

A Literature Review of Factors Influencing Breast Cancer Screening in Asian Countries

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Abstract: Breast cancer is a major public health concern among Asian women. As breast cancer is often diagnosed in advanced stages in younger women, mortality rates are frequently higher compared with rates in developed nations. Due to the influence of various psychological, social, and cultural factors on breast cancer, women are reluctant to screen their breast cancer symptoms at the early stages when treatment is most expected to be successful. Screening options for Asian women are also limited because of demographic constraints and their knowledge of preventive health measures. This paper proceeds to review the existing literature on factors influencing breast cancer screening among Asian women. For the most part, health care professionals, medical doctors, gynecologists, and breast cancer advocates should find actual ways to overcome psychological barriers such as beliefs about pain, fear, embarrassment, and modesty of women through public awareness campaigns. Considerable attention should be also devoted to lower socioeconomic status women. In the same way, health care providers should explain to the women about the importance of breast cancer as a common disease and the existence of breast cancer screening programs in a small scale approach, as well as the benefits that participation in these programs can offer. This initiative is about enhancing health status among women and it is part of community development endeavor.

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Introduction

The burden of breast cancer continues to increase in Asian countries, although some strategies for breast cancer prevention and treatment are in place. Two systematic literature reviews on cancer prevention and breast cancer screening barriers (Parsa et al., 2006; Yoo, 2010), have shown wide disparity among breast cancer incidences in Asian countries. Breast cancer incidence rates increased significantly until the end of the 1990's in Asian women (Yoo et al., 2006). It was reported that, the percent of increase in breast cancer mortality for middle-aged women from the mid-80s to the mid-90s was the highest in Korea, followed by China, and Japan (Bray et al., 2004). In Asian countries, breast cancer is also the most frequently diagnosed cancer among women. According to the National Cancer Registries for Asian countries, the crude incidence rate of breast cancer varied from 21.3 per 100,000 population in Jordan, 21.4 in Iran, 24.1 in Turkey, 34.86 in Malaysia, 48 in Japan to 54 per 100,000 population in Singapore (Ferlay, 2001; Petro-Nustus, 2002; Harirchi, 2004; Secginli, 2006; Hisham, 2004).

Breast cancer arises in the younger age group of Asian women, 40 to 49 years-old compared to the other Western counterparts, where the peak prevalence is realized between 50 to 59 years. As has been described, in Singapore (Yip and Ng, 1996), Malaysia (Hisham and Yip, 2004), Iran (Harirchi et

al., 2004), Thailand (Thongsuksal, 2000), Pakistan (Usmani et al., 1996) and Arab women in Palestine (Nissan et al., 2004), more than half of new cases of breast cancer were diagnosed in women below the age of 50 years and in advanced stages III or IV.

There are many factors related to breast cancer prevention such as psychological, social, cultural, and structural and policy factors of breast cancer screening. For example, a study from Iran showed that the breast cancer incidence will grow up considerably in the future as a result of the national shortage of breast cancer screening programs which originates from incomplete registration and diagnosis of cancer patients. The westernized life style will also help this up-growing trend (Mousavi et al., 2009).

What is more important in breast cancer issue in Asian countries is that the breast cancer screening behaviours is characterized largely by the women's psychosocial attributes and demographic factors. It appears that many barriers to breast cancer screening are also related to culture, income, education, immigration status, and language barriers. As a result, breast cancer screening practices are few among Asian women.

Similarly, Asian immigrant women in America, especially those who have immigrated within the last 10 years, tend to have less cancer screening activity than native women. For instance, only 41% of Filipino and 25% of Korean immigrant women in Los Angeles

reported receipt of a mammogram in the previous two years. Arab Americans represent the largest immigrant group but only 58.1 percent of them reported to have mammogram every 1–2 years. But Iranian American showed a higher rate of mammography screening. A total of 81.1% of the women aged 40 and above reported having a mammogram less than two years ago, and 9.4% of the women more than two years ago (Shirazi, 2006).

