Assessment of Factors that Hinder Early Detection of Breast Cancer among Females at Cairo University Hospital

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Abstract: In Egypt, breast cancer ranks the first among cancer affecting females. The aim of this research was to assess factors that hinder early detection of breast cancer among females at Cairo University Hospital. A descriptive exploratory research design was adopted in this research. Females were selected from the surgical outpatient clinic and surgical inpatient wards at Cairo University Hospital. Sample of 120 females diagnosed as third stage breast cancer. Tool for data collection was structured interview schedule developed by researchers. It included two parts; Part I: A) Sociodemographic characteristics; B) History of the sample and C) Knowledge about methods of breast cancer detection. Part II, factors that hinder early detection of breast cancer. Results revealed that, the most common factors that hinder early detection of breast cancer are; lack of awareness about breast cancer (79%), denying having breast cancer (72%) and financial problems (25%). Also, a statistically significance negative correlation was found between age of females and breast self-examination and mammogram, while, a statistically significant positive correlation was found between age of females and seeking medical help. Conclusion: delay in breast cancer diagnosis was influenced by interactions between many factors as lack of awareness about methods of early detection, financial problems, denial of having breast problems.

Key words: Breast Cancer - Females - Early Detection

INTRODUCTION

Women’s health status has an important impact on the health of their children, family and community. In addition to, the traditional roles of women as wives, mothers and primary care givers for their families [1]. Breast cancer represents 10% of all cancers diagnosed worldwide annually and constituted 22% of all new cancers in women in 2008, making it by far the most common cancer in women. The rate of increasing incidence is higher in developing countries [2], more than one million cases occurring annually. The American Cancer Society estimated that, in 2012 approximately 226,870 women would be diagnosed with 39,510 deaths. Women are not only being diagnosed with breast cancer in the later stages of the disease but also a higher proportion of younger women in their thirties and forties are clinically presenting with breast cancer [3].

The survival rate from breast cancer in developing countries is generally poorer than in developed countries, primarily as a result of delayed diagnosis of cases. Breast cancer is a dangerous disease but it could be very simple to treat if discovered in an early stage. The only way to decrease mortality and morbidity from breast cancer is to detect the disease before the patient presents with symptoms [4]. Early detection requires early diagnosis in symptomatic women and regular screening in asymptomatic women. Early detection and screening activities of breast cancer include breast self-examination (BSE), clinical breast examination (CBE), mammography and sonography. Mammography can reduce mortality rates in women aged 40 to 74 by 25%. Researches recommend a monthly BSE starting at age 20, a yearly CBE for women aged 35 and above and an annual mammogram for women aged 40-69 years, unless otherwise advised by physicians. The key prerequisites for early detection are to ensure that, women are supported in seeking care and that they have access to appropriate, affordable diagnostic tests and treatment [5].
Studies revealed that, additional barriers to early detection of breast cancer include fear of cancer, fear of finding out one has cancer, the notion that, there is no cure, perceived benefit, time, cost, fear of gossip, fear that breast examination and mammogram could be painful, husband or other male family members objecting to breast examination, preference for a female health professional, accessibility of the health care system, perceived effectiveness and embarrassment [4, 6].

In Egypt during 2009, the incidence of breast cancer represented 25% of all newly diagnosed malignancies [7]. Also, it was responsible for nearly 15% of all cancer deaths. It is the second leading cause of death worldwide after lung cancer [8]. Data from the regional population-based cancer registry at Gharbia governorate 2000-2002 (Egypt) as well as data from the National Cancer Institute hospital based registry (Cairo) show that, breast cancer is the first cancer in Egypt (19% of all cases, male and female considered together). It is by far the commonest cancer among Egyptian women and represents 37% of all female cancers. Incidence in term of crude incidence and age standardized rate are relatively high for a low income country (37.6 / 100,000 and 49.6 / 100,000 respectively). More than 60-80% of breast cancers present at advanced stage. Treatment of advanced cancer is more difficult and costly. In Egypt, breast cancer can cost up to 250,000 LE to cure and a mastectomy is sometimes the only solution. This can be very difficult for the patient to deal with. If the disease is detected at an early stage, however, the surgery won’t cost more than 15,000 LE and offers a greater chance of removing the tumor without the trauma of a mastectomy [9].

