motivate women to participate in their health care.

Core Category Six: Support

Support. Includes personal, social and cultural support. Participants had problems with not being able to get assistance from their spouse or support from their insurance company in regards to providing coverage for breast cancer screening. Job security was a major concern. Women expressed concerns about losing their jobs if they became sick or diagnosed with cancer. Culturally, in Iran, it is considered cultural misconduct to seek information about women illnesses and the health care system in Iran does not support routine physical examinations. One woman stated: "I don't know how my husband would react [if I was diagnosed with breast cancer]; if I knew he would support me, I would feel comfortable." Another participant stated: "If they gave out cards and charged an annual fee like they do for vaccinations, maybe everybody like me would know sooner. When I found out I had breast cancer, they had already removed my breast."

Lack of support was further expressed by a participant when she stated: "Because our country is an Islamic state, they cannot talk about women's illnesses. Now we have TV programs about sewing or skin beauty, but they don't speak much about women's illness or breast cancer so many families just have to suffer from these diseases."

Discussion

Participants were from only one city, Tehran, therefore a broader sample representing more Iranian women would more accurately describe the problem and the need to develop and implement health promotion programs for women in Iran. The women who participated in this study described candidly their personal beliefs and religious obligations about breast cancer and personal health. According to these women, some of their beliefs and perceptions are founded on religious and cultural beliefs pertaining to understanding the danger of breast cancer, the need for breast cancer screening, feelings of lack of empowerment and personal responsibility for their health. Findings from this study are consistent with similar findings documented in the literature. Drossaert, Boer, and Seydel (2003) report that women might consider themselves capable of following up with a screening test but at the same time consider actually doing it to be difficult. Ajzen (2002) notes that "self-efficacy (the ease or difficulty of performing the behavior) and controllability (the extent to which the performance is up to the actor)" (p. 665) comprises the overall concept of perceived behavioral control.

Findings from this study present a challenge in creating an individualized plan specific to Iranian women that involve focusing on women's personal, cultural, and religious beliefs. Iranian women's perceptions concerning the need to participate in breast cancer screening and follow up care is related to not only internal factors such as

women's self-confidence and personal perceptions about cancer but also to broader external factors related to the culture of this society in regards to women and women's health issues. Other external factors such as health information and social support were found to be directly related to cultural issues surrounding women's health issues and cancer in general. While it is important to focus on these external factors, if internal factors such as women's locus of control are not addressed, Iranian women's breast cancer screening and follow up breast cancer screening/treatment behaviors will not change.

Findings from this study suggest that Iranian women believe they should be personally responsible for improving their health, but lack the knowledge needed to take on this responsibility. In other cultures where women may have more knowledge pertaining to breast cancer and breast cancer screening they may or may not expect "expert practitioners" to assume responsibility for their well-being. The Iranian women who participated in this study expressed a desire and interest in assuming an active role in health promotion pertaining to breast cancer rather than relying on the role of the "expert practitioner." Cultural expectations and beliefs in Iran have induced a lack of knowledge regarding women's health related to breast cancer. Cultural beliefs, for these participants have contributed to the lack of knowledge about the dangers, screening, and treatment for breast cancer. Iranian healthcare professionals should consider addressing some of the cultural myths and attitudes of this society in order to change women's beliefs and perceptions about the danger of breast cancer. Encouraging public health officials and healthcare providers to promote education regarding women's health and developing new policies will build a picture in Iranian society that supports women's health.

Expressions and experiences of participants show three reflections/options on breast cancer control. First: "To control, I must not permit the cancer to spread." This demonstrates the central role of subjective (active) behavior for each person, because each person knows that this is her personal (not others') responsibility. Second: "For cutting a root (cancer) you must cut it by the right time." This statement demonstrates women's perception that perfect time plays a major role in cancer control. Third: "Each person would know her own abilities, so she wants the responsibility to be hers, and not that of others." These aspects of the problem pertaining to Iranian women's perceptions of cancer control can be summarized as recognition and responsibility, timing and a positive belief regarding the ability to deal with cancer occurrence.

The women in this study felt that control is a conscious behavior, which means being conscious about factors that affect behavior. These findings are similar to other studies, (Kwok, Cant, & Sullivan, 2005; Sobero, Giraldo, Strode, Rosa, & DeLuca 2003) that explored the understanding and decision making of women who were screened. Participants in this study understand the importance of health care and the feeling of empowerment; that self-concept and self worth builds the belief of each person. This feeling comes from being faithful or belief of connection to the center of beliefs and creation, feeling of nearness and as a result self-ability.

