

# Exploring Knowledge about Breast Self- Examination among Middle-Aged Women in Aswan, Egypt (Upper Egypt)

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**Abstract** – Breast cancer is a major killer disease among women and an overwhelming number of women have fallen victim to this deadly disease worldwide as well as in Egypt. Thus, early detection of breast cancer is crucial to decreasing the morbidity and mortality of breast cancer. This qualitative, exploratory descriptive study aimed to understand the perceptions of Egyptian middle aged women about breast self-examination (BSE). The study was conducted in two rural areas in Aswan, Egypt, using the purposive sampling technique; twelve (12) middle aged women were selected as the study participants. Data was collected through semi-structured face to face interviews using an interview guide and an audiotape recorder. The interview was in the Arabic language. The qualitative content analysis (Unrau & Coleman, 1997) using the manual method, was utilized as the analytical method to identify emerging Categories and themes. The Cognitive domain was identified as the main theme with three categories: knowledge about breast cancer, knowledge of breast self-examination and preventive measures for breast cancer. The overall findings revealed that middle-aged women living in the rural areas in Upper Egypt lack knowledge about breast cancer and breast self-examination. In addition, they have a negative attitude towards BSE, thus the practice of BSE is very low, and in some cases, non-existent among women in Upper Egypt's rural areas. This study has implications for policy makers and other stakeholders. Hence, it is recommended that accurate knowledge, support and service about breast cancer and BSE be provided in the region, to improve the practice of BSE as well as to decrease the mortality rate of breast cancer in Egypt.

**Keywords:** Breast, Self-Examination, Rural areas in Aswan

## I. INTRODUCTION

Breast cancer is the second leading cause of death among women, worldwide (44). Though the cause is unknown there are risk factors that are closely linked to the development and progression of breast cancer. The disease is classified into four stages. Stage 1 of disease involves development of primarily small tumors (less than or equal to 2 cm) with no known lymph node involvement and no metastases to other organs. Stage 2 is characterized by either a slightly larger primary tumor than stage one (between two and five cm) or the involvement of lymph node. Stage 3 consists of large tumors (greater than five cm) with signs of inflammatory breast cancer. "ipsilateral nodes" may get involved, and the disease may get spread to other structures. A high percentage of women present themselves at this stage, where treatment options are limited. In stage 4 is generally considered as incurable and the cancer usually spreads to lungs, liver, bone, or brain [39].

The magnitude of disease could be controlled through early detection and its treatment. Processes for early detection include breast self-examination (BSE), clinical breast examination, and mammography. The latter two require skilled practitioners, equipments and facility for care recipients. Particular to BSE, it is considered as inexpensive and not requiring additional resources of a woman using this modality. However, the women need to be knowledgeable about BSE. As patient education is an integral component of the nursing role a study was conducted to explore knowledge that women have about BSE. To limit the scope of the study, participants selected were women from Aswan which is in upper Egypt, where 41.23% of adult females are illiterate [20].

**III. FINDINGS**

**II. METHODOLOGY**

Using qualitative research approach in-depth interviews of 12 middle aged women were audio recorded and observations of participants' nonverbal communication documented through field notes. Participants' demographic profile was analyzed through descriptive statistics. The interviews were transcribed verbatim and the data analysis was carried out manually, during which the researcher read the data over and over again in search of true meaning and deeper understanding. This careful reading of the interview data helped in obtaining a general sense of the situation, extract theme and categories.

Following the ethical guidelines of the research, approval for the study was obtained from the Aswan Directorate of Health and from Ethics Review Committee of Aga Khan University. Individual informed consent was signed by the study participants.

**A. Demographic Profile of the Participants**

Among the middle aged participants selected for the study, majority were between the age of 40-50- and upper secondary was the maximum level of the education of the participants. Pertaining to occupation and family structure, majority were housewives and the nuclear family structure was common amongst the participants. Detailed profile is presented in Table I.

**B. Obstetric Profile of the Participants**

Majority of the participants reported that at the time of menarche their age was < 15 years. Only once participant reported being pregnant < 4 times, one was pregnant for > 8 times. Remaining carried pregnancies between 4-8 times. Similarly majority of the women had 3-8 children. Particular to family planning, participants were equally distributed in two groups; using various methods of family planning and not using any method of the family planning. Participants' details are tabulated in Table II.