Delay in seeking medical advice for symptoms of breast cancer remains an important factor in late diagnosis and further management. This delay has a significant impact on the individual, society, as well as the government strategies for health resources expenditure. The general outcome is far better and less expensive on the long run to treat patients with early stage breast cancer than advanced [10]. The nurse has the roles of educator, health promoter, advocate, researcher, consultant and direct care provider in breast cancer screening. The preventive services delivered by nurses in the form of health assessment, screening and counseling can be integrated into comprehensive health promotion and protection activities at the community level, including worksites [11]. From researchers’ observations, most females admitted to surgical wards and undergone mastectomy as well as followed in outpatient clinics were in the late stage of breast cancer. So this research aimed at assessing factors that hinder early detection of breast cancer among females at third stage. Results of this study answered the following questions: 1. what are the causes for delay in seeking medical help? 2. Is there a relationship between sociodemographic characteristics and sample’s knowledge about ways of detecting breast cancer?

MATERIALS AND METHODS

Research Design: A descriptive exploratory research design was adopted in this research.

Setting: Females were selected from Cairo University Hospital (the surgical outpatient clinic and surgical inpatient wards 28, 29 and 30 at El-Manial University Hospital, Qasr El-Ainy).

Sample: Purposive sample of 120 females (based on rule of sum calculated by number of variables multiplied by a constant of 10) was selected based on diagnosis of third stage of breast cancer.

Tool for Data Collection: A structured interview schedule was developed and filled by the researchers. It included two parts; Part I: a. Sociodemographic characteristics: as age, education, occupation, marital status, monthly income, place of residence, body mass index and exercise regimen. B. History of the sample, obstetric history; age at menarche, age at first pregnancy, age at menopause, contraceptive methods, breast feeding etc……and medical history; family history of breast cancer, affected person in the family, knowing people with breast cancer and their recovery, previous history of breast problems, history of hysterectomy, person discovering the disease, causes for being afraid of breast cancer, having cancer at other places. C. Knowledge about methods of breast cancer detection: as breast self-examination (time of practicing breast self-examination, cause of not doing breast self-examination), mammogram (time for doing it, causes for not doing it) clinical breast examination by doctors or nurses (when to do it, causes for not seeking breast examination). Part II: Factors that hinder early detection of breast cancer.

Tool Validity: Tool was submitted to a panel of five experts in the field of oncology, maternity nursing and community health nursing, general surgery and medical surgical nursing to test the content validity. Modification was carried out according to the panel judgment on clarity of sentences and appropriateness of content.
Ethical Consideration: An official permission was granted from the directors of the surgical inpatient units and surgical outpatient clinic. The researchers introduced themselves to the females who met the criteria of selection, then informed them about the purpose of this research in order to obtain their acceptance to participate in this research. The researchers ensured that, the research posed no hazards on their health. All events that occurred during data collection were considered confidential. All females were informed that, participation in the research is voluntary. A written consent was obtained from females who were willing to participate in the research.

Pilot Study: It was carried out on 10% of the total sample to check clarity of items and determine the feasibility of the research. Pilot sample was excluded from our research sample.

Procedures: Data was collected through a period of 6 months from March 2012 till August 2012, two days per week from 10 am till 1 pm. After the females had been fully informed and consented for participation in the research, the researchers started to collect data through structured interview. Data collected through 1) personal interview to collect data related to sociodemographic and history, 2) assessment of female’s body mass index. Interview the sample took about 40 minutes for each one.

Statistical Analysis: Collected data were coded and tabulated using personal computer. Statistical package for social science (SPSS) version 16 was used. Descriptive as well as inferential statistics were used to answer research question. Statistical significance was considered at p-value <0.05.

