Biomedical & Pharmacology Journal Vol. **7**(2), 611-618 (2014)

Women's Experiences and Knowledge of Breast Self-Examination: A Qualitative-Quantitative Study

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http://dx.doi.org/10.13005/bpj/532

(Received: August 09, 2014; accepted: October 31, 2014)

ABSTRACT

Breast cancer is the most common cancer among women worldwide. This study was aimed to explain the experiences and knowledge of women in Jiroft city in iran regarding breast self-examination. This study was conducted with a combined approach in the research. After analyzing the quantitative data from the questionnaire, the perspectives of women on breast self-examination were examined through interviews. The age range of the subjects was 20 years to 51 years, with a mean and standard deviation of (29.5±6.43). In the knowledge section, 95.8 percent failed to answer any of the questions, and 96% of subjects in this section emphasized that no educational program is provided by the health care team to perform breast self-examination. There was a significant relationship between knowledge and practice of breast self-examination (p=0.001). The following themes emerged in the results of a qualitative approach: 1) the feeling the need for breast self-examination; 2) attempt to play a role in the family; 3) lack of training programs on breast self-examination. Women's knowledge was found to be inadequate in relation to breast cancer and screening. Interventions to increase knowledge so as to achieve an adequate performance of breast self-examination, along with self-care and training programs, are tangibly needed on request.

Key words: Breast Cancer, Breast Self-examination, Qualitative Research.

INTRODUCTION

As a major public health problem worldwide, breast cancer is the most common cancer after skin cancer and the second leading cause of death. The high and increasing incidence of the disease and the difficulty in treating patients at advanced stages impose a heavy burden on the health system in each country. Therefore, to empower women for breast screening measures, these systems provide several mechanisms to make possible the discovery of the disease in its early stages[1]. The problem of screening can be an important factor to save mankind from a terrible nightmare called cancer. The availability of these methods, along with its outstanding results in reducing the severity and grading of cancer when they were discovered, indicate the importance of these tests[2]. In the last decade, the discovery of the breast screening measures has been able to make

a dramatic reduction in the prevalence and incidence of the cancer mortality and greatly increase the therapeutic progress[3]. Results of screening tests for gynecological and breast diseases are more substantial and more considerable than other cancer screening tests and have been shown to have greater efficacy. Breast examination performed by the person herself, or breast self-examination, is a screening method for case-finding in the early stages of breast cancer[4]. The failure to refer heath care centers in the early stages of this cancer is affected by certain factors that include the women's low level of knowledge of the realities of breast cancer, lack of awareness of the importance of the individual examination and how to apply, and/or neglect to do so, (BSE) Breast, social poverty, late onset of bothersome symptoms of breast cancer (such as skin ulceration) and careless examination by the physicians. Statistics indicate the broad success of breast screening tests such as breast self-examination[5-6-7]. In 2005, Fincham *et al* reported that breast cancer patients have highlighted issues such as the right screening when expressing their experiences on supportive care[8]. Phenomenological studies by Charalambous *et al* (2008), who examined the perspectives of cancer patients and explored their experiences in relation to the quality of nursing care in Cyprus, have emphasized training for proper care and screening[9]. Based on the findings and documentation of the world, several qualitative studies have been conducted on the experiences of women with breast cancer, which have varied from country to country, as the women's experiences and knowledge level of disease have varied across studies and populations. Their experiences of screening can also be different, and there are special perspectives on breast self-examination. Screening is one of the most important strategies to be recommended by nurses, physicians and families. However, the way women can properly enjoy and understand this strategy and the factors that affect the practice of breast self-examination make necessary and undeniable the use of experiences of studies performed to promote health behaviors; and the use of tapes and templates patterns can emphasize the efficacy of breast self-examination. By providing a clear illustration of the human experience, this research can be an instruction and guidance for our performance because it helps us understand the way we need to look at the world and our role in it, the type of service we offer and the manner we can serve humanity. Therefore, this study was performed to explain and understand the structure and nature of women's experiences of breast self-examination.