TABLE I DEMOGRAPHIC PROFILE OF PARTICIPANTS

Variable	Number	Percentage
<b>Age</b>		
40-50	09	
50-60	03	25
<b>Education level</b>		
Uneducated	6	50
Primary	1	8.3
Secondary	3	25
Upper secondary	2	16.7
Graduate (Bachelors)	0	0
Above Bachelors	0	0
<b>Occupation / Profession</b>		
House wife	09	75
Working woman	03	25
<b>Family Structure</b>		
Extended Family	3	25
Nuclear Family	9	75

(N=12)

TABLE II OBSTETRIC HISTORY PROFILE OF PARTICIPANTS

Variable	Number	Percentage
<b>Age on menarche</b>		
< 15years	11	91.7
> 15years	1	8.3
<b>Number of pregnancies</b>		
< 4	1	8.3
4-8	10	83.3
> 8	1	8.3
<b>Number of children</b>		
< 3	1	8.3
3-8	11	91.7
> 8	0	0
<b>Family planning</b>		
Oral/Topical	3	25
Injection	3	25
IUD	0	0
Sterilization	0	0
None	6	50

**Theme and Categories**

Upon analysis of the data, cognitive domain was one of the themes that emerged and under this theme various categories surfaced out. A diagrammatic view of the theme and its related categories is presented in figure 1.

**Category 1: Knowledge about Breast cancer**

The study participants reported that through various sources they acquire knowledge about breast cancer. These sources include media, community, and the physician.

**Definition of Breast Cancer**

The participants defined breast cancer as ‘tumor’, ‘cyst’ and ‘small amount or lump in the breast’.

One of the participants said: Breast cancer is tumors that appear on the breast. When a woman feels then she should contact a doctor. The doctor will ask for tests to decide if the tumor is benign or malignant.

Another participant said: Breast cancer is tumors that appear in the breast. The tumors could be the result of malfunctioning hormones that affected the breast.

However, there were a few who could not relate what breast cancer meant to them. As one of the participants said: I don’t know exactly what the meaning of breast cancer is but I have heard this term in by watching T.V.

**Risk Factors for Breast Cancer**

With regard to risk factors, the participants shared four main risk factors: gender, age, marital status, and breast feeding.

**1. Gender:** One of the participants said that both men and women could be at risk for breast cancer. However, the rest of the participants (11) said that only women are at risk for breast cancer.

**2. Age Group:** Among those who identified age as a risk factor, three participants said that women in 30-35 age bracket are at the highest risk for breast cancer. One of the participants said that individuals aged 25 years are at high risk for breast cancer. Two of the participants said that those who are 40 and above are at the highest risk for breast cancer, and four of the participants said that there is no specific age for breast cancer and it could attack women at any age.

One of the participants said: Breast cancer is a female disease which attacks women over forty years old; and sometimes, even women under forty suffer from the disease. It is a bad disease which, if not treated timely, results in the removal of the whole breast.

Having a different perspective one of the participants said: I know that breast cancer comes at any age.

Another participant responded that: It always happens to married women who are older than 25 years and who have undergone childbirth.

**3. Marital Status:** Regarding marital status there were three opinions: Four of the participants said that married women are more at risk of getting breast cancer and four said that unmarried women are at risk, and the rest said that there is no relationship between breast cancer and individual's marital status. Thus, according to the participants' opinion, both single and married women could be diagnosed with breast cancer.

**4. Breast Feeding Practices:** Four of the participants said that mothers who breast feed their babies are at a higher risk for breast cancer; in contrast four said that mothers who do not breast feed their babies are at a higher risk for breast cancer, and four said that breast feeding practices had no effect on the occurrence of breast cancer.

#### ***Category 2: Preventive Measures of Breast Cancer***

Regarding measures for prevention of breast cancer, various responses were received from the participants. These responses are sub-categorized and are presented succinctly.

##### ***Breast Feeding***

It appears that a good percentage of the participants perceived that breast cancer could be prevented through breast feeding. Participants rationalized that because breast feeding is the natural role of the breast.

Sharing her perspective one of the respondents said: I think that if a mother doesn't breast feed her kids then the breast doesn't perform the original function and this leads to diseases.

##### ***Large Number of Children***

Perceiving fertility as a mean to prevent breast cancer, two of the participants reported that this disease could be

prevented by having large number of children. Thus these respondents thought that women having fewer children are at risk of developing the disease.

##### ***Religious or Spiritual Aspect***

Five of the participants believed that the breast cancer could only be prevented if God wills. These respondents felt that if they trust on God then they could be saved from being harmed ever.

##### ***Examination and Follow Up***

Three of the participants were of an opinion that through periodical health checkups they could be saved from having breast cancer.

