RESEARCH ARTICLE

Breast Cancer Screening Barriers from the Womans Perspective: a Meta-synthesis

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Abstract

   <u>Background</u>: The principal aim of health service providers in the field of breast cancer is to detect and treat lesions at an appropriate time. Therefore, identification of barriers to screening can be very helpful. The present study aimed to systematically review the qualitative studies for extracting and reporting the barriers of screening for breast cancer from the womans perspective. <u>Materials and Methods</u>: In this systematic review; Pubmed, Google Scholar, Ovid Scopus, Cochrane Library, Iranmedex, and SID were searched using the keywords: screening barriers, cancer, qualitative studies, breast and their Persian equivalents, and the needed data were extracted and analyzed using an extraction table. To assess the quality of the studies, the Critical Appraisal Skills Programme (CASP) tool was used. <u>Results</u>: From 2,134 related articles that were found, 21 articles were eventually included in the study. The most important barriers from the point of view of 1,084 women were lack of knowledge, access barriers (financial, geographical, cultural), fear (of results and pain), performance of service providers, women's beliefs, procrastination of screening, embarrassment, long wait for getting an appointment, language problems, and previous negative experiences. Articles' assessment score was 68.9. <u>Conclusions</u>: Increasing women's knowledge, reducing the costs of screening services, cultural promotion for screening, presenting less painful methods, changing beliefs of health service providers, provision of privacy for giving service, decreasing the waiting time, and providing high quality services in a respectful manner can be effective ways to increase breast cancer screening.

Keywords: Breast cancer - screening - barriers - women's perspective - qualitative studies

Introduction

   Nowadays cancers are leading cause of death around the world (Aghbali et al., 2013) Breast cancer (BC) is one of them with increased incidence, high mortality rate, and high economic and social costs (Zainal et al., 2013). The BC stands for about 30% of cancer-caused deaths in High Income Countries Breast cancer is about 30% cause of cancer deaths in High Income Country. And about 29% of all cancer incidences is also reported to be 29% of all cancer incidences (Al-Dubai et al., 2012). In 2009 there were approximately 192,000 new diagnoses of BC and 47,000 deaths in the USA. BC ongoing to be a major public The BC is going to be a major public health problem in High Income Countries as well as the Low Income ones (Yusuf et al., 2013). Lifestyle behaviors such as lack of exercise, fatty diet, and breastfeeding habits have been mentioned as some of the risk factors of the BC (Berkiten et al., 2012). Previous studies demonstrated that the mortality rate of the BC can be reduced by screening and early detection. Mammography, Breast Self-Examination (BSE), and Clinical Breast Examination (CBE) are some of the methods for screening of the BC (Fouladi et al., 2013). Previous studies have identified a variety of barriers to BC screening, such as poor interactions with doctors and the screening procedure itself (such as pain and discomfort) (Al-Naggar 2012), Anxiety, fear of BC diagnosis, lack of awareness relating to BC (Khokher et al., 2011) and long geographical distance to the screening center were other barriers. Many of these studies were done using qualitative methods (Abdullah et al., 2013; Vithana et al., 2013). Qualitative research provides insights into emotional and experiential phenomena, towards determining the perspectives of those being studied (Sadeghi et al., 2014). In doing so, the qualitative studies generate valuable information to enforce clinical decision-making or to develop policies at a local level. Nonetheless, the generalizability of the findings of these

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studies is often limited by small sample sizes (Alizadeh, et al., 2013). In this regard the aim of this study was to conduct a systematic review of qualitative studies to explore the barriers of BC screening from women's perspective.

