

## Mammography among Iranian Women's: The Role of Social Support and General Self-Efficacy

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**Abstract:** Breast cancer is the most common type of cancer in Iranian women and the age of affliction with breast cancer in Iranian women is at least a decade lower than that of women in developed countries. Mammography is the effective method in reducing deaths because of cervical cancer. The aim of this study was to determine the social support and self-efficacy related to undergoing mammography. In this cross-sectional study, conducted among men's referred to health centers in Kermanshah County, the West of Iran, during 2016 were randomly selected to participate voluntarily in the study. Participants filled out a self-administered questionnaire including the background variables, standard social support scale and general self-efficacy questioner. Data were analyzed by SPSS Version 21 using bivariate correlations and logistic regression statistical tests. Participants' ages ranged from 30-48 years [95% CI: 35.01, 36.79]. Almost 12.1% (14/116) of the participants had already undergone mammography at least once. Furthermore, 7.8% of them reported positive family history of breast cancer. In addition, logistic regression analysis indicated educational level (OR = 1.526), positive family history of breast cancer (OR = 1.323), family support (OR = 1.814) and self-efficacy (OR = 1.260) were stronger predictors to undergoing mammography. Based on our result, it seems that creating appropriate and special supportive atmosphere in the family and also behavioral interventions for improvement of self-efficacy among women may be usefulness of the results in order to promotion undergoing mammography.

**Key words:** Family support, self-efficacy, mammography, participants, Iran

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### INTRODUCTION

Breast cancer is the most common type of cancer in women and predications indicate the increasing trend in instances of new cases of this disease. According to Iranian Institute of cancer breast, cancer is the most common type of cancer in Iranian women and the age of affliction with breast cancer in Iranian women is at least a decade lower than that of women in developed countries (Alavijeh *et al.*, 2015). Currently mammography is the best available diagnostic method for diagnosing masses in breast and can determine masses before they are tangible however, the public use of screening services is in a very low level (Alavijeh *et al.*, 2015) Breast cancer changes the

individual's course of life, creates many problems in physical, mental, social, economic and familial aspects of life and results in the increase of the feeling of dependence, low self-confidence, increased sense of vulnerability, pain, physical symptoms and disturbed thought in individuals with this disease (Courstens *et al.*, 1996). Breast cancer negatively impacts daily functions, social activities and mental peace and creates new roles (Helgeson *et al.*, 1996) and makes the patients more dependent on others less able to protect others and less able to participate in common social activities. All of these factors, in addition to long-term hospitalization, frequenting visiting of doctors, different treatments and their side effect and high costs of treatments result lower

life quality in patients (Shell and Kirs, 2001). Studies have shown that cancer occurs faster in individuals that do not have many facilitating factors such as flexibility, problems-solving ability, hope, courage, spiritual beliefs and social support (Baider *et al.*, 2003). Social support has been defined as the amount of love, companionship and attention received from family members, friends and other individuals and its role has been considered as a stress buffering process. And its psychological usefulness may be due to its effect on mental assessment of stress factors, selection of effective coping methods, feeling of self-esteem and personal skills (Rathus, 2007).

Social support is a multi-dimensional concept that has been defined in different ways. For example, it can be defined as a resource provided by others as a means for coping with stress or an exchange of resources (Schulz and Schwarzer, 2004). Some researchers have defined social support as the amount of enjoying affection, companionship, care, respect, attention and help received by the individual from other individuals or groups such as family members, friends and significant others (Sarafino, 1998). Studies have also indicated the significant relationship between higher levels of anxiety and lower levels of social support (Landman *et al.*, 2005).

Another variable suggested to be involved in prediction of behavior is self-efficacy. According to Bandura knowledge, skills and previous achievements in individuals are not appropriate predictors for future performance of individuals; it is human belief about his abilities impacts the performance (Bandura *et al.*, 1996; Bandura, 2007). Beliefs related to self-efficacy impact aims and wishes and form the outcomes of human behavior. Self-efficacy determines the ways in which explore obstacles. In facing problems, the individuals with low self-efficacy are convinced that their behaviors are useless and stop making efforts quickly. However, individuals with high self-efficacy overcome obstacles by improving self-management skills and perseverance and are resistant against problems (Bandura, 2004).

Considering the above points and the importance of social support and self-efficacy in behavior, the present study explores the relationship of general self-efficacy, perceived social support level and undergoing mammography in women visiting health centers in the city of Kermanshah.