RESULTS

Findings of this descriptive exploratory research will be presented in two main parts: 1) description of the sample and 2) factors that hinder early detection of breast cancer.

Part I: Description of the Sample: Regarding sociodemographic characteristics of the studied sample, 11.7% aged from 20 to less than 30 years, 13.3% aged from 30 to less than 40 years, 41.7% of the sample aged between 40 to less than 50 years, 23.3% aged between 50 to less than 60 years and only 10% were over 60 years, with a mean age 46.08 ±10.83 years. As for marital status, 62.5% of the sample was married, 17.5% were widowed, 11.7% were divorced and only 8.3% were single. Sixty five percent of the sample had a monthly income less than 1000 Egyptian pounds with a mean of 515.08 ± 295.723. In relation to educational level, 28% of the sample was able to read and write, 40% had diploma education, only 11% had university education and low percentage had primary, preparatory and secondary school education (7%, each respectively). More than two thirds of the sample 70.8% was housewives, 22.5% were employees, 1.7% was student and only 5% were retried. Sixty eight percent were from rural areas. It was found that, 71.7% of the sample was obese (BMI>30kg/m²) and the rest had normal body mass index. Only 14.2% of them were practicing exercises.

Concerning obstetric history 80.8% of the sample had menarche at age less than 15 years with a mean 14.17 ±2.16 years. Results revealed that only (92 out of 120) of the sample got pregnant, where 57.6% aged from 15 to less than 21 years at their first pregnancy, while 40.2% aged 21 to less than 26 years and only 2.2% aged 26 years and more at their first pregnancy with a mean of 20.17 ±2.470 years. As for menopause, 83 out of 120 passed through the menopausal period where the majority (90.4%) of the sample aged 41 years to less than 51 years at menopause with mean of 45.83 ±3.79 years. Only 20% had previous breast problems, these problems were in the form of benign tumor (21%), breast masses (67%), abscess (12.5%) and breast cancer (8.5%). Only (10%) of the sample had hysterectomy with a mean age 52.45±4.762 years. Sixty eight point three percent of the sample was breast feed their children. As for the medical history of the sample, 75.8% had no family history of breast cancer and only 24.2% had previous family history of breast cancer, 65.5% of those with family history indicated that, their mothers were the affected person, 17.2% were their grandmothers, 17.2% were their aunts and only (3.4%) were their sisters. Also, 30.8% of the sample revealed that, they know people having breast cancer and only 17.9% of these people had recovered.

In relation to sample’s knowledge about methods of breast cancer detection, 55% of the sample did not have knowledge about breast self-examination, 70% never practiced breast self-examination, only 30% of the sample practiced it; where 75.7% were doing it once per month.
and 24.3% were doing it only in the presence of complains. The majority of the sample (91.7%) revealed that, lack of knowledge was the main cause of not doing breast self-examination (Table 1). It was found that, 31.5% of the sample mentioned that, breast self-examination could be performed after two or three days of starting menstrual cycle, 21.7% said that, it could be performed at any time during the month, 0.8% said it could be done from 2-3 days pre menstruation, 6.8% identified that it could be done week pre menstruation and 39.2% of the sample did not know when to perform breast self-examination. It was found that, 87.5% of the sample did not have any knowledge about mammogram. Ninety point eight percent of the sample performed mammogram because the doctor ordered it. The main causes for not doing mammography were; painful sensation (76%), very expensive procedure (72%). Results revealed that, 58.3% of the sample did not have clinical breast examination by doctors or nurses and only (41.7%) of the sample had clinical breast examination by doctors or nurses. The result also revealed that, the main causes for not seeking doctors or nurses for clinical breast examination were Embarrassment (90%), disapproval from husbands (65%) and fear from being diagnosed by breast cancer (64%) (Table 2). Results revealed that, the main cause for being afraid of cancer breast was fear of death (66%), while, 29.1% identified that, they were afraid but without known cause and 18.3 said that, it is an expensive disease. Results revealed that, 83.3% of the sample discovered the disease by themselves and 95% of them revealed that, they didn’t have any other type of cancer. Sixty seven point seven percent did not seek medical help. It was found that, 93.3% of the sample did not know the degree of their breast cancer.