Materials and Methods

This study is a meta-synthesis that has been designed and conducted with the aim of systematically exploring qualitative studies for identifying the barriers to appropriate BC screening. The data have been collected in the first stage using these search keywords: "breast cancer", "breast cancer screening", "breast cancer detection", "breast cancer prognosis" and their Persian equivalents. Then in the next stage combining keywords: "barrier", "qualitative study", "qualitative" in the SID, Iranmedex, PubMed, Google Scholar, Ovid, Scopus, and Cochrane Library databases. No time limitations were considered for searching and selecting the articles. The inclusion criteria for the study were: conduction of the study as a qualitative study, analysis of barriers from women's perspective, and articles published in Persian and English. The exclusion criteria were: studies presented in seminars and conferences, educational studies, analysis of barriers from a point of view other than the women's, analysis of barriers from the point of view of women who had physical problems (such as multiple sclerosis, ambulatory impairments). For identification and coverage of more published articles, after searching the databases, some valid journals in this field also were hand searched. To increase confidence of identification and analysis of the articles, after selecting the main articles and deleting the articles with poor eligibility, the reference lists of the selected articles were also searched. Out of 2134 related articles found, after deletion of articles with poor relation to the study aims, eventually 21 thoroughly related articles were included and accurately studied (Figure 1). After accurately studying and extracting the needed data, the extracted data were first summarized in the extraction table and thematically analyzed. Excel 2007 software was used to draw graphs. The Endnote X5 software was used for organizing, title and abstract reviewing and also identification of duplicated articles (Sadeghi-Bazargani, Tabrizi et al., 2014).

In order to assess the quality of the selected articles, Critical Appraisal Skills Programme (CASP) assessment tool was used. This tool consists of 10 questions for exploring principles, hypotheses, and specificities of qualitative studies and systematically helps to understand and recognize issues reviewed in qualitative studies. The first two questions are for screening and can be readily answered. If the answer to both of the questions was "yes", assessment of the article continued. A four point scale was used for each criterion ranging from 1 to 4 which include: 1 (totally disagree), 2 (disagree), 3 (agree), 4 (totally agree). The given point demonstrates the success of the article in reaching the intended criterion (in the checklist).

Whenever we were confident that the intended criterion was completely reached, "totally agree" choice was selected.

Whenever we were sure that the intended criterion was not reached at all, or if there was no information about that criterion, the "totally disagree" choice was selected.

If we were doubtful whether or not the intended criterion is reached; for example because the presented information was vague, or because the intended criterion was reached only in some aspects, one of the "agree" or "disagree" choices had to be selected and the selection depended on the reviewers' decision about the amount of adherence to the required criterion. The minimum and maximum score of each article were 8 and 32. To make easier the comparison of the quality of the articles, the scores 8 to 16 were considered as "C", 17 to 24 as "B" and 25 to 32 as "A". (The results of articles' assessment is included in appendix 1)

Results

In this study from among 2134 found related articles, eventually 21 articles totally relevant to the aims of the study were included and reviewed thoroughly. The characteristics of the reviewed articles are brought in table 1. Most of the studies were conducted in USA (8 articles) and Iran (3 articles). In the 21 selected articles attitudes of 1084 women (approximately 52 participants on average for each study) about screening barriers were reviewed.

Using Thematic Analysis, the similar cases were combined and the barriers that extracted from the studies categorized and then organized in 10 groups which are shown in figure 1 according to their recurrence in the studies.
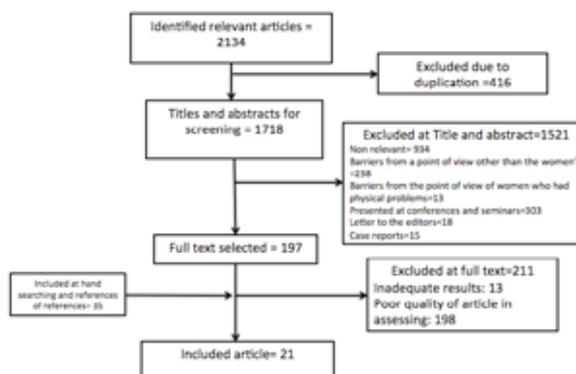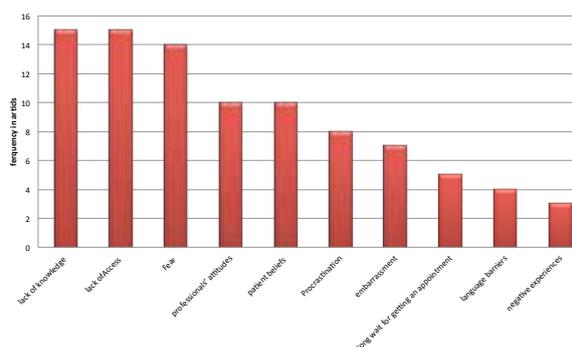