On the whole, breast cancer screening behaviours among Asian women residing in their native country are low. To illustrate, mammography screening in Middle Eastern countries are low (Schwartz et al., 2008). Reviews of the literature have shown that only 25% of Turkish people reported having at least one mammogram. Fewer women about 10.3% in the United Arab Emirates had mammography, which was attributed to poor knowledge of breast cancer screening and infrequent offering of screening by health care workers (Schwartz et al., 2008).

Parsa (2006) also noted that previous studies have illustrated that only 3.8% in Malaysia (Hisham and Yip, 2004), 6% in Iran (Jarvandi et al., 2002), 7% in Jordan (Petro- Nustus, 2002), 12% in South Asia (Choudhry et al., 1998), and 16% in China (Fung et al., 1998) women reported performing breast self exam regularly, compared to Sweden where 70% of women aged 25-80 years examined their breasts on a regular basis (Persson et al., 1997). Furthermore, mammography was carried out only in 3.8% of Malaysian women; and there was a significant difference in screening rates between urban and rural areas (50.6% versus 42.3% respectively, $P < 0.05$) (Narimah, 1997).

Diversity of Asian population in terms of psychological, social, cultural, and religious ideas also cause challenges in the breast cancer screening rates. While randomized trials comparing mammography with no mammography screening found that women might benefit a 15% relative risk reduction in mortality from mammography (Gotzsche, 2006). It is believed that breast cancer screening options for women in Asian countries are required to adapt tailored strategies and factors influencing breast cancer screening methods should be considered in long-term care on reducing in the number of advanced stage tumors. To some extent, the cost-effectiveness of breast cancer screening activities is not successful without women's participation within those programs. Therefore, this paper presents the previous literature to look into the factors influencing breast cancer screening among Asian women.

Methodology

More than 100 articles published from the year of 1990 through 2011 were found and reviewed by

four databases namely, Pub Med, Medline, Science Direct, Google Scholar. But we summarized the findings from relevant published studies to identify factors influencing breast cancer screening in Asian countries. The inclusion criteria were “psychosocial factors”, “early detection” or “breast cancer screening” in combination with “mammography practices”, “clinical breast exam”, “breast self exam”, and “Asian women”. The factors influencing breast cancer screening were regarded as three main subjects such as psychosocial issues, socio demographic or individual factors and knowledge. On the other hand, the potential obstacles for breast cancer screening among Asian women are related to the attitudinal, logistic, and demographic determinants.

Psychosocial Factors

There are many psychosocial factors that explain the different aspects of health-related behaviors. Recently, the concentrate on the factors such as self efficacy, beliefs, social influence, and barriers, have been studied by a number of researchers to understand breast cancer screening behavior. Here are some illustrations of the factors which we have drawn recently on breast cancer early detection among Asian women.

Beliefs toward Breast Cancer and Early Detection

Several researchers have reported that there is a strong relationship between beliefs and health behaviors, such as mammography (Sheeran, 2002; Ajzen, 2004). In line with breast cancer screening via mammography, beliefs include knowing the time and place of doing mammogram and other information such as arranging for work leave and transportation are subjects that will increase the mammography usage among women (Gollwitzer, 1993; Rutter, 2006). Similarly, belief components such as touching of breasts by the technician, living longer, and X-ray exposure are effective in doing mammography (Motano, 1997).

The belief in the benefit of early detection among Asian such as Korean (Han et al., 2000) and Turkish women (Secginli et al., 2006) are positively associated with screening behaviors. Poss (2001) also stated that significant beliefs allow a better understanding of the cultural perspective affecting the people's behaviour. For instance, with regard to clinical breast exam in Tehran, although, more than half of the women preferred to be examined by a female physician, forty seven percent said that clinical breast exam by a male physician was not against their Islamic beliefs. Likewise, the results showed the vast majority of the women believed that breast self-exam was not against their religious beliefs (Montazeri et al., 2003). It is therefore, religious belief among Asian Muslim women is an important contributor to the breast cancer early detection. In contrast, a survey by

Ahmadian (2011) in Iran showed that adherent women to mammography had more positive beliefs in doing screening than non-adherent group. Focus groups revealed that most Iranian women are not interested in those practices that require their bodies be touched by physicians, so breast cancer screening practices would be neglected by women.