Table 1: Distribution of the Sample in Relation to Breast Self-Examination

<table>
<thead>
<tr>
<th>Breast Self-Examination</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Having knowledge about breast self-examination (n=120)</td>
<td>No knowledge</td>
<td>66</td>
</tr>
<tr>
<td>Practicing breast self-examination (n=120)</td>
<td>No practice</td>
<td>84</td>
</tr>
<tr>
<td>Number of practicing breast self-examination (n=36)</td>
<td>Once per month</td>
<td>27</td>
</tr>
<tr>
<td>Reasons for not doing breast self-examination (n=84)</td>
<td>Presence of complain</td>
<td>9</td>
</tr>
</tbody>
</table>

Table 2: Distribution of the Sample in Relation to Causes for Not Doing Mammogram and Clinical Breast Examination

<table>
<thead>
<tr>
<th>Causes for not Doing Mammogram (n=120)</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Painful sensation</td>
<td>91</td>
<td>76%</td>
</tr>
<tr>
<td>Very expensive procedure</td>
<td>86</td>
<td>72%</td>
</tr>
<tr>
<td>There’s no need for this procedure</td>
<td>67</td>
<td>56%</td>
</tr>
<tr>
<td>Embarrassment</td>
<td>66</td>
<td>55%</td>
</tr>
<tr>
<td>Fear from being diagnosed by breast cancer</td>
<td>54</td>
<td>45%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Causes for not having Clinical Breast Examination(n=70)</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Embarrassment</td>
<td>63</td>
<td>90%</td>
</tr>
<tr>
<td>Disapproval from husbands</td>
<td>46</td>
<td>65%</td>
</tr>
<tr>
<td>Fear from being diagnosed by breast cancer</td>
<td>45</td>
<td>64%</td>
</tr>
<tr>
<td>Young age</td>
<td>25</td>
<td>35%</td>
</tr>
<tr>
<td>Mistrust in doctors and nurses</td>
<td>31</td>
<td>45%</td>
</tr>
<tr>
<td>Lack of awareness about this examination</td>
<td>25</td>
<td>35%</td>
</tr>
</tbody>
</table>

*Responses were not mutually exclusive

Table 3: Distribution of the Sample in Relation to Causes for delay in Seeking Medical Help

<table>
<thead>
<tr>
<th>Causes for delay in Seeking Medical Help (n=81)</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of awareness</td>
<td>64</td>
<td>79</td>
</tr>
<tr>
<td>Denial (thinking it was simple mass and it will go)</td>
<td>58</td>
<td>72</td>
</tr>
<tr>
<td>Financial problems</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>Fear of cancer</td>
<td>12</td>
<td>14.8</td>
</tr>
<tr>
<td>Psychological distress</td>
<td>10</td>
<td>12.5</td>
</tr>
<tr>
<td>Embarrassment</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>No pain</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Self neglecting (because of young age)</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Fear of divorce</td>
<td>1</td>
<td>1.2</td>
</tr>
<tr>
<td>Lack of time</td>
<td>1</td>
<td>1.2</td>
</tr>
</tbody>
</table>

*Responses were not mutually exclusive
### Table 4: Correlation Between, Socio-Demographic Characteristics and sample’s knowledge about Ways of Detecting Breast Cancer (n=120)