## **MATERIALS AND METHODS**

This is a cross-sectional study that was conducted in the first quarter of 2016 on women aged over 30 who visited the health centers of Kermanshah for receiving services. For conducting the study, first, the eight

districts of Kermanshah City that have been determined by municipality were considered as strata and two health centers were randomly selected from each stratum. Then the subjects were selected from the women visiting the medical centers using simple random sampling and the designed questionnaire was given to them. It should be noted that the subjects were given explanations on the way the study was conducted, the aim and the confidentiality of the information and all of them entered the study willingly. This study has been approved by the Institutional Review Board at the Kermanshah University of Medical Sciences (KUMS.REC.1394.265).

Questionnaire included four sections that comprised of 29 questions: 6 questions for demographic factors, 12 questions about social support and 10 questions for general self-efficacy and one questions about undergoing mammography.

**Demographics:** The variables assessed in this study included: age (years), education level (under diploma, diploma and academic), economic status (very weak, weak, average, good very good), had insurance (Yes/No), job (housewife, working) and family history of breast cancer (Yes/No).

**Social support scale:** Social support was evaluated by 12 item standard scale. Each item was measured on an ordinal 5-point Likert-type scaling (1 = strongly disagree, 5 = strongly agree).

Multidimensional scale of perceived social support, including three scopes (family, friend and other significant). Examples of the items are: There is a special person who is around when I am in need. The reliability coefficient for the social support scale in our study was 0.79, suggesting that the internal consistency was adequate.

**General self-efficacy scale:** General self-efficacy scale is a ten-item scale that is designed to assess optimistic self-beliefs to cope with a variety of difficult demands in life. Each item was measured on an ordinal 5-point Likert-type scaling (1 = not at all true, 2 = hardly true, 3 = moderately true, 4 = exactly true). Examples of the items are: I can always manage to solve difficult problems if I try hard enough. The reliability coefficient for the social support scale in our study was 0.87, suggesting that the internal consistency was adequate (Luszczynska *et al.*, 2005).

**Undergoing mammography questionnaire:** To assess whether or not the participants had experimented with

undergoing mammography, we used one questions “have you ever undergoing mammography in lifelong” which the response category was yes or no.

**Statistical analysis:** Data were analyzed by SPSS Version 21 using appropriate statistical tests, including bivariate correlations and logistic regression at 95% significant level.

## RESULTS AND DISCUSSION

Participants’ ages ranged from 30-48 years [95% CI: 35.01, 36.79]. Regarding the education, 21.6% under diploma, 65.5% diploma and 12.9% academic education. Almost 12.1% (14/116) of the participants had already undergone mammography at least once. Based on our result, 10.3 % of participants had housewife. Furthermore, 7.8% of them reported positive family history of breast cancer. In addition, 83.6% of participants reported had insurance.

Table 1 shows bivariate correlations between the scopes of social support (family support, friend support and significant other support) and general self-efficacy. All of them were statistically significant at 0.01.

Logistic regression analysis (Backward Stepwise Wald method) showed that the final model resulted in the fourth step and, among background variables, educational level (OR = 1.526) and positive family history of breast cancer (OR = 1.323) were stronger predictors to mammography (Table 2).

Finally, regression analysis indicated family support (OR = 1.814) and self-efficacy (OR = 1.260) were stronger predictors to mammography (Table 3).

As the findings indicated, 12.1% of the women explored in this study reported undergoing mammography once. The frequency of undergoing mammography in Iranian women has been reported being 0-30%

(Fouladi *et al.*, 2013; Noroozi *et al.*, 2011; Shamsi *et al.*, 2014). For example, Noroozi pointed out that 14.3% of the Iranian women have a history of undergoing mammography at least once in their lifetime (Noroozi *et al.*, 2011). However, the findings of Boxwala indicated that 63.8% of American women had undergone mammography and Breast Self-Examination (BSE) (Boxwala *et al.*, 2010). Mammography is an effective method for early diagnosis of breast cancer that can detect about 73% of the cases of cancer. However, different studies have mentioned that different factors such as the lack of enough knowledge on mammography and its role in early diagnosis of breast cancer, the lack of feeling a need for undergoing mammography, the lack of recommendation by physicians, being time-consuming, the pain of doing and the cost of mammography as the factors impacting the lack of undergoing mammography (Noroozi *et al.*, 2011). Having a knowledge on the status of cancer is necessary for deigning and planning for prevention or control of cancer (Jarrahi *et al.*, 2013).