MATERIALS AND METHODS

This study was conducted with a combined approach in the research in Jiroft in 20014, for which the researchers made a two-part questionnaire to study with a quantitative approach. Data obtained by the questionnaire included demographic information and the level of knowledge about breast cancer (eg, signs and symptoms, risk factors, breast self-examination and clinical breast examination).

Degree of internal consistency of the questionnaire to determine the level of knowledge was calculated by conducting a pilot study on 40 samples, and Cronbach's alpha was determined to be 0 / = 86. From 240 study subjects who were assessed by the questionnaire, only 200 questionnaires were usable, which were analyzed using the software SPPSS. In a qualitative approach, this research is a phenomenological study. Qualitative research provides an opportunity to focus on answers to questions about social experience: how the experience is created? and how it gives meaning to human life. The underlying belief of the researchers in this qualitative study is reflected by the idea that there are several facts giving meaning to the lives of individuals under study[10]. In addition, phenomenology is a systematic and accurate method to extract and display the perceptions of human experience about various phenomena. In other words, the use of phenomenological method is one of the most important ways to identify experiences[11]. According to the objective of the study, participants were selected based on a purposive sampling method from women referring to health care centers of Jiroft, who had experienced a breast self-examination test, and had the following inclusion criteria for this study. Inclusion criteria for the women in this study were: 1) willing to communicate and express their experiences; 2) proper mental state to

communicate; 3) performing breast self-examination. A total of 19 women participated in this section.

Data were collected through semi-structured interviews, and the study participants completed the informed consent form after the confidentiality of personal information and the recorded interviews was emphasized. The firstly presented themes began with a few open questions in the interview. What is breast screening? What is breast self-examination? What problems are you facing when performing breast self-examination? From whom do you want to help if you encounter a suspect case at the time of performing? These questions encouraged participants to express their experiences.

Sometimes indirect questions were used, for example, "*what do you think of the concerns of women who perform breast self-examination?"* and *"what feelings do they have?*" "*for what purpose do they perform it?*" The duration of the interviews ranged from 20-35 minutes. The text of all the interviews, which was taken from audio tape, was transcribed, coded, and analyzed as soon as possible. The content analysis method was used in this study, in which the experiences of selected subjects were clearly examined and explained.

RESULTS

Quantitative Section

Based on the findings, minimum and maximum age of subjects was 20 and 51 years, respectively, with a mean and standard deviation of (29.5 ± 6.43). In addition, 98% of participants were married, and 41.7% had a high school education. 25.7% of the whole subjects experienced the breast self-examination, but only 9.1 percent monthly performed the self-examination on a regular basis. Almost 10% of family members and close relatives had a history of breast cancer, among which 1 percent were one of the immediate family members. 78% of subjects had not already heard anything about BSE. Participants had poor

Table 1: Comparison of knowledge level of women referring to health care centers in terms of personal characteristics and BSE

Variable	Variable grouping	Mean and standard deviation Knowledge level	P-value
Number of children	0	4.83±15.2	P=0.0013
	1	4±2.2	
	2 and more	4.45±2.16	
Job	Housekeeper	1.13±5.4	P=0.001
	Employed	6.43±0.77	
Family history of breast cancer	Yes	5.39±0.01	P=0.001
	No	4.13±0.12	
Location	Urban	4.13±0.18	0.761
	Rural	3.14±0.2	
Education	Illiterate	2.13±0.18	P=0.001
	Under diploma	3.13±1.24	
	Diploma	4.13±0.18	
	University education	6.13±1.38	
Age	18-25	3.18±1.18	P=0.06
	26-31	3.93±0.1	
	31 and above		
BSE	Does it	6.6±0.1	P=0.0013
	Does not do it	4.6±0.18	