#### ***Category 3: Knowledge and Experience of Breast Self-Examination***

When asked about their knowledge of breast self-examination (BSE), the immediate response received from three participants was "I don't know". Whereas the rest of the nine participants responded that they had heard about it (BSE) and their source of information was media, physicians, and community. However, these participants either had incomplete or had incorrect information.

##### ***Breast Self-Examination Technique***

The participants' responses regarding BSE technique were categorized into three categories

**1. Complete Ignorance Regarding BSE:** Three participants were completely unaware about the term and the technique of breast self-examination. This analysis supported by of the quotes from the participant. She said: I don't know what breast self-examination is and how it is done; if I knew it I would have done it.

**2. Incomplete Information Regarding BSE:** Seven participants shared the technique of breast self-examination and the steps needed for BSE. However, the information they had about the steps and techniques for BSE was incomplete.

One of the participants said: Once a doctor told me that I should examine my breast while taking a shower by moving my palm over the breast. I should start from the bottom to the top and from side to side. If I felt anything, I should see a doctor to get it checked.

### 3. Incorrect Information Regarding BSE

Three participants had incorrect information about BSE. This is reflected in a participant's views which are as follows: I got the information from TV; it was that to examine my breast I will need to rub my breasts between my hands to feel if something is wrong. and then I must see a doctor. Breast self-examination is very useful but I don't know how to do it.

#### Frequency to Perform BSE

None of the participants correctly responded about appropriate time to practise BSE, however about the frequency of breast examination, their responses varied from few days to few months.

### Breast Self-Examiner

Sharing their perspectives about who should perform the breast examination, ten participants reported physician and two responded that as it is self-examination so they should examine their breasts. Participants' responses were as follows:

Physicians should perform the BSE because they are the only ones who understand what I suffer from. In addition, physicians have the ability to practise BSE.

The doctor must do the examination because she is the one who knows how to do it and diagnose cancer.

I should do it if I feel pain. Once, I felt pain in my breast, I went to the clinic doctor, she examined me and gave me an ointment. I got better.

Both the doctor and the person affected should perform the BSE, but the doctor knows better.

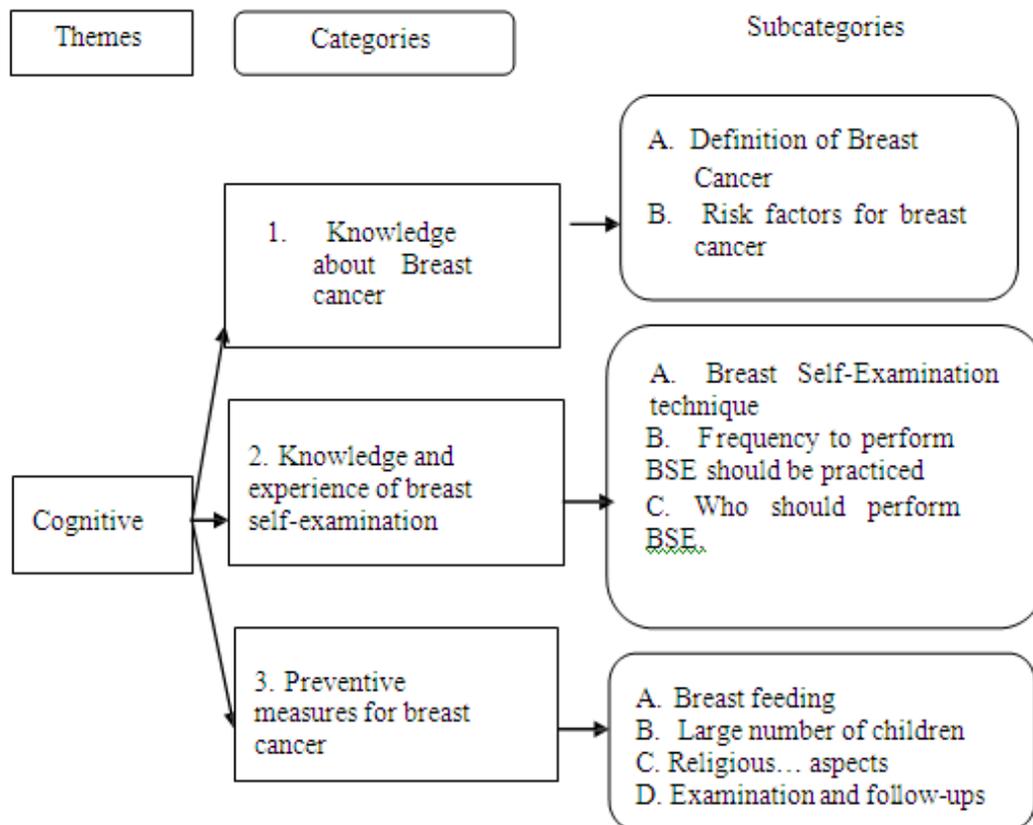


Fig. 1 Cognitive Domain, categories and subcategories that emerged from the interview data