Sometimes beliefs can be altered by other factors. For example, in a study of Vietnamese American women, mostly from first generation immigrants, socio-demographic and acculturation factors showed a high correlation with breast cancer screening rather than attitudes and beliefs (McPhee, 1997). Up to point, Asian women always occupy a lower position which it can itself result in ignorance of their own needs including health care needs (Im, 2004; Benner, 2002; Nissian, 2004; Hisham; 2004).

Attitude and Practice of Breast Cancer Screening

Previous researchers showed that attitudes toward mammography is an important factor for low participation rate among Asian women (Im et al., 2002; Hisham and Yip, 2003; Rashidi et al., 2000). For instance, modesty was reported to be an inhibiting issue that influenced women's participation in mammography (Im et al., 2002). One reason for low participation rate in mammography among Asian women was their inability in perceiving the importance of breast cancer screening test (Parsa, 2006).

Within Iranian context, cultural and social characteristics are very important factors for participation in mammography. A focus group by Ahmadian (2011) in Iran showed that religious boundary and modesty prohibit the performance of breast cancer screening among women. Moreover, from their view of point, destiny is a strong reason for any disease such as breast cancer. Death is viewed as God's will by most Iranian women, especially among the traditional ones and this negatively affects their attitude. Attitudes toward mammography are also developed by women's beliefs about the expected outcomes resulting from the screening performance. The antecedent of attitude is about personal belief concerning the perception of what they should do regarding breast cancer which eventually prescribed their action to seek treatment or early detection. Consequently, this is portrayed in the difference between adherent women to mammography and non-adherent one might contribute to a sense of fatalism.

Previous studies revealed that women in Korea (Lee et al., 2000; Im et al., 2004), Malaysia (Hisham and Yip, 2003), Iran (Jarvandi et al., 2002), and Singapore (Straughn and Seow, 2000), did not notice the importance of early detection which influences their attitude toward breast cancer screening.

Self-efficacy to Perform Breast Cancer Detection Practices

In terms of prevention of disease, self-efficacy and barriers are the strongest predictors to explain people's behaviour to prevent diseases (Wallace, 2002). Bandura (1977) observed that low self-efficacy shows avoidance behaviour among people and in reverse, high self-efficacy tends to result in initiating behaviours and high efforts to overcome personal obstacles like fear. Self-efficacy is positively correlated with attendance at the breast screening exercise (Straughan and Seow, 2000).

Along with early detection, there must be adequate self-efficacy to challenge the psychosocial obstacles. It seems women who are aware of cancer detection are more likely to take part in the screening programs. A significant positive relationship has been found between breast self-exam and self-efficacy (Edgar et al., 1984; Brailey, 1986). However, according to Shirazi (2006) although most women seem to believe in the efficacy of breast self-exam, they are not so easy to do. In addition, women seem to find that it is embarrassing to perform breast self-exam and to look at their own body in the mirror. The majority also lacked confidence in performing breast self examination.

Self-efficacy was also investigated to be a significant variable for mammography screening (Savage, 1996; Lechner, 1997; Allen et al., 1998; Wallace, 2002). A survey by Ahmadian (2011) in Iran revealed that adherent group to mammography had more self-efficacy towards mammography uptake than the non-adherent group. On the contrary, self-efficacy had no significant relationship with participation in mammography in Kerman, Iran (Abbaszadeh, 2007). Beyond socio-demographic characteristics, self-confidence may influence the health status of women because they may believe in changing of their health behavior prior to every decision making. If women do not tend to undergo breast cancer screening, any attempt to recruit them for their participation in early cancer detection such as health care providers or doctors' advice will be fruitless.

A study by Kim et al., (2009) showed that Korean American women, who are not thinking about having a mammogram, had significantly lower self-efficacy for having a mammogram. Thus increasing women's self efficacy towards cancer detection is an important step to overcome psychological barriers to screening and may lead to changes in breast cancer prevention behaviors.