knowledge of breast cancer and breast self-examination. 96% of subjects in this section emphasized that no educational program is provided by the health care team to perform breast self-examination, and only 4.2 percent gave the right answer. In other words, 95.8 percent failed to answer any of the questions in this section. In this section of the study, there was no statistical relationship between the level of knowledge and the three variables of age, location, and number of children (p=0.06). There was a significant relationship between the practice of BSE and the two variables of knowledge level and family history of the disease (p=0.0013). Working women had better knowledge than housewives, and there was a significant relationship between occupation and knowledge level of breast self-examination (p=0.001). In addition, people who were performing breast self-examination had better score of knowledge than others. There was a significant relationship between knowledge and practice of breast self-examination (p=0.001) (Table 1).

Qualitative Research Section

After content analysis, three themes and sub-themes were derived in the qualitative section (Table 1).

The three themes were: 1) feeling the need for breast self-examination; 2) attempt to play a role in the family; and 3) lack of training programs on breast self-examination

Feeling the Need for Breast Self-Examination

Early detection is associated with better prognosis of cancer, and the physician better performs definitive diagnostic procedures[12].

Prevention and Life Expectancy

Participant 3 stated, "*When health is lost … and we have to wait a lot to find a good doctor and have go to another city for treatment … I tried to do breast screening or breast self-examination to avoid creating problems. Using screening (BSE), we can create an increase in life expectancy for ourselves.*"

One of the participants was a 36-year-old woman with a college education, who said, "*Cancer is an experience full of suffering and pain for the patient, family, treatment team and community.*"

Deprivement of life and family also leads to envy and regret. Breast self-examination can help prevent disease as possible when it can be done properly with sufficient knowledge, but they have not provided enough knowledge.

Fear of Side-effects associated with Treatment and Physical Defects

Another participant stated, "*I don't like getting cancer, I don't like getting chemotherapy treatment, losing hair ...*" A 20-year-old said, "*If I get breast cancer, I will be immersed in suffering … I'll face the outcome of breast defect … I'll suffer physical defect. If a member of the body is lost, I won't know whats happening to me. If physical crisis happens to me, the people around look at me with pity ... we won't feel defect, non-existence and helpless if we soon notice breast cancer. We do not actually cause physical or psychological crisis among family members. I wish I had the knowledge to do so.* "

Attempt to Play a Role in the Family
Concerns about Children

In addition to her activities at home, every mother should have a series of emotional responses and affectionate behaviors with children and family

Table. 2: Themes extracted from the data collected from the study participants

Theme	Sub-theme
1 - Feeling the need for breast self-examination	Prevention and life expectancyFear of side-effects associated with treatment and physical defects
2- Attempt to play a role in the family	Concerns about childrenWillingness to participate in family affairsChange in mental image of the body
3- Lack of training programs on breast self-examination	Lack of training programsInadequate skill in the diagnosis of breast masses

members. The mother's performance plays an important role in shaping family activities, which can create deep emotional relationships in the family if it can have a good influence on family members. It can also affect the friends and social environment surrounding children; so it will provide a social environment with mental health for people.

Willingness to Participate in Family Affairs

A 36-year-old participant stated, "*If I get cancer, the whole family will be involved. All the family members will share in the experience of pain.*"

A 24-year-old participant said, "*I like to have a child and to be a good mother to the children. I don't like having cancer ...*"

Essentially, the participants cited the following cases to play role, "*If we get cancer, we want someone to take care of us, while we must take care of children and other family members, and even do responsibilities beyond our ability … the threat of situation arises in our marriage life.*"

Change in Mental Image of the Body

"*The disorder is caused in the family's daily life, and we do not have the fundamental role of the mother at all. The loss of a breast due to breast cancer means the loss of feminine identity ... people have weak perspective about … they have no knowledge in dealing with cancer patients. For example, if you say that someone has the disease, they say wretch! poor! … she will die at all, they say she is at the end of life, they consider her dead … when they realize that you are sick, their views will change completely. So with a little skill, I do breast self-examination to get rid of cancer*"

Lack of Training Programs on Breast Self-Examination

The main class consisted of two subclasses: lack of training programs, and inadequate skill in the diagnosis of breast masses.