Figure 1. Literature Review and Retrieval Flow Diagram

Figure 2. Most Common Barriers to Breast Cancer Screening

Breast Cancer Screening Barriers from the Womans Perspective

Lack of knowledge

Lack of knowledge about the breast cancer screening, oblivion of the existence of screening services and the way to use them, wrong information and knowledge about screening and getting information from unaware people who caused patients' misleading, were the most important barriers relating to breast cancer screening in the field of women's knowledge.

Lack of access

Most problems related to access were: financial, geographic and transportation, cultural, and time-related (due to lack of time for attending screening) problems.

Fear

Fear of the result of screening to be positive, and fear of pain were the most common aspects of fear of breast cancer screening.

Professionals' attitude

In some studies women had indicated that the professionals and other health service providers have told them that "there is no need for screening". Also in some studies the participating women had mentioned that the health service providers do not inform them about screening and that most of them consider treatment as their first priority rather than prevention.

Patients' beliefs

Women's false beliefs were also of the most important barriers of screening. The most prominent of those beliefs were: false religious beliefs (fatalism), believing that screening has no efficacy, preferring local and conventional curers, lack of fear, believing that the disease would diffuse when touched, and cultural limitations.

Procrastination

In some studies, participants had mentioned procrastination due to carrier and life avocations, lack of fear, and low screening culture, as the breast cancer screening barriers.

Embarrassment

Most women (especially in Islamic and developing countries) had

Table 1. Result of Articles Evaluation

#	Screening code C** 1	2	Research Designing 1	S***	Sampling 1	2	3	S	Data collection 1	2	3	4	5	6	S	Reflexivity 1	2	S	Ethical Issue 1	2	3	S	Data Analysis 1	2	3	4	5	6	S	Findings 1	2	3	4	S	value 1	2	3	S	Total Score ****
1	+	+	+	3	+	+	+	4	+	+	+	+	-	+	3	+	-	3	+	+	-	3	+	+	+	+	+	+	4	+	-	+	+	3	+	+	+	4	27=A
2	+	+	+	3	+	+	-	2	+	+	+	+	-	-	3	+	-	3	-	+	+	3	+	+	+	-	+	+	3	+	-	+	+	3	+	+	+	2	23=B
3	+	+	-	2	+	+	+	4	+	+	+	-	+	-	3	-	-	1	+	+	+	4	+	+	-	-	-	-	2	+	-	-	+	3	+	-	+	3	23=B
4	+	-	+	3	+	-	+	3	+	-	-	+	+	+	3	+	+	4	+	+	+	4	-	+	+	+	+	+	3	+	-	+	+	3	-	+	+	3	26=A
5	+	-																																					-
6	+	+	+	2	+	+	-	2	+	+	+	+	+	-	3	-	-	1	-	+	+	3	+						1	+	-	-	+	2	-	-	+	2	16=C
7	+	+	+	3	+	+	-	3	+	+	+	-	+	-	2	-	-	1	-	+	-	2	-	+	-	-	-	-	1	+	+	-	+	2	-	+	+	2	16=C
8	+	+	+	4	+	+	+	4	+	+	+	+	+	-	3	+	-	3	+	+	+	4	+	+	+	+	+	+	4	+	-	-	+	3	+	+	-	3	28=A
9	+	+	+	4	+	+	-	3	+	+	+	+	+	-	3	+	-	3	+	+	+	4	+	-	+	+	+	-	3	+	-	-	+	2	+	-	+	2	24=B
10	+	+	+	3	+	+	+	4	+	+	+	+	+	-	3	-	+	3	-	+	+	3	+	+	+	+	+	+	3	+	-	+	+	3	+	+	+	3	25=A
11	+	+	+	4	+	+	-	3	+	+	+	+	+	+	4	+	-	3	+	+	+	4	+	+	+	+	+	+	3	+	+	+	+	4	+	+	+	3	28=A
12	+	+	+	3	+	+	-	3	+	+	+	-	+	-	3	+	-	3	+	+	-	3	-	+	-	+	-	-	2	+	+	+	+	4	+	+	+	4	25=A
13	+	+	+	3	+	+	-	2	+	+	+	+	+	-	3	+	-	3	-	+	+	3	+	+	+	+	+	+	3	+	-	-	+	3	+	+	+	4	24=B
14	-	+	+	3	+	+	+	4	+	+	+	+	+	+	4	+	-	3	-	+	+	3	+	+	+	+	+	+	4	+	+	-	+	3	+	+	+	4	30=A
15	-	+	-																																				-
16	+	+	+	3	+	+	-	2	+	+	+	+	+	-	3	-	-	1	-	+	-	1	+	-	-	-	-	-	1	+	-	-	+	2	-	-	-	1	15=C
17	+	+	+	4	+	+	+	3	+	+	+	+	+	+	4	+	+	4	+	+	+	4	+	+	+	+	+	+	3	+	+	+	+	4	+	+	+	3	29=A
18	+	-	+	3	+	-	+	4	+	+	+	+	+	-	3	-	+	1	+	+	-	2	+	+	+	+	-	-	3	+	-	-	+	3	+	-	+	4	23=B
19	-	+																																					-
20	+	+	+	2	-	+	+	2	+	+	+	+	+	-	3	-	-	1	+	+	-	2	+	+	-	-	-	-	2	+	-	+	+	2	+	-	-	2	16=C
21	+	+	+	3	+	+	-	3	+	+	+	-	+	+	3	+	-	2	+	+	+	4	+	-	-	-	-	-	1	+	-	+	-	3	-	+	-	2	21=B
Total			2.89					2.84							2.94			2.26				2.94							2.36					2.74				2.73	22=B