The findings of the present study can be of concern to the medical and health system in Iran and the reasons for low rate of undergoing mammography in Iranian women should be explored and applicable solutions should be provided for promotion of mammography in Iranian women.

As the findings indicate, among the background factors the history of an individual with breast cancer in the family and the level of education were predictors of undergoing mammography in the participant. It has been shown in several other studies that the level of education can impact the individual’s knowledge and increase preventive behaviors in individuals (Lykins *et al.*, 2008; Brunswick *et al.*, 2001; Ali *et al.*, 2008; Ma and Fleisher, 2003). The relationship between having an individual with cancer in the family and having more screening behaviors has also been pointed out in similar studies (Jalilian and Emdadi, 2011) and the findings of the present study too confirm this relationship. Considering the aforementioned relationship, it seems that improving the level of perceived vulnerability to diseases in the society can be useful in promotion of mammography.

The findings of the study indicated that there is a correlation between self-efficacy, family support, support of the friends and support of the society and the highest

Table 1: Correlation between different scopes of social support and general self-efficacy

Variables	X1	X2	X3
X1, family support	1		
X2, friend support	0.576**	1	
X3, significant other support	0.429**	0.636**	1
X4, self-efficacy	0.388**	0.315**	0.371****

Correlation is significant at the 0.01 level (2-tailed)

Table 2: Logistic regression analysis for background variables related to undergone mammography

Variables	B	SE	Wald	p-values	Odds ratio	95% CI for EXP(B)	
						Lower	Upper
Education	1.503	0.551	7.438	0.006	4.494	1.526	13.235
Positive family history of breast cancer	2.017	0.886	5.178	0.023	7.515	1.323	42.693
Constant	-5.345	1.297	16.994	0.000	0.005	-	-

Final model step 5<sup>a</sup>

Table 3: Logistic regression analysis for social support and general self-efficacy variables related to undergone mammography

Variables	B	SE	Wald	p-values	Odds ratio	95% CI for EXP(B)	
						Lower	Upper
<b>Step 1</b>							
Significant other	0.181	0.148	1.492	0.222	1.198	0.897	1.600
Family support	0.601	0.271	4.933	0.026	1.825	1.073	3.102
Friend support	0.056	0.142	0.153	0.696	1.057	0.800	1.397
Self-Efficacy	0.226	0.088	6.590	0.010	1.254	1.055	1.490
Constant	-20.796	6.117	11.560	0.001	.000		
<b>Step 2*</b>							
Significant other	0.190	0.145	1.720	0.190	1.209	0.910	1.606
Family support	0.608	0.268	5.133	0.023	1.837	1.085	3.109
Self-Efficacy	0.225	0.088	6.549	0.010	1.253	1.054	1.489
Constant	-20.254	5.861	11.940	0.001	0.000		
<b>Step 3*</b>							
Family support	0.596	0.258	5.315	0.021	1.814	1.093	3.010
Self-Efficacy	0.231	0.086	7.251	0.007	1.260	1.065	1.491
Constant	-17.756	5.041	12.407	0.000	0.000		

\*Variable (s) entered on step 1: significant other, family support and self-efficacy

level of correlation was between self-efficacy and family support. Also, the findings of the present study showed that family support and self-efficacy are stronger predictors in undergoing mammography in women explored in this study. The findings of several studies have shown the relationship between social support and having breast cancer screening behaviors and healthy behaviors (Kim *et al.*, 2010; Karami *et al.*, 2014; Canty-Mitchell and Zimet, 2000). The findings of the present study indicate that, in designing intervention in Iranian society, it seems that paying attention to the promotion of family support is more useful, compared with other types of support. Also, it should be said that individuals with weak self-efficacy beliefs avoid problems, instead of facing them and deal with issues in an unrealistic way (Bandura *et al.*, 1996). On the other hand, perceiving self-efficacy in previous successes is a stronger and more effective predictor of future successes (Abbasianfard *et al.*, 2010). The findings of the study by Mirzaei-Alavijeh too showed that self-efficacy is a strong predictor of undergoing mammography in women (Alavijeh *et al.*, 2015) and these findings are consistent with the findings of the present study.

### CONCLUSION

As the present study showed the positive and effective role of family support and self-efficacy in undergoing mammography, it seems that creating appropriate and special supportive atmosphere in the family and also behavioral interventions for improvement of self-efficacy in women can be effective in promotion of mammography in women.

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