The women participating in this study argue that the training of people to stay away from known risk factors and encourage healthy habits is the first measure for the cancer prevention and control. Breast screening is the best strategy for reducing cancer mortality.

Lack of Training Programs

One participant says, "*Extensive screening program for breast cancer is not doing well in Iran, and breast cancer screening and breast self-examination should be emphasized by training.*"

One participant stated, "*It is better to pay special attention to women's education and perform programs for the prevention of breast cancer.*"

A 40-year-old participant stated, "*There must be training ... but it is not done through radio and television ... I myself learned from my friend who is a nursing student and from books ...*"

Inadequate Skill in the Diagnosis of Breast Masses

Insufficient training data was obtained from relevant manuscripts, and participants liked to receive practical skills in training classes held in health centers by health teams. Women have little public information in the community.

One participant stated, "*Therapists have not enough time for training ... they don't give much importance to publicity … and if it is done, the community does not see it.*"

One participant stated, "*The lack of awareness of breast self-examination reduces participation in this important issue that should be taught to all women. In addition, too much time is not spent on training ... I can't distinguish a tumor from the mammary gland. Sometimes I went to the doctor. He said it is the mammary gland, don't worry. I wish they would learn the skills needed about mammary gland in the female breast? ...*"

A participant stated, "*I don't know whether or not it is good to do test on my breast?*"

Another participant said, "*I wish there was a class to show the self-examination and we were asked to know whether we have the necessary skills to implement it.*"

DISCUSSION

In both research approaches, the study participants pointed out the importance of education to the client so that patient education has been emphasized as a necessity by all the samples studied. Breast cancer is a disease that involves the patient, family and community, and wastes a lot of material and spiritual resources. The findings of this study emphasize the need to shift from terminal treatment to early diagnosis.

Prevention programs, along with proper training, are effective in improving women's health. Knowledge of of breast screening methods is effective in the program to prevent and control breast cancer.

As Nahcivan *et al* stated, it is necessary to educate women about early diagnosis and counsel them especially for planning supportive care [13]. Errico reported that since many women in developing countries have little information on breast cancer and its warning factors, they go to the hospital for treatment when it is too late[14]

Participants noted that inadequate training is a factor influencing breast screening. In a study consistent with our research, Ortega *et al* stated that training can be more and efficiently done by the health team[15]

In general, public attitudes about providing the necessary knowledge and eliminating training needs has changed in recent decades, and health care team members are expected to provide complete information to the patient about the disease, complications, treatment and care so that patients can be aware of all aspects of the disease and the treatment process and play a more active and more independent role in decisions relating to themselves[16].

Feeling the need for BSE was another finding of this study that provides the context for health promotion, and many relevant studies have been in parallel with our study. Gurm wrote, "*A decrease in family support can be seen in women with breast cancer. Thus, women need to develop health promotion in themeselves.*"[17] The women participating in this study expressed the fear of physical defect and community response to this defect. The loss of a breast means the loss of female identity, and disrupts their physical, mental, social and spiritual well-being[18]. Kennedy *et al* reported that many women wish to have normal life patterns in society, make an informed choice of activities, and learn experience from the community[19]. The women's experience of breast screening was cited in this study as the fear of side effects of breast cancer treatment and stressful situations after getting breast cancer. Breast cancer is a terrible and tragic event for many women[20]. Side effects of breast cancer treatment can affect the knowledge, confidence, self-worth and acceptance of the patient. Fear of death and impaired mental image are factors that disrupt the mental health of patients with breast cancer.