*reference in table1; ** Continue (If the answer to both questions was "yes", assessment of the article continued); *** Score each item; **** Total score (C= 8 to16, B= 17 to 24, A= 25 to 32)

Table 2. Details of Articles Included to Review

Reference	Aim	Sample (n) & Sampling	Data collection & Analysis	Barrier
Najib Kawar 2012	To explore beliefs about participating in breast cancer screening (BCS)	(N=11)-two groups of Jordanian women-snowballing technique	Focus group interviews- content analysis	Fear of finding out that they may have BC, long wait for getting an appointment, distance and cost, health care professionals did not encourage BCS, seek professional help for treatment not screening
Thomas et al. 2005	Describe some of the factors that act as barriers to effective uptake of breast and cervical cancer screening services	(N=135)- Black minority ethnic (BME) groups living in Brent and Harrow in the UK.	Focus group, telephone interviews- Content analysis	Language problems; poor health education; cultural values and beliefs; misconceptions about perceived risk; lack of knowledge about services; lack of local access to services; and poor attitudes of GPs.
Kaltsa et al. 2012	Identify the factors that influence mammography screening behavior in a sample of Greek Women.	(N= 33)- Individuals who were members of six women's associations- purposive sample	Semi-structured interview	Fear of finding out that they may have BC
Friedman et al. 2012, USA	Understand why some women who are obese undergo cancer Screening	(N=51) Women who were between 40 and 74 years old and moderately to Severely obese. purposively sampled	semi-structured interviews, focus groups- grounded theory approach	General Population barrier, = fear, modesty, competing demands, and low perceived risk. Weight-related barriers= insensitive comments about weight, and equipment and gowns that could not accommodate them.
Ashing-giwa et al. 2004, USA	Describes the cancer experiences of African American, Latina, Asian and Caucasian women.	(N=122) 102breast cancer survivors,20 health professionals -convenience sample	semi-structured interviews, focus groups-	Lack of knowledge about breast cancer; medical care issues such as insurance, cost and amount of time spent with physician; cultural sensitivity of providers, language barriers, and cultural factors related to beliefs about illness, gender role and family obligations (e.g. self-sacrifice).
Wu et al. 2012; USA	Explore perceptions, knowledge, attitudes, beliefs, and practices of Asian Indian women living in the US in relation to breast cancer and breast cancer screening	(N=11) AI women between the ages of 42 and 71 years, who lived in the Midwestern U.S- convenience sample	focus groups- constant comparison techniques	Negative experiences, lack of Access to screening, and inadequate knowledge about breast cancer screening.
Krombein and De Villiers 2006	Evaluate the knowledge, attitudes, and actual screening practices regarding breast cancer among women	(N=9) women in the Bonteheuwel township in the Western Cape- purposive sampling.	focus group	Fear of diagnosis, Insufficient knowledge, Feeling personally invulnerable, Time constraints, Embarrassment or discomfort associated with requesting-not receiving-a CBE from the doctor, especially when attending for an unrelated problem, cost of a private doctor
Allen et al. 2008; USA	Explore factors that women feel facilitate or hinder their receipt of diagnostic services following an abnormal screening Mammogram.	(N= 64) low-income, ethnically diverse women aged 40 or over who had a recent abnormal mammogram- purposive sampling	Interviews-immersion/crystallization	Dissatisfaction with communication of results; perceived disrespect on the part of providers and clinic staff; logistical barriers to access of diagnostic services; anxiety and fear about a possible cancer diagnosis; and a lack of information about breast cancer screening and symptoms.
Bober et al. 2007; USA	Explore health perceptions, screening behaviors, and barriers of young female HD survivors	(N=22) female HD survivors, ages 21-40, treated with chest irradiation at least 5 years earlier.	Focus group and individual in depth interview- content analyses	Fear of finding cancer, Desire not to think about illness, Primary care physician says it is unnecessary, Insurance billing errors
Miller et al. 2007; USA	Evaluate challenges to accessing and providing breast and cervical cancer screening for women with mental illness.	(N=67) women in a community primary care setting (16), women with mental illness(16), primary care providers(9), mental health providers(26)- convenience samples	Focus group and in depth interview-	Systems barriers: transportation problems, long wait-times for MMG appointments, and short PCP visits patient barriers; beliefs about the dangers of MMG screening, the shame or embarrassment associated with the test, fears of an adverse finding
Farooqui et al. 2013; Malaysia	Examine cancer patients' perceptions of cancer screening and early diagnosis.	(N=20), different types and stages of cancer from the three major ethnic groups (Malay, Chinese and Indian)	semi-structured interviews- thematic content analysis	Lack of information, language barrier, Financial constraint, poor level of perceived susceptibility to cancer, fatalistic beliefs