<table>
<thead>
<tr>
<th>Socio-demographic characteristics</th>
<th>Knowledge about Breast self examination</th>
<th>Practicing Clinical Breast Examination</th>
<th>Knowledge about Mammogram</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R</td>
<td>P</td>
<td>R</td>
</tr>
<tr>
<td>Age</td>
<td>-.221 weak</td>
<td>.015*</td>
<td>.453 good</td>
</tr>
<tr>
<td>Marital status</td>
<td>-.114</td>
<td>.216</td>
<td>.165</td>
</tr>
<tr>
<td>Education</td>
<td>.432 good</td>
<td>.000**</td>
<td>-.472 good</td>
</tr>
<tr>
<td>Occupation</td>
<td>-.082</td>
<td>.372</td>
<td>-.221</td>
</tr>
<tr>
<td>Residence</td>
<td>-.088</td>
<td>.341</td>
<td>.221</td>
</tr>
<tr>
<td>Family history</td>
<td>.546 V. good</td>
<td>.000***</td>
<td>-</td>
</tr>
</tbody>
</table>

Part II: Factors that Hinder Early Detection of Breast Cancer: In relation to factors that hinder early detection of breast cancer, Table 3 showed that, causes for delay in seeking medical help were; lack of awareness about breast cancer (79%), denying having breast cancer thinking it was only a simple mass and it will go (72%) and financial problems (25%). As observed in Table 4, a statistically significance negative correlation was found between age of the sample and knowledge about breast self-examination ($r=-.221, p=.015$) and mammogram ($r=-.247, p=.007$), while a statistically significant positive correlation was found between age of the sample and performing clinical breast examination ($r=.453, p=.000$). As for the education of the sample, a statistically significant positive correlation was found for their knowledge about breast self-examination and mammogram ($r=.432, p=.000$ and $r=.463, p=.000$) respectively and a statistically significance negative correlation was found for clinical breast examination ($r=-.472, p=.000$). Also a statistical significance correlation was found between place of residence and clinical breast examination and knowledge about mammogram ($r=.221, p=.015$ and $r=-.206, p=.024$) respectively. A statistically significant positive correlation was found between family history of breast cancer and knowledge about breast self-examination and mammogram ($r=.546, p=.000$ and $r=.655, p=.000$) respectively.

**DISCUSSION**

Breast cancer is an important health challenge that women face and affect their safety and productivity [12]. Results of this research will be discussed in the following frame; Description of the sample and causes for delay in seeking medical help.

Results of this research revealed that, more than one third of the sample aged between 40 to less than 50 years and less than one quarter aged between 50 to less than 60 years. In agreement with the research results the American Cancer Society [13] revealed that, the risk of developing breast cancer increases with advanced age and about 1 out of 8 invasive breast cancers were found in women younger than 45 years, while about 2 out of 3 invasive breast cancers were found in women age 55 years or older. According to the National Cancer Institute, [7] breast cancer diagnosis is less frequent among women in their thirties and younger. Moreover, the research done by Said *et al.* [14] to examine the presence of peripheral blood cytokeratin (CK) in newly diagnosed, non metastasizing 40 Egyptian females found that, the patients' median age was 49 years (range 29 to 80 years). While the research done by Aboserea, Abdelgawad and Wafik [15] to examine the most frequent barriers delaying breast cancer diagnosis among females at Sharqia Governorate, Egypt revealed that, the most frequent interviewed age groups were 30-39 years, 20-29 years and 40-49 years (27.9, 24.4 and 22.1% respectively) with mean age 38.7 years. The difference in the research results could be related to the sample selection at the time of the research.

In relation to educational level, more than one quarter of the sample was able to read and write while low percentage had university education. The same result was obtained from Aboserea, Abdelgawad and Wafik [15] who revealed that, more than one third of the sample was illiterate. They mentioned that, illiteracy constituted important precipitating factors of lack of awareness and knowledge of women about breast cancer. Moreover, El Shamaa and Hassanein [16] who studied the risk factors of breast cancer among 84 Saudi women and reported that, educational level of cases ranges from illiterate to secondary while that of the controls ranges from illiterate to university, yet, education is found to be a risk factor. In contrast to the research results, Ozmen *et al.* [17] found that, patients with breast cancer are significantly more
educated. Higher education does not mean that people will follow all the health guidelines because some highly educated people still lack the awareness to make correct health decisions.

Results revealed that, more than two third of the sample are from rural areas. Opposite of the research results, Dey [18] found that breast incidence among 4,794 females in Gharbiah, Egypt is more in urban areas than rural areas. This difference could be related to the sample selection.