Participants in this study have emphasized the effort to play the role of a mother. The diagnosis of cancer can cause intense emotional reactions affecting their performance in the family. In addition, cancer can reduce the activity of the mother at home. Acute disease in an individual strongly affects the family. Thus, a crisis is caused in family by several factors such as change of role and loss of sense of control[21]. In addition, the flow of changes in life has been reported in cancer patients[22]. Some effects of breast cancer disease include concern for the family's future and reduced performance[23]. Valuable supports must be available to women so that they can do a more serious fight with the disease[24].

According to the research results, which is consistent with the study of Rapach and Chantler[26-25], inadequate skills in the diagnosis of breast masses have been reported by the participating women.

The results of this study showed the need to study women's education and the implementation of screening programs.

In many communities, the following factors have a positive impact on the screening program: the use of multimedia and printed learning materials along with training classes, the use of reminding and reinforcing factors, attention to design and implementation of self-learning programs (including

video tapes and audio tapes), and the use of computer and the Internet[27]

Lack of knowledge and motivation and lack of understanding of women cause them to neglect screening; and the findings of relevant studies actually indicate that breast cancer causes difficult consequences for family members as well as health and social care systems, which require special attention. Given the personal, economic and family problems related to breast cancer, which are followed by economic and social problems for society, it is imperative that the public to use targeted health programs on screening using breast self-examination. As the time is changing, the experiences, perspectives, views, and consequences of this problem seem to be changing constantly, and so diverse and dynamic planning is needed to prevent the occurrence of this event and its consequences.

CONCLUSIONS

Given the importance of prevention programs (especially self-care interventions for early diagnosis of the disease), the use of experiences of studies aimed to promote this behavior is an undeniable need for women at risk of breast cancer due to their high incidence and prevalence rates of breast cancer in human communities and our country.

ACKNOWLEDGMENTS

The researchers would like to express their sincere thanks to all participants in the study.

Funding/Support

This study was supported by a grant of a research project No. 139/93 Kerman University of Medical Sciences , Kerman , Iran

REFERENCES

1. Stevens RG1, Brainard GC, Blask DE, Lockley SW, Motta ME .Breast cancer and circadian disruption from electric lighting in the modern world. *CA Cancer J Clin.* **64**(3):207-18 (2014)
2. Landmark B, wahl M. Issues and innnovations in nursing practice, living with newly diagnosed breast cancer: a qualitative study. *J of Advanced Nursing*; **40**(1): 112 (2002).
3. Marc AF, Leon S. Clinical gynecologic endocrinology and infertility. 8th ed. Philadelphia, PA: Lippincott Williams and Wilkins; 2010.
4. Malak AT, Dicle A. Assessing the efficacy of a peer education model in teaching breast self-examination to university students. *Asian Pac J Cancer Prev,* **8**(4): 481-4 (2007).
5. Sadikoglu G1, Ozcakir A, Dogan F, Gokgoz S, Bilgel N. .Mammography utilization among Turkish women. *Asian Pac J Cancer Prev.* ; **11**(2):377-81 (2010).
6. Okobia, Bunker CH, Okonofua FE, Osime U. Knowledge, attitude and practice of Nigerian women towards breast cancer: A cross-sectional study. *J Surg oncol* ; **4**: 11-9 (2006).
7. Kasper DL. Harrison's principles of internal medicine. 16th ed. New York. Mc Graw hill. 2005
8. Fincham L, Copp G, Caldwell K, Jones L, Tookman A. Supportive care: Experiences of cancer patients. *Eur J Oncol Nurs*; **9**: 258–268 (2005).
9. Charalambous A, Papadopoulos R, Beadsmoore A. Listening to the voices of patients with cancer, their advocates and their nurses: A hermeneutic-phenomenological study of quality nursing care. *J Oncology Nurs* ; (5):436–442 (2008).
10. Speziale H , Carpenter D. Qualitative research in nursing: advancing the humanistic imperative4th Ed. New York; Williams & Wilkins; 2007.
11. Lin LC .Data management and security in qualitative research. *Dimes Crit Care Nurs*. **28**(3):132-7 (2009).
12. Smith RA1, Brooks D, Cokkinides V, Saslow

D, Brawley OW. A Cancer screening in the United States, 2013: a review of current American Cancer Society guidelines, current issues in cancer screening, and new guidance on cervical cancer screening and lung cancer screening. *Cancer Journal for Clinicians.,* **64**(1): 30-51 (2014).