Table 2 (continued). Details of Articles Included to Review

Kissal and Beser 2011; Turkey	Explore experiences of BSE, CBE and undergoing mammography and perceived barriers	(N=46) Turkish women's aged 60-75 years -Purpose sampling	Focus group interviews- content analysis.	Insufficient knowledge, fear, neglect/postponement, embarrassment/religious beliefs, inability to make an appointment, lack of a physician's recommendation and health professionals' attitudes.
Kawar,2013; US	Investigate barriers to BCS	(N=107) Jordanian and Palestinian immigrant women- snowball sampling technique	Interviews-thematically analyzed	Embarrassment, Family relationships, Fatalism, Traditional healers Consultation, Citizenship issues, Language, Affordability, Nonparticipation in health screening, Stigmatization of cancer, Fear of breast cancer, Ignorance, Availability, Political situation
Pons-Vigue et al. 2012; Spain	Explore concept of prevention and identifies the knowledge, perceived benefits and barriers, among women from different cultural backgrounds and socioeconomic levels	(N=68) women who were either native (Spanish) or immigrants from low income countries, aged 40 to 69 years. theoretical sample	Focus group and interview, Triangular groups, Pilot group	Aspects of the country of origin; inequalities by socioeconomic position of information, access and resources, Cultural issues that mean health is not a priority, Value-Role given to health and disease Demographic socio-economic aspects; Low social class, Low educational level, Lack of available time, Low family and social support Aspects of the health system; No knowledge of the health system and how to use it, Perceptions, attitudes and mistrust of health services, Bad previous experiences with the health system and health professionals Aspects of the early detection of BC; No knowledge of the disease, its importance and severity, Not knowing what causes the disease: random causes, will of God, etc., No knowledge of the possibility of early detection and cure, Lack of culture of prevention, Fear of the result of mammography, Shame,
Puschel and Thompson 2011; Chile	1) Understand why women did not comply with, mammography screening; and 2) encourage women to obtain mammography screening. In this paper, we describe the two processes	(N=48) women 50-70 years old who have had different experiences with screening practices and diagnosis of breast cancer.	focus groups, grounded theory model	Lack of practical information such as where the women could go to receive a mammogram and a high level of bureaucracy and mistreatment
Bener and et al., 2002; United Arab Emirates	Understand perceptions, knowledge, attitudes, and beliefs about breast cancer and its screening	(N=41) United Arab Emirates women, aged 25–45 years	focus group	Fear, lack of knowledge about cancer and the screening program, fear, embarrassment, mistrust of health care and belief in predestination.
Keshavarz et al. 2011, Iran	Demonstrate effective factors on breast and cervical cancer screening tests (BCCST of female workers	(N=70) female workers aged 20-45 years old. Purpose sampling	focus group-Content analysis	Individual barrier: Lack of knowledge, Fatigue, Depression, Shyness and fear of examinations, Fear of diagnosis of cancer Time barriers: Long working hours, Working-leave limitations Financial barriers: Expensive private BCCS services, Diagnostic examination charges Service barriers: Availability of screening centers, Low quality public BCCS services, Non attention to clients' dignity and privacy in public BCCS services, Environmental barriers: Considering low priority to women's cancer in the community, limited information dissemination in the community
Fernandez and et al 2005; USA	Identify factors influencing regular breast cancer screening among African American and Hispanic women.	(N=58) Women who had received a repeat mammogram within the past year (considered adherent) and those who were overdue for a repeat mammogram (considered no adherent)	Focus groups and in-depth personal interviews	Accessibility, Cost and Insurance, Time/Conflicting Priorities, Cues to Action, Health Care Provider Recommendation, Faith in God, Fear of mastectomy, Pain during mammography, Mammograms are embarrassing, Procrastination
Lamyian and et al . 2007; Iran	Explore factors that women feel facilitate or hinder screening foe early detection of breast cancer	(N=31) Iranian women- Purpose sampling and theoretical	Interviews-constant comparative method	Procrastination, Fear, low self-efficacy, fatalism, misinformation, infective health communication, competing priorities

Table 3. Critical Appraisal Skills Programme (CASP)