#### IV. DISCUSSION

Among all the participants (n=12), 50% were illiterate. Among the literate, upper secondary was the maximum education which was attained only by two participants, remaining were educated till secondary (three) or till primary (one participant) (Table I). These findings are supportive of the findings reported by UNICEF<sup>42</sup>, which estimated that (38%) of the females in Upper Egypt are literate. Among those who join the school, 800,000 girls are out of school between the ages of 6 and 15 and 600,000 are out of school between the age of 6 and 10<sup>4</sup>. One of the reasons for dropping out from school is that in Upper Egypt families consider their daughters as their honor; and as soon as a girl's menstrual cycle starts her marriage is planned. Therefore, between 13- 19 years of age most of the girls are married<sup>34</sup>. Similarly in present study, majority of the participants (10) married between the ages of fourteen to seventeen years, and the other two married at the age of twenty. Similar findings were reported in earlier studies<sup>19, 38</sup>. Therefore; as reported by the participants, by the age of 45, all of them achieved the status as grandmothers. Besides early marriage, in Upper Egypt, women are required to produce a large number of children<sup>27</sup>. Hence, in this study also a majority of the participants (92%) had 6- 8 children (Table II).

In the present study, under the theme 'cognitive domain' there are three main categories which are discussed succinctly.

##### ***Cognitive Domain (knowing)***

This domain contains learning skills predominantly related to thinking processes; processing information, constructing understanding, applying knowledge and solving problems<sup>11</sup>.

The sources of knowledge, as stated by women in their interviews, were media especially television, community, and lady doctors. Even though the internet is available in Egypt, people, especially those residing in rural areas are not familiar with it. Therefore, they are dependent on television as a source of their information and knowledge. This finding is in tune with the findings of other studies conducted in Egypt and other countries which indicated that media, community, internet, and health caregivers are the sources for women to acquire knowledge about breast cancer and breast self-examination<sup>1,2,37</sup>.

##### ***Category 1: Knowledge about Breast Cancer***

The study revealed that middle aged Egyptian women defined breast cancer as a tumor or lump, in the breast. Another study enrolled 122 working women, from Lower Egypt (Cairo), to evaluate the effects of training programmes focusing on knowledge, attitudes, and practice regarding breast self-examination, the study reported that only 11% of the participants were knowledgeable about breast cancer and breast self-examination<sup>37</sup>. Likewise, another study, which enrolled 261 Iranian women with mean age, of 28 years, living in the city of Hamadan, reported that women had moderate knowledge about breast cancer<sup>32</sup>. Similarly, there are studies endorsing that women do not have enough knowledge about breast cancer and breast cancer screening<sup>5,8,15,32,33</sup>. Thus there is congruency between the findings of present study and the studies cited here.

The present study also reported that the participants grouped the risk factors for breast cancer under four areas, i.e. gender, age, marital status, and breast feeding.

With regard to gender, the study participants viewed only women at risk of being diagnosed with breast cancer. They justified their opinion by pointing out that the breast was an organ relevant to females only, not males. However, previous studies have reported that men and women both are at risk for breast cancer but, as compared to men, women are at a higher risk<sup>23, 31, 43</sup>.

The study participants perceived that breast cancer is identified at certain age; their responses varied from participant to participant. There were few who did not consider age as a risk factor because they felt that breast cancer could occur at any age. However, 40 and above is considered as age in which individuals are at high risk for breast cancer<sup>3, 14,31,37,41</sup>.

Pertaining to marital status as a contributing factor for breast cancer, the study participants voiced three opinions. The first was that married women are at a higher risk for breast cancer than unmarried women; the second opinion contradicted the first; and the third opinion was that there is no relation between marital status and occurrence of breast cancer. The participants arrived at these conclusions on the basis of their knowledge of their neighbors' experiences with breast cancer. A direct relation between marital status and breast cancer is not reported in the literature, but there are studies reporting that the mother's age (30 years or above) at the time of the delivery of the first child, small number

of children, or null parity are seen as risk factors for breast cancer<sup>13, 21, 22, 30</sup>.