Regarding obstetric history, more than two third of the sample had menarche at age less than fifteen years while, the majority of the sample aged 41 years to less than 51 years at menopause. In the same direction, American Cancer Society [13] reported that, women who have more menstrual cycles because they started menstruating at an early age (before age 12) and/or went through menopause at a later age (after age 55) have a slightly higher risk of breast cancer. This may be related to a higher lifetime exposure to the hormones estrogen and progesterone. In addition, Said et al. [14] found that, most of cancer patients are postmenopausal constituting 57.5% of the total sample.

Regarding age at first pregnancy, results of the research revealed that, from those who got pregnant, more than half of the sample aged from 15 to less than 21 years at first full term pregnancy, while 40.2% aged 21 to less than 26 years and only 2.2% aged 26 years and more at their first pregnancy. This finding contradicted Buki et al. [19] where it was identified that, women having their first child after 30 years of age have twice the risk for breast cancer as women having first child before 20 years of age. Also, the research done by Aboserea, Abdelgawad and Wafik [15] revealed that, the most frequent risk factors of breast cancer are first full term pregnancy at $\approx 35$ years. Moreover, American Cancer Society [13] revealed that, women who have not had children or who had their first child after age 30 have a slightly higher breast cancer risk.

As for the medical history of the sample, less than one quarter of the sample had previous family history of breast cancer, more than two third of those with family history having a first-degree relative. On the same line, National Cancer Institute [7] reported that, a family history of breast cancer also increases risk and accounts for 20-30% of all breast cancers. Also, Aboserea, Abdelgawad and Wafik [15] found that positive family history of breast cancer constitutes 3.5% among females at Fakous District, Sharqia Governorate, Egypt. In addition, American cancer society [13] mentioned that, having a first-degree relative (mother, sister, or daughter) with breast cancer almost doubles a woman's risk of having breast cancer and having two first-degree relatives increases her risk about three-folds.

More than two third of the sample are obese and the rest had normal body mass index. Low percentage was practicing exercises. According to American cancer society, [13] having fatter tissue can increase the chance of getting breast cancer by raising estrogen levels. Before menopause, ovaries produce most of estrogen and fat tissue produces a small amount of estrogen. After menopause (when the ovaries stop making estrogen), most of a woman's estrogen comes from fat tissue. In agreement with the study results, the research done by Aboserea, Abdelgawad and Wafik [15] in Egypt, found more than 54% of the studied sample is overweight and obese. Although women need estrogen, still increase estrogen level can increase the risk of having breast cancer. With increasing obesity among Egyptian population especially females and lack of exercises, this can increase their chances of having breast cancer. Regular exercises tend to lower the levels of estrogen.

Results of this research revealed that, more than half of the sample has no knowledge about breast self-examination, more than two third of the sample never practice breast-self examination. The majority of the sample revealed that, lack of knowledge is the main cause of not doing breast-self examination. Most of females who practiced breast-self examination apply it in wrong time. In the same context, the research done by Yavan et al. [20] who reported that, the most important factors of not performing breast-self examination are lack of information on the implementation and ignorance. Also, the research done by Obaikol, et al. [21] found that, the level of awareness among the research sample is high; but the knowledge of the technique and practice ratios of breast-self examination is poor. It is important that the awareness of breast-self examination should be translates into adequate or appropriate practice for early detection of breast lumps. Most cancerous breast lumps are self discovered, but it is important that these lumps are discovered in the early stages when they are still small.