Screening Questions		
1. Was there a clear statement of the aims of the research? HINTS: What was the research trying to find out?; Why is it important?; What is its relevance?	Yes ☐	No ☐
2. Is a qualitative methodology appropriate? HINT: Does the research seek to interpret or illuminate the actions and/or subjective experiences of research participants?	Yes ☐	No ☐
Detailed Questions:		
Appropriate research design		
3. Was the research design appropriate to address the aims of the research? 3.1 Has the researcher justified the research design? (eg have they discussed how they decided which methods to use)	Write comments here	
Sampling		
4. Was the recruitment strategy appropriate to the aims of the research? Has the researcher explained how the participants were selected? 4.1 Have they explained why the participants they selected were the most appropriate to provide access to the type of knowledge sought by the study? 4.2 Are there any discussions around recruitment? (eg why some people chose not to take part)		
Data collection		
5. Were the data collected in a way that addressed the research issue? 5.1 Was the setting for data collection justified? 5.2 Is it clear how data were collected? eg: focus group, semi-structured interview etc 5.3 Has the researcher justified the methods chosen? 5.4 Has the researcher made the methods explicit (eg for interview method, is there an indication of how interviews were conducted, or if they used a topic guide?) 5.5 Is the form of data clear (eg tape recordings, video material, notes etc) 5.6 Has the researcher discussed saturation of data?	Write comments here	
Reflexivity (research partnership relations/recognition of researcher bias)		
6. Has the relationship between researcher and participants been adequately considered? Is it clear: 6.1 If the researcher critically examined their own role, potential bias and influence during: -formulation of research questions -data collection including: sample recruitment, choice of location 6.2 How the researcher responded to events during the study and whether they considered the implications of any changes in the research design?	Write comments here	
Ethical Issues		
7 Have ethical issues been taken into consideration? 7.1 Are there sufficient details of how the research was explained to participants for the reader to assess whether ethical standards were maintained? 7.2 Has the researcher discussed issues raised by the study (eg issues around informed consent or confidentiality or how they have handled the effects of the study on the participants during and after the study?) 7.3 Has approval been sought from the ethics committee?	Write comments here	
Data Analysis		
8 Was the data analysis sufficiently rigorous? 8.1 Is there an in-depth description of the analysis process? 8.2 If thematic analysis is used, is it clear how the categories/themes were derived from the data? 8.3 Does the researcher explain how the data presented was selected from the original sample to demonstrate the analysis process? 8.4 Is there sufficient data presented to support the findings? 8.5 To what extent is contradictory data taken into account? 8.6 Did the researcher critically examine their own role, potential bias and influence during analysis and selection of data for presentation?	Write comments here	
Findings		
9. Is there a clear statement of findings? 9.1 Are they explicit? 9.2 Is there adequate discussion of the evidence both for and against the researchers' arguments? 9.3 Has the researcher discussed the credibility of their findings? 9.4 Are the findings discussed in relation to the original research questions	Write comments here	
Value of the research		