Contrary to this, Kwok et al., (2005) found that faith-oriented people had lower level of health and lower healthy behaviors compared to action-oriented people. Inter connection between feeling of empowerment and personal health care increases the aggregation of self-abilities and so increases self health care (Raffifar & Attarzadeh, 2005). Nielsen, Dyhr, Lauritzen, & Malterud (2004) reported the positive effect of these

two factors, in a study conducted in Denmark. Nielsen et al., (2004) reported that what people believe can produce a positive view of health care. Other studies (Tolma, Reininger, Evans, & Ureda 2006; Tolma, Reininger, Ureda & Evans 2003) involved women who followed up with preventative annual mammography, found that empowerment is the most powerful motivation for self care. These authors noted that an increase in personal empowerment increases adherence to preventative procedures and that the effect of empowerment is better than outside factors.

This study found that lack of personal understanding of risk and lack of personal sensitivity to increasing age, menopause, and gender understanding can affect severity and prognosis of disease, and that personal ignorance can lead to mortality from diseases. Participants in our study believe that empowerment and conscious effort depends on self responsibility and self belief, which is consistent with Williams, Clarke, and Savage (2002), who report that the women's view of family history (genetic) of breast cancer and understanding of dangers and prognosis of breast cancer are important factors in subjective (active) or objective (inactive) action in women. In order to help Iranian women personally or in a group setting to consciously make decisions that affect their health, the education provided needs to address their cultural and religious beliefs in order to change their view of preventive health care activities.

Education programs for women in Iran must be developed to address activities targeting screening, self-care, early detection, control, empowerment development, self-control, in a culturally sensitive flexible and dynamic way. Further research is needed to document results of any educational programs that are implemented. Data regarding preventative behaviors and detection need to be maintained in order to document the effectiveness of educational efforts. It is essential that researchers continue to evaluate women's experience and health promotion behaviors and to describe factors affecting Iranian women's behaviors pertaining to the control of breast cancer in this society.

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Author Note

Dr. Eileen Thomas is an assistant professor at the University of Colorado College of Nursing in Aurora, Colorado. She serves on the advisory board of the Colorado Department of Public Health Breast and Cervical Cancer Screening Program. For nearly a decade, Dr Thomas has focused her research on racial and ethnic women's breast cancer screening behaviors. Dr. Thomas developed the Women's Breast Conflict Scale, a tool designed to identify women least likely to participate in mammography screening. Correspondence regarding this article can be addressed to: Eileen Thomas, PhD, RN Assistant Professor; 13120 E. 19th Avenue, Mail Stop: C288-18, Aurora, CO 80045; Phone: 303-724-8540; Fax: 303-824-8560 and E-mail: eileen.thomas@ucdenver.edu

Dr. Socorro Escandón is an assistant professor at the College of Nursing, University of New Mexico, in Albuquerque, New Mexico. Dr Escandón has conducted research with racial and ethnically diverse populations and has extensive experience in qualitative research analysis. Dr Escandón developed a Mexican-American Intergenerational Caregiving Model and an Intergenerational Caregiver Familism Scale; a tool designed to measure the structure, attitude, and behaviors of Hispanic caregivers.

Dr. Minoor Lamyian is an assistant professor in the Department of Reproductive Health and Midwifery at the University of Tarbiat Modares in Tehran, Iran. Dr Lamyian's research interest includes Iranian women's health behaviors, including women's breast cancer screening behaviors. Dr Lamyian established the Iranian Women's Health Society in 2007, a Non Governmental Organization (NGO) developed to encourage and educate women and health planners about early breast cancer detection. Her contact information is: Minoor Lamyian, PhD, RN, Assistant Professor, Faculty of Medical Science, Dep. of Health Education, Tarbiat Modares University Al-Ahmad AVE, Tehran, Iran; Phone: [98] 2182883809; Fax: 8006564; PO BOX:14155-4838 and E-mail: lamyianm @ modares.ac.ir or lamyianm @ yahoo.com

Dr. Fazlolah Ahmadi is an associate professor in the Department of Nursing at Tarbiat Modares University in Tehran, Iran.

Sam Mohammad Setoode, MD is a practicing physician at Khodadoost Hospital in Shiraz, Iran.

Dr. Shokoofe Golkho is an assistant professor in the Women's Research Center at AL.ZAHRA University in Tehran, Iran.

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