Social Influence on Breast Cancer Screening

Social influence is a significant contributor of behavioral intention in health issues (Bosompra, 2001; Smith, & Biddle, 1999). Regarding breast cancer

screening, Allen, Sorensen, Stoddard, Colditz, and Peterson (1998) have reported that social network influence was significantly associated with mammography intention in women.

Previous literature showed, if the social support network, including the employers, colleagues in the workplace, family, and friends, is being improved through appropriate health education campaign, then it is likely that more positive attitude toward preventive health behavior will be observed (Straughan and Seow, 2000; Abdullah and Leung, 2001; Juon et al., 2004). Likewise, supportive social influences along with self-efficacy were found to be strongly linked to mammography intention adjusting for prior mammography use (Allen et al., 1998). Instead, a study in Iran demonstrated that women adherent with mammography had lower social influence in comparison to non-adherent ones. The result was not anticipated because non-compliant women also admitted that they were influenced by their social networks such as friends, families and doctors regarding participation in mammography. Indeed, social influence in Iran is not the same as the other parts of the world (Ahmadian, 2011).

In some Asian countries, culturally norms inhibit the discussion of particular issues, such as cancer behavior. Similarly, Iranian women do not tend to talk about cancer disease, as they believe breast cancer affect their body and attractiveness. So, participating women could not benefit information which has been received in their social network. On the other hand, most women who have participated in mammography in the past two years have indicated that their mammography was diagnostic. It can be concluded that there is resistance against family or friends' advice regarding mammography use and as a result they were less influenced by social factors.

With regard to Muslim women, Rajaram and Rashidi (1999) pointed out that Muslim men inappropriately use Islam to justify their authority and dominance over their spouses which creates another barrier for breast cancer screening. Usually, an expectation of obedience to spouse who exerts control over family health decisions is in conflict with the expectation of remaining healthy in order to serve the needs of the family.

Further many studies have reported the positive influence of social support on women's psychological well-being through every stage of breast cancer (Hoskins et al., 1996; Lugton, 1997). Emotional support is offered by family members in the form of trust, concern, and listening and examples of instrumental support such as money, time, labour, and transportation. Peers provide appraisal support that increases the individual's self-esteem. Information

support includes advice, suggestions, information, and directives (Gotay and Wilson, 1998).

Previous literature also showed relationship of higher social support levels with higher income and higher education. Women who did not adhere to screening guidelines (for breast self exam or clinical breast exam) reported less social support (Katapodi et al., 2002). Influence of family, friends or someone with breast cancer is significant for participation in screening (McCance, 1996). Other researchers reported that lack of encouragement by family members and physicians leads to low participation in breast cancer screening (Han et al., 2000). Social support network, including employers, colleagues in the workplace, family, and friends, can be improved through appropriate health education campaign, then it is likely that a more positive attitude toward preventive health care will be provided (Straughan and Seow, 2000; Abdullah and Leung, 2000; Juon et al., 2004).

Barriers of Breast Cancer Screening

The most significant construct of the health belief model is the perceived barrier that determines behavior change (Janz & Becker, 1984). It involves individual's own estimation of the obstacles in his or her way in adopting a new behavior. Some of the barriers include difficulty with starting a new behavior or a new habit, fear of not being able to perform a desired behavior and embarrassment (Umeh & Roggen-Gibson, 2001).

Perceived barrier as a salient factor also affects on breast cancer screening. Taking no care of oneself, lack of information, and fear are the three most commonly cited barriers (Garbers et al., 2003). Barriers in the case of mammography could include fear of cancer, pain, cost, travel and time (Champion and Menon, 1997).

The socio-cultural barriers such as patient-physician communication difficulties, beliefs about cancer, and cancer prevention impact women's involvement in breast cancer screening programs. Previous studies revealed that physicians are less likely to allocate information with individuals differ from them by social class, ethnicity, gender, and age (Meleis et al., 1995; O' Malley et al., 1997). Health care professionals also have stereotypical ideas about Muslim women as being powerless, uneducated and subservient (Meleis et al., 1995). Rashidi and Rajaram (2000) argued that the unique complexities in the socio-cultural backgrounds of Asian Muslim immigrant women could also delay access to healthcare services. Physician communication problems exist due to religious, cultural and linguistic differences between older Asian Muslim women and their physicians.