10. How valuable is the research? 10.1 Does the researcher discuss the contribution the study makes to existing knowledge or understanding? 10.2 Do they consider the findings, in relation to current practice or policy, or relevant research based literature? 10.3 Do they identify new areas where research is necessary? Have the researchers discussed whether or how the findings can be transferred to other populations or considered other ways the research may be used		

mentioned embarrassment as a reason for not participating in screening programs. This case was seen more frequently when the professional was male.

Long wait for getting an appointment

Long wait for an appointment was mentioned as an important reason for refusing or postponing participation in screening.

Language barriers

This problem was seen in women who lived abroad or in multilingual countries in which the health providers talked in a different language, because it causes the women not to be able to obtain the required service.

Negative experiences

Negative experiences from past screenings (due to pain, inappropriate services, bad behavior or any other reason) were mentioned as an screening barrier.

Purposive sampling with 8-time recurrence was the most frequent kind of sampling among the studies. In 17 studies the used approach in qualitative studies wasn't mentioned. Focus Group Discussion was mentioned in 9 papers, semi-structured interviews were mentioned in 6 papers, and in 6 studies both methods were used. In 6 studies content analysis method was used. Using two coders in 9 studies and respondent validity in 5 studies were the most frequently used methods to provide rigor and accuracy in results. In 15 studies justification was obtained from ethics committee and in 14 studies written consensuses were filled by the participants. Studies' assessment results showed that the assessment score for studies was 68.91 from 100. In 3 studies from 21 papers the assessment was not continued, because the answer to at least one screening question was "no". Maximally scoring parts were "data collection" and "ethical issues" and the minimum score related to "feedback".

Discussion

Identification of the screening barriers will have important role in prevention of disease progression. For identification of screening barriers from women's perspective, qualitative studies' methods could have the greatest efficacy; however, the results of these studies are not generalizable to the bigger society and other regions. So In this study with an approach of systematically reviewing the results of these studies in the field of identification of breast cancer screening barriers from the women's perspective, we tried to summarize and report the breast cancer screening barriers. The results showed that lack of knowledge, lack of access (financial, geographical and time-related), fear, beliefs of health service providers especially in the field of breast cancer, and beliefs of women themselves are the most important screening barriers from women's perspective.

Lack of knowledge and awareness, with a recurrence of 15 out of 21 studies was one of the most important breast cancer screening barriers from women's point of view that is in accordance with the results of previous studies in this field (Al-Naggar and Bobryshev 2012;

Beshir and Hanipah 2012; Guvenc et al., 2012). Therefore scheduling and implementation of effective interventions to increase awareness and knowledge of women especially in rural and deprived regions seems to be an important affair. For this goal, special methods and educational templates regarding environmental conditions and audiences must be used such as group education by national and regional media, group discussion sessions, publication of educational material in the form of booklets, pamphlets and posters, education by the health service providers especially in the premier level of the service provision, education by peer levels, and etc.