13. Nahcivan NO1, Secginli S.Health beliefs related to breast self-examination in a sample of Turkish women. *Oncol Nurs Forum.* **34**(2):425-32 (2007).
14. Errico KM, Rowder D. Experiences of breast cancer survivor – advocates and advocates in countries with limited resources: A shared journey in breast cancer advocacy. *Breast J,* **12**(1): 111-116 (2006).
15. Ortega-Altamirano D, Lopez-Carrillo L, Lopez- Cervantes M. Strategies for breast self examination training to women of reproductive age. Salud Publica de Mexico; **42**(1): 17-25 (2000).
16. van der Meulen IC1, de Leeuw JR, Gamel CJ, Hafsteinsdóttir TB Educational intervention for patients with head and neck cancer in the discharge phase. *Eur J Oncol Nurs.,* **17**(2):220-7 (2013).
17. Gurm BK. Understanding Canadian punjubi–speaking South Asian women's speaking South Asian women's experiences of speaking South Asian women's experiences of breast cancer: a qualitative study. *Inter J of Nursing Studies*; **45**(2):266- 276 (2008)
18. Heravi Karimovi M, Pour Dehghan M, Jadid Milani M, Foroutan SK, Aein F. Study of the effects of group counseling on quality of sexual life of patients with breast cancer under chemotherapy at Imam Khomeini Hospital . *J of Legal Medicine of Islamic Republic of Iran.* **11**(40): 201-206 (2006).
19. Kennedy F, Harcourt D, Rumsey N. The shifting nature of women's experiences and perceptions of ductal carcinoma in situ. *J Adv Nurs.* **68**(4):856-67 (2012)
20. Gürsoy AA1, Mumcu HK, Çalik KY, Bulut HK, Nural N, Kahriman IL, Hintistan S, Erdöl H, Yiðitbaþ Ç, Yilmaz F. Attitudes and health beliefs associated with breast cancer screening behaviors among Turkish women. *J Transcult Nurs.* **22**(4):368-75 (2011).
21. Karimoi M, Pour Dehghan M, Faghih Zadeh S, Montazeri A, Milani M. The effects of group counseling on symptom scales of life quality in patients chemotherapy. *Behbood J of Kermanshah University* ; **10**(1): 10-21 (2007).
22. Mazanec SR1, Daly BJ, Douglas S, Musil C. Predictors of psychosocial adjustment *West J Nurs Res.* **33**(4):540-59 (2011).
23. Dundar PE, Ozmen D, Ozturk B, *et al*. The knowledge and mammography in a group of women in a rural area in western Turkey. *BMC cancer*; **6**(43):1-9 (2006).
24. Landmark B, wahl M. Issues and innovations in nursing practice, living with newly diagnosed breast cancer: a qualitative Study. J of Advanced Nursing 2010; 25-Raupach JCA, Hiller JE. Information and support for women following the primary treatment of breast cancer. *Health Expect*; **5**(4):289–301 (2002).
26. Chantler M, Podbilewicz-Schuller Y, Mortimer J. Change in need for psychosocial support for women with early stage breast cancer. *J Psychosoc Oncol* ; **23**(2/3):65–7840(1): 112 (2005)
27. Haghighatkhah H, Shafiee M, Khayamzadeh M, Molaee Goorchin H, Akbari ME. Evaluation of concordance of mammography and ultrasonography reports with maligna breast diseases. *Iranian Journal of Breast Disease.* **2** (2). 27-32 (2009).