Likewise, findings of many studies showed that women were fearful about cancer and death which make them reluctant to participate in breast cancer screening (Benner et al., 2002; Juon et al., 2004; Nissan et al., 2004). Researchers have proved that increased benefits and decreased barriers are linked to increased screening (Slenker and Grant, 1989; Champion 1992; Rakowski et al., 1992). Previous studies highlighted barriers to screening behavior including fear of results, fear of treatment and fear of the test itself. These studies include countries such as, Iran (Jarvandi et al., 2002), Malaysia (Hisham and Yip, 2003), United Arab Emirates (Bener et al., 2002) and Jordan (Petro-Nustas and Mikhail, 2002). Smith et al., (2006) also investigated that fatalism, fear, language barriers, and preference for traditional healers are barriers. Lack of time and costs also were the most frequently reported reasons for Chinese women from Hong Kong reluctance to participate in clinical breast examinations or mammography screenings (Chua, 2005).

Physical examination of body parts is a barrier to screening for Asian women. This barrier includes a woman's concern for maintaining her own expectations of modesty and attitudes of her male sexual partner. Although there is little information about the cancer screening behaviour of Muslim women, modesty has also been concerned in these communities (Rashidi and Rajaram, 2000). In Asian traditional culture, women embarrassment prevents them to show their breasts to others, including health care providers (Smith et al., 2006; Im et al., 2004; Juon et al., 2004). Asian women are unwilling to show their breasts to others, including to health care providers (Smith et al., 2006; Im et al., 2004; Juon et al., 2004). Sometimes unpleasant previous experiences stresses the modesty issues of the Korean, Chinese, and Iranian women further (Im et al., 2004; Juon et al., 2004; Abdulah, 2001). Male physicians also do the clinical exams in Asian countries which needs women expose their breasts to them. Thus, they feel ashamed and as a result they do not tend to undergo a stressful screening. A study by Ahmadian et al., (2011) identified barriers that may have an impact on women's adherence to mammography in Iran. The 400 women admitted embarrassment, lack of doctor or health care provider's advice regarding mammography, and worry about mammogram devices as the most selective barriers.

Besides, Asian immigrants are more disadvantaged and faced with numerous barriers in accessing health care than non-immigrant minority women. Cancer screening barriers include: cost, particularly for undocumented immigrants, lack of female physicians, women's lower status and men's gate keeping, transportation and language (Crane et

al., 1996). Latina, Chinese, and Vietnamese American women who were born outside the United States were significantly less likely to have mammography compared to white women (Hiatt, 1996). It seems to me that the lack of knowledge is a barrier to regular cancer screening for minority women related to Asian communities.

Researchers have demonstrated that increased benefits and decreased barriers are linked to increased screening (Champion, 1992; Rakowski et al., 1992; Slenker and Grant, 1989). However, previous literature on increasing breast self-examination practices in women revealed that the fear of breast cancer would encourage women to accept early detection, but there are some barriers with more effect on breast self-exam performance (Champion, 1993; Champion & Menon, 1997; Umeh & Rogan- Gibson, 2001). Similarly, a survey in Iran by Ahmadian (2011) showed that non-adherence with mammography was associated with high levels of distress among Iranian women which ends in being unable to overcome their problems on taking mammography. Although, the study highlighted that participating women are advantaged by socio-demographic characteristics. It is believed that respondents in the lower socioeconomic classes had more barriers to screening.

Some studies suggest that having a gynaecologist, as a regular physician, and physician referral are important predictors in mammography (Jarvandi et al., 2002; Im et al., 2004; Juon et al., 2004; Secginli et al., 2006). Also, the rate of referral by a physician was substantially higher among participating women in mammography. In some Asian countries such as Iran, Turkey, and Korea insurance for having mammography requires doctor's reference to ensure payments (Jarvandi et al., 2002; Juon et al., 2004; Secginli et al., 2006; Parsa, 2006).

For the most part, women who had been screened before cited fear, pain, or other attitudinal barriers more often, but women who had never had been screened cited cost or other logistical barriers. As shown in this review, women's socio-psychological aspects influence participation behaviour.