Lack of access was also one of the most important barriers to breast cancer screening from women's point of view which consists of financial, geographical, and cultural access problems pointed out by most of the studies (Noroozi and Tahmasebi 2011; Park et al., 2011; Roder et al., 2013). Therefore making practical attempts to reduce screening costs and to insure these services, to increase women's geographical access by expanding centers and clinics providing these services in far and deprived locations and to provide these services by the primary care providers, and also to increase cultural access by service being provided by female practitioners or other female service providers, providing a private place in which the clients could feel convenience and safety and also attempts to produce culture of using these services, are recommended.

According to the study results, fear of positive result of screening and fear of pain of some screening methods were among the most important barriers to screening. Results of previous studies also showed that fear of screening is a major breast cancer screening barrier (Bener et al., 2009; Ahangar et al., 2014). However, results of some studies indicate that sometimes fear can be both a barrier and an encouraging and facilitating factor for breast cancer screening (Abdollahzadeh et al., 2014). Therefore to eliminate women's fear and to cause them to participate in screening and to increase screening participation rate, warning women about sequences of late detection of breast cancer and using painless methods, can be effective ways.

From the women's perspective, health service providers in the field of breast cancer have a prominent role in participation of target group in screening. For many of them have reported that doctors and other service providers have told them that "screening is not needed" or that most of the professionals prefer treatment over prevention, so it seems that beliefs and actions of health providers has a great impact on women's participation in screening; this has been shown in previous studies also (Karadag et al., 2014). For this reason changing the attitude of the health providers seems to be necessary. To do this, changing payment methods from salary or other methods to capitation method can increase amount of screening, because with this method, health service providers will prioritize prevention over treatment because if the covered person becomes ill and gets referred to higher levels of healthcare system, and surgeries and other hospital cares, then the doctor will have to pay the costs and so his/her revenue will decrease.

Results showed that besides the beliefs of health

providers, some beliefs of women are also effective in participation in screening. Among these beliefs we can refer to false religious beliefs (fatalism) which is manifested by saying "I trust in god" or "whatever god wants", not believing in efficacy of screening and its role in prevention and treatment, confidence in local and conventional curers, believing that the disease will diffuse if tampered with and cultural limitations such as women's role, fear of husband, and sexual issues; mostly seen in developing countries and socially and culturally retarded societies. Results of some previous researches conducted in this field also indicate these barriers. Therefore endeavor to change false religious beliefs, development of prevention culture, cooperation with local and conventional curers, and also trying to eliminate cultural barriers to improve the cancer screening condition seem to be promising methods.

Regarding the results of the current study, the most important barriers besides the barriers already discussed are: procrastination, embarrassment, long wait for getting an appointment, language barriers, and previous negative experiences that are indicated in various studies (Feng et al., 2014; Floriano et al., 2014). To surmount these barriers we recommend: identification of high risk women and their follow-up to prevent procrastination, providing private service places and appropriate time for service provision to solve the embarrassment problem, management of health service providers having the same language with people, providing the women with translators or teaching the native languages to the service providers to eliminate the language barriers, and presentation of good quality services and appropriate behavior with the patients to prevent negative screening experiences.

The main limitation of the present study is the low amount of the results to the qualitative studies. Therefore it is recommended that another review study be conducted including other types of studies. Another limitation of the study was that our search was limited to only English and Persian languages which may result in bias.

In conclusion: the current study has summarized and reported the barriers of breast cancer screening, by systematically reviewing the qualitative studies. According to its results, increasing women's awareness, reducing screening service costs, increasing and developing screening service provision centers, promote culture of screening, presenting less painful screening methods, changing the beliefs of health service providers and the women, providing places with privacy for provision of services, reducing the waiting time for appointments, removing language barriers, and providing high quality services and appropriate behavior, are necessary. Results of this study could be used by managers and health service providers especially in the field of cancer, in planning and implementing interventions in order to improve the breast cancer screening conditions.

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