In addition, Aboserea, Abdelgawad and Wafik [15] found that, lack of doing mammography, annual clinical breast examination and monthly breast-self examination is the main limitations for early diagnosis of breast cancer in Gharbia, Egypt. Moreover, the research done by Al-Dubai et al. [22] who explored barriers to breast-self examination among urban women in Malaysia, found that, 55%
practice breast-self examination, among the 45% of respondents who do not practice breast-self examination, 79.8% do not know how to do it, 60.6% fear being diagnosed with breast cancer, 59.6% are worried about detecting breast cancer, 22% report that they should not touch their bodies, 44 and 28% reported breast-self examination as embarrassing or unpleasant, 29% identify it as time consuming, 22% think that they will never have breast cancer or it is ineffective and finally 20% perceived breast-self examination as unimportant. Ignorance is a major problem in Arab countries and in Egypt, even for those with higher education; lack of awareness is very common. Most female do not perform this examination although it is very simple and will not cost them money but still they have no knowledge about this procedure and there is also the fear of discovering tumors.

Results of this research indicated that, most of the sample don’t have any knowledge about mammogram, but the majority of the sample performs it according if the doctor recommends it. The main causes for not doing mammography were; painful sensation, very expensive procedure, no need for this procedure, embarrassment and fear from being diagnosed by breast cancer. Guilford [23] reported that, women who start having mammography screening at age 40 rather than age 50 is correlated with a 26% reduction in risk of death due to breast cancer. The research done by Ahmadian, Abu Samah, Redzuan and Emby [24] on 400 Iranian women to test barriers to having breast cancer mammography revealed that, women in developing countries such as Iran do not feel any advantage in mammography use. Also the role of anxiety, fear and embarrassment is to discourage mammography. Lack of media and resources, lack of physician prescription, worries about knowing cancers during mammography, also devalued mammography utilization among Iranian women.

Results of this research revealed that, more than half of the sample did not perform clinical breast examination by doctors or nurses. The result also added that, the main causes for not seeking doctors or nurses were embarrass, disapproval from husbands, fear from being diagnosed as having breast cancer, mistrust in doctors and nurses, young age and lack of awareness about this examination. Also, it was found that, the main cause for being afraid of cancer breast is fear of death, while, more than one quarter identified that, they are afraid but without a known cause and low percentage reported that, it is an expensive disease. In the same line, a research done by Bener et al. [25] on 1,200 Qatari national women between the ages of 30-55 years discovered that, despite having an adequate knowledge of breast cancer, participation rates in breast cancer screening activities are low (breast-self examination 24.9%, clinical breast examination 23.3% and mammography 22.5%). In Arab countries, females tend to refuse examination by doctors especially for sensitive feminine places due to Embarrassment and their culture that taught them not to be touched or expose her body to any males not even to doctors.

Results of this research revealed that, one third of the sample went for medical help after one and two weeks respectively and one third seek medical help after months of discovering the tumor. The same results were obtained from Dey [18] who examined urban and rural differences in Gharbiah, Egypt and found that most cases are either stage 2 (33.7%) or stage 3 (45.9%). In Egypt, a research was performed on 343 women with breast cancer and found that forty-six percent of patients presented late (stage III or IV). The reasons for late presentation were delay in seeking medical advice, social reason, financial factor and delay of referrals. Other factors such as the absence of pain or poor health education contributed to the delayed presentation [26, 27].

**Factors that Hinder Early Detection of Breast Cancer:** In relation to factors that hinder early detection of breast cancer, findings indicated that, the most common factors are; lack of awareness about breast cancer, denying having breast cancer thinking it was only a simple mass and it will go, financial problems, fear of cancer and psychological distress. In the same context, World Health Organization [28] explored that, there is a common misconception in Egypt that cancer is contagious, a notion that has caused the husbands of many diagnosed women to seek a divorce. If a young woman is diagnosed with breast cancer, she is considered unmarried or unable. Egyptian women do not usually come forward until the late stages of the disease, when it is often too late to assist. Jemal et al. [29] reported that, 99% of Egyptian women are unaware of the dangers of breast cancer. Because of this lack of awareness, incidents of death from breast cancer are higher in Egypt than in other parts of the world. This is exacerbated by the fact that many people will not talk about cancer, nor are women educated to perform self-breast examinations and take mammogram tests. Unfortunately only highly educated women or those who have been overseas are aware that, breast cancer if caught in the early stages, can be cured. Consequently women are coming to doctors when the cancer has reached an advanced stage, necessitating aggressive treatment. The research done by Ali et al. [30]
examined the effects of socio-economic and demographic factors in delayed reporting and late-stage presentation among patients with breast cancer in South India and concluded that, most cases of breast cancer presenting at an advanced stage are probably due to poor economic status, living in remote areas, illiteracy and negligence by the patient or their family members and general practitioners.