Demographic Determinants

Available information is limited about the health status and health practices within diverse cultural groups and socio-demographic factors, and there is poor understanding about the amount of these factors affecting health education (Hoare et al., 1994). It appears that many barriers to breast cancer screening are related to culture, income, education, immigration status, and language barriers.

Esterada, Trevino, & Ray, (1990) also noted that culture, education, income, and age, contribute to underuse of cancer screening methods among women population. For example, factors such as high

education, married status, employment were predictors of performance of breast self-exam (Madan et al., 2000). Previous studies showed that education and socioeconomic conditions are major factors for women delay in this trial exam and response to treatment in several cancers, including breast cancer (Blanchard, 2004). For example, less educated or recently immigrated women aged forty and older were less likely to have mammograms in the past two years (McPhee, 1997).

Besides, higher levels of education, income, health insurance, and access to health care reduce the feelings of powerlessness, denial, and turmoil (Saint-Germain and Longman, 1993). Several studies have also proposed that income and education level may be important variables associated with mammography use (Straughan and Seow, 2000; Juon et al., 2002; Finney et al., 2003). Blanchard (2004) argued that that education and socioeconomic conditions are major factors for women delay in the screening and response to treatment in several cancers, including breast cancer. Instead, Chua et al., (2005) reported that education level had no effect on the awareness. According to this study, full-time housewives were more likely to have heard of mammographic screening compared to non-housewives.

Other studies also hinted that age was associated with mammography (Abdulah and Leung, 2001; Petro-Nustas and Mikhail, 2002; Katapodi et al., 2004; Juon et al., 2004; Wu et al., 2006). To illustrate, 66% of Filipino American women with the average age of 65 years had never had a screening mammogram, and 42% had once in the past 12 months. Instead, age was not shown to be a significant reason in mammography practices upon a cross-sectional study which carried out among female teachers in Malaysia on breast cancer screening in 2006 (Parsa et al., 2008).

A baseline survey of participation in mammography showed that 21.9% of Korean-American women aged 40 and older had a mammogram in past 12 month (Sadler, 2001). On the contrary, age was not shown to be a significant reason in mammography practices upon a cross-sectional study which carried out among female teachers in Selangor in Malaysia on breast cancer screening in 2006 (Parsa et al., 2008). At the same time, Navon (1999) stresses the inadequacy of attributing each and every difference to cultural factors which are interrelated to the economic or educational disparities. Undoubtedly, socio-demographic factors make women modify their cultural beliefs.

A study by Yu et al., (2003) investigated the factors influencing breast cancer screening utilization among Chinese and Korean women, living in the United States, and examined similarities and

differences between the two sub-populations. The results showed that breast cancer screening among Asian women was significantly associated with their ability to speak English, and availability of health insurance. Even for immigrant communities, social discrimination is believed to account for much of the differences in cancer screening behavior (O'Malley et al., 1997). In addition, women with health insurance were more likely than other women to do screening (Juon et al., 2004; Secginli, 2006). Tessaro and Smith (1994) also found that family history as a significant risk factor.

Therefore, establishing a breast cancer screening program, particularly mammography among Asian women of low socio-economic status should be inaugurated. In a way, combining of other but less accurate screening modalities such as breast self-examination or physical examination would be important to seek earlier detection.

Knowledge of Breast Cancer and its Early Detection

Many Asian women may not know that they should obtain an intervallic breast cancer screening (Im et al., 2004). Misconception on breast cancer reasons and expectations from screening program is also a big issue among them. A study showed that misconception on breast cancer was highest among Pakistani women (Gilani et al., 2010). Several studies demonstrated that lower screening rate among Asian women is associated with their knowledge of preventive health measures (Benner et al., 2001, Petro- Nustus, 2002; Juon et al., 2004; Nissan, 2004; Chua, 2005; Parsa, 2006). Suarez et al., (1997) have also found that older women have less knowledge about the importance of mammography.