Relating breast feeding as one of the risk factors contributing to breast cancer, participants' responses varied. Few perceived it as a cause, few reported it to be a preventive measure and a few felt that breast feeding does not have any relationship with breast cancer. However, earlier researches have reported that high estrogen level contributes to 80% of all the breast cancers. Thus in lactation, due to reduction in estrogen level, risk of breast cancer reduces<sup>40</sup>. Similarly citing the findings from earlier studies<sup>10, 24</sup>, it has been reported that "Breastfeeding for an extended period (at least a year) is associated with a decreased risk of both hormone receptor-positive and hormone receptor-negative breast cancer"<sup>28</sup>.

### ***Category 2: Preventive Measures against Breast Cancer***

The participants reported that breast feeding, large number of children and regular health screenings are preventive measures for breast cancer. The participants reported that those who did not practice breast feeding were at a higher risk of getting breast cancer, as breast feeding has been closely associated with the preventive aspect of breast cancer. Having a large number of children was also reported by the participants as a preventive measure, and they also mentioned that practicing breast feeding several times played its role too. Participants reported that physical examination and follow up are also the measures for prevention of breast cancer. Findings of the studies reported earlier indicate that breast feeding<sup>13, 21, 30</sup> a healthy diet, weight control, avoidance of alcohol and hormonal supplement as preventive measures and breast self-examination, Mammogram, physical breast examination as measures for early detection of breast cancer<sup>7, 26, 36</sup>.

Having a different perspective a number of participants (42%) reported that nothing can prevent the disease from occurring unless "Allah" (God) wants it to be prevented. Their opinion reflected the religious beliefs that they uphold. The majority of the people who live in the rural areas are Muslims, who follow Islamic rules and recite the "Quran" regularly. According to the Quran: in the name of God the Merciful "Wherever ye are, death will find you out, even if ye are in towers built up strong and high if some good befalls them, they say, this is from God; but if evil, they say, this is from thee (O prophet). Say: all things are from God. But what hath come to these people that they fail to understand a single fact?"<sup>17</sup>. The participants therefore, believe that (God)

"Allah" with His power can do anything and everything. Thus, the participants shared their religious beliefs that there is no need to perform breast self-examination because like any other diseases, breast cancer can be prevented only if Allah wishes to save you from that disease but if He does not wish to save you then you will not be protected. They justified this by quoting the "Quran" In the name of God the Merciful "And when I am ill, it is He who cures me"<sup>18</sup>. This perception in this study is similar to the findings of a number of studies, in which it is indicated that people believe that they get breast cancer by God's will<sup>9, 25</sup>.

### ***Category 3: Knowledge and Experience of breast Self-Examination***

Community and media were the main sources of information for the study participants. None of them received any teaching from the health care personnel. Among those who affirmed about practicing of the breast self-examination, majority of them were not regular nor did they know the correct technique of examination. Thus these findings were consistent with a number of previous studies which revealed that most women lacked knowledge about breast self-examination therefore; among them the rate of practicing breast self-examination was low<sup>14, 31, 35, 37</sup>. However, there are studies which reported that women are knowledgeable yet they do not practice breast self-examination<sup>3, 6, 12, 16</sup>.

In addition, when the term breast self-examination was used, it seemed that a majority of participants had not heard about it previously and they related the word "examination" with lab tests. As a result, the majority of the participants stated that the physician (doctor) is the one who is responsible for doing breast self-examination. The participants could not get the clear meaning of the word "self". Although the participants were interviewed in their local language 'Arabic', even then they could not relate to the word "self". Additionally, they identified examination as something to be done by a physician (like other physical assessments, such as heart and lung examination). Therefore, the participants could not relate breast self-examination to something that is to be done by the individuals themselves. Thus they asserted that breast examination should be done by the physician (doctor). Furthermore, none of the participants could identify the proper time and the correct steps for breast self-examination. Thus, it was evident that the participants lacked knowledge about breast self-examination.

## V. CONCLUSION

The findings from this study reveal that the middle-aged women living in the rural areas of Aswan, Egypt, have limited knowledge about breast cancer and breast self-examination. Whereas, through coordinated efforts of Health ministry, WHO, & other supportive agencies having knowledge and practicing breast self-examination, breast cancer could be detected early. Therefore, free education regarding breast self-examination should be provided to women. Additionally, affordable screening programmes, such as clinical breast examination by female doctors in the rural areas and mammography facilities should be made accessible to the community including women residing in rural areas.

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