In the same line, the research done by Fatema et al. [31] who examined factors associated with breast cancer screening among Asian Indian women in Metro-Detroit and reported that, barriers to breast cancer screening are perceptions that a mammogram is painful and that breast cancer screening is useful only when there are breast problems. Barriers that influenced access to healthcare such as lack of transportation and language barriers were significantly negatively associated with adherence. Perceived usefulness of breast cancer screening in detecting breast cancer early and the relative importance of mammography were benefits significantly positively associated with adherence. In addition, the research done by Kressin et al. [32] reported that, negative attitudes towards breast cancer screening refers to, generalized distrust of others, fear of pain or diagnosis and disbelief in the efficacy of screening tests, may be more predominant among racial and ethnic minorities and could, therefore, account for lower rates of cancer screening among these women. Moreover, the research done by Abosere, Abdelgawad and Wafik, [15] at Sharqia Governorate, Egypt found that, the most common barriers delaying early detection of breast cancer among the studied females were; not doing regular mammogram 99.5%, not practicing monthly breast self examination 97.4%, not doing annual clinical breast examination 95.6%, illiteracy 65.9%, reluctance in seeking medical advice 56.9%, far distance from health services 56.2%, negligence of the patient complaints 47.4%, fear from breast cancer diagnosis 44.1%, patient poverty and High cost 27.9% and lack of time 23.6%.

Results of the present research indicated that, there is a statistically significance negative weak correlation between age of the sample and practicing breast self-examination and mammogram, while a statistically significant positive correlation was found between age of the sample and clinical breast examination. Yavan et al. [20] found a statistically significant negative correlation between women’s age and CBE/mammography status ($r = -0.300$, $p < .001$ and $r = -0.542$, $p < .001$, respectively). The rates of CBE and mammography performance were relatively higher for younger females. These results could be related to being young and may be having young children so they fear for themselves and immediately can perform mammogram.

A statistically significant good positive correlation was found for between education and breast self-examination and mammogram, also a statistically significance negative correlation was found with clinical breast examination. Almost the same results are observed from the research done by Yavan et al. [20] where a statistically significant positive correlation was observed between educational level and breast-self examination status of women ($r = 0.266$, $p < .001$); and it was observed that, women with higher education performed more mammography ($r = 0.283$, $p < .001$), but there was no statistically significant correlation between the women’s educational level and clinical breast examination performance. Also, Al-Dubai et al. [22] found that, married women having a high education level are more likely to practice breast-self examination. With higher education people tend to have more information so the rate of breast-self examination and mammography can increases.

Results of the present research indicated a statistical significance correlation between family history of cancer and breast self examination and mammogram. According to the research done by Madanat and Merrill [33] who found that women with a family history of breast cancer have significantly better general breast cancer knowledge and awareness about breast cancer screening. Parlar et al. [34] mentioned that, the rate of having knowledge of and performing breast-self examination increases when there is a family member with breast cancer. The experience of any women with breast cancer in their families might alert them to the symptoms, ways of detection, etc…

Delay in breast cancer diagnosis was influenced by interactions between many factors as lack of awareness about methods of early detection, financial problems, denial of having breast problems etc…

**Recommendations:** Based on the findings of this research the following are recommended:-

- Educational program is needed to increase females’ awareness about breast cancer.
- Educational program is needed to increase females’ awareness about importance of monthly breast self examination and how and when to do it
- Raise awareness of the importance of seeking medical help as early as possible.
- Mass media should have a role in raising the awareness of the community about breast cancer and channels for early detection.
REFERENCES