Studies in Korea (Joun et al., 2004) and Turkey (Secginli et al., 2006) showed knowledge of breast cancer screening guidelines was a major predictor of regular screening. Women who had knowledge of mammography guidelines were ten times more likely of having regular mammograms (Secginli et al., 2006). The results of some studies carried out in Korea (Lee et al., 2000; Im et al., 2004), Singapore (Straughn and Seow, 2000), Malaysia (Hisham and Yip, 2003), Iran (Jarvandi et al., 2002) showed that women had poor information on breast cancer and screening test.

Knowledge is one important influencing factor in mammography use and breasts self-exam (Jarvandi et al., 2002; Secginli et al., 2006; Han et al., 2000; Miller and Champion, 1996). Alternatively, Schulter (1982) has found that there is no correlation between breast cancer knowledge and screening behavior. As argued by Reddy and Alagna (1986), the relationship between knowledge and participation in mammography as a trial exam is not simple.

Electronic media and TV were noted as the most important sources of getting information on breast cancer in Iran, while health care providers were ranked last (Montazeri et al., 2008). Relatives and friends also were the most common sources for getting information among less educated women (Hatefnia et al., 2010). Regardless of low knowledge of breast cancer in Asian countries, only a few studies evaluated on the methods for increasing awareness by health care providers and local awareness campaigns (Ali and Baig, 2006; Dow et al., 2007; Adib et al., 2009; Tavafian et al., 2009; Moshfeghi and Mohammadbeigi, 2010; Keshtgar and Baum, 2010; Noroozi et al., 2010; Garg et al., 2010). This literature was already cited in the research by Asadzadeh et al., (2011). Definitely, women's knowledge regarding the breast cancer symptoms and screening behaviors is a significant factor to detection of less advanced stage and intensify women's participation in cancer preventive behaviors.

Conclusion

Previous studies conducted in Asian countries have proved that women's individual characteristics, psychosocial factors, and knowledge are imperative to breast cancer health seeking behavior. This literature review is an account of what has been published on the factors influencing breast cancer early detection by scholars and researchers. Even though, fundamental studies in breast cancer prevention and control within the above mentioned factors are still limited.

In order to improve women's participation in breast cancer prevention programs/ screenings, especially among the at-risk subgroup, the intervention strategies should tailor to their knowledge and socio-demographic factors. The strategies adopted should also take into account the women psychological and cultural matters in order to encourage lifelong mammography screening practice for Asian population which is based on theoretical interventions. Based on the socio-psychological theories and models, the interventions are able to change individuals and communities' attitudes towards health. On the same note, healthcare professionals working with Asian women should carefully address the misconceptions such as worry about mammogram devices and fatalism.

Active recruitment strategies and educational materials also have an important effect on women's adherence to breast cancer screening behavior. Women's awareness concerning breast self-examination and physical examination must be taken into account in screening protocols in younger women to further promote breast cancer screening. As breast cancer is a widespread disease in Asian countries, recommendations on breast cancer screening, and its

intervals must be made clear to women, and this is a primer role among healthcare professionals.

The Ministry of Health, health care organizations, national cancer councils, cancer programming and research institutes, and advocates in Asian countries would allocate funds to carry out cancer research in identified priority areas to help reduce the breast cancer disease. Future researchers should also focus on designing qualitative studies on barriers to screening like embarrassment, pain, and fear with asymptomatic women from different socioeconomic backgrounds to discover ways to overcome psychosocial, individual and structural barriers to screening.

Diversity of Asian population in terms of cultural and social limits the applicability of an exclusive breast cancer prevention program. Consequently, small scale approaches for breast cancer detection such as compulsory and free mammogram for low socioeconomic status women seem to be practical initiative to identify breast cancer and decrease in the number of late stage tumors among Asian women.

In sum, the aim of this paper is to highlight factors influencing breast cancer screening among Asian women. The above mentioned factors showed how psychosocial and individual determinants can be used to explain and predict individual health-promoting behavior. Many of the examples covered in this paper concern personal and community development strategies. It is through understanding the psychological and demographic barriers to screening, a more affirmative action through appropriate strategies can be developed to change the human's (women) attitudes, broaden their knowledge, and enhance their awareness about the disease. All this effort is about promoting health and well-being, which is parcel of community development endeavor.

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