Breast Cancer Knowledge, Perception and Breast Self-Examination Practices in Aswan Women, Egypt

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Abstract: Cancer is the leading cause of death worldwide. Breast cancer is the most common form of cancer among females in developed and developing countries. Early detection of breast cancer is of vital importance; as it's one of the major killer diseases of women all over the world. Breast self-examination (BSE) is the most important and effective way for the early detection of breast cancer. The study aims to focus on exploring perceptions about BSE among Egyptian women living in rural areas through Focus Group Discussion (FGD). In addition, this study is an attempt to explore whether or not Egyptian women have adequate knowledge about BSE and whether the middle-aged women practice BSE or not. This is because little is known about the BSE experience among these Egyptian rural women. The study design Focus Group Discussions with rural women; which consider as Qualitative descriptive-exploratory design. Data was collected from April 2011 to May 2011 in Aswan, Egypt. Audio tapes were used to record the interview, and notes were taken from observations made on things that might be relevant to the study, such as participants' non-verbal communication (facial expressions and other body language). The overall finding revealed a lack of knowledge about breast cancer and breast self –examination in middle aged women living in rural areas in Upper Egypt. The majority of the interviewed women believes that the physician should perform BSE. In addition 33% of these women believe that breastfeeding and multiple pregnancies increase breast cancer. The practice of BSE is very low, and in some cases; not exist among women in Upper Egypt rural areas. More than imagined there is no practice of BSE; although it's the only coin that can protect them from such disease. BSE is a better way than screening by health care professionals, as women can practice it themselves and thus help in the early detection of breast cancer. So, it is hoped that education of women about BSE will help to reduce mortalities of breast cancer and early detection of breast cancer instead of detection in the advanced stages. BSE for women of all ages as a very important tool in early detection of breast cancer. They should know the importance of BSE and the number of examinations they should perform. But, first, it is necessary to understand their perceptions and their knowledge about breast cancer and BSE. In the Egyptian culture, women often feel shy and even humiliated when they are asked to get their breast examined by the physicians. In addition when they do notice an abnormality in their breast they avoid seeking help.

Keyword: Breast cancer, Breast self-examination, Early Detection

1. Introduction

Breast cancer is a major killer disease of women both globally and regionally. It is the most common cancer among women, and the second cause of deaths among women worldwide **(WHO, 2010 and Parkin *et al*, 2002)**. It has affected women of diverse regional backgrounds, it is estimated that one million women develop breast cancer each year and approximately 519,000 women's deaths are related to breast cancer **(McPherson *et al*, 2000; WHO, 2010)**. According to **Manning-Walsh (2004)** breast cancer incidence has increased and it is alarmingly affecting women of all ages, seriously impacting their interpersonal marital and sexual relationships. **Stephen (2009)** describes breast cancer as "a malignant (cancerous) growth that begins in the tissues of the breast, cancer is a disease in which abnormal cells grow in an uncontrolled way". There is no known cause for breast cancer; however there are risk factors that are closely linked to the development and progression of breast cancer. Studies have shown that there is a high incidence of breast cancer among women during their productive period. Also, middle aged women (40-60) are most likely to develop breast cancer. The occurrence of breast cancer creates psycho-social stress for both the patient and the family, due to the threat it poses to a patient's life. Furthermore, breast cancer not only has a psychological effect on patients but it also affects the finances of the family, as breast cancer treatment is very costly. Yet, most patients with breast cancer seek medical help for the first time at stages two and three **(Khatib and Modjtabai, 2006)**.

In Egypt breast cancer is the most frequently diagnosed cancer among women, which constitutes 22.5 % of all cancers **(Ibrahim and Aref, 1982)**. Breast cancer accounts for 37% of all types of cancers, globally. However, the incidence of breast cancer

varies from one country to another **(WHO, 2010)**. In the United State of America (USA), it is estimated that around 20 women would develop breast cancer each hour, and around five women will die from breast cancer each hour **(Lancaster, 2005)**. Studies have established that the rate of breast cancer is the highest in the USA and Canada; where one out of nine women are expected to develop breast cancer, women aged 47-73 years being more susceptible to the disease, leading to epidemic proportions in these countries **(George, 2000; McPherson *et a*l, 2000; Naeem *et al*, 2008)**. According to another recent study conducted in the USA, in 2008, there were 182,460 reported cases of breast cancer **(Jemal et al, 2008)**. As mentioned above, and according to the **US Cancer Statistics (1999)**, and as cited by **Mei-yu and Tsu-yin (2004)**, cancer has been the primary cause of death in Asian American women since 1980. **Bender *et al* (2005)** estimated that cancer has a high incidence and death rate in the United States were 1,368,030 new cases of breast cancer were diagnosed and 653,700 deaths from breast cancer. According to **Altaf (2004)**, breast cancer is the most dangerous, ranking as one of the highest health problems among women in all countries. In addition, **Mele *et al* (2005)** reported that breast cancer is a very serious disease and that it has a high rate of mortality among women. Other research, by **Manning- Walsh (2004)**, reported that the main cause of anxiety and tension in women is breast cancer.

Incidence of breast cancer in the developing countries is high, almost as high as in the developed countries. One out of nine Pakistani women are expected to develop breast cancer (50 per 100,000), and among Indian women the rate is 9 per 100,000 (Kumar et al, 2009). In Iran, in 2005, the prevalence of breast cancer among women was 22 per 100,000 (**Tavafian *et al*, 2009**). Breast cancer is one of the major health alarms for many countries in the Gulf Region, such as Bahrain, where it comprises 46.8% of all cancers, and Jordan, where it represents 38% of all cancers, and in Egypt; it also represented by a higher percentage (42,5%) from total cancers **(ElSayed *et al*, 2009)**. Likewise, breast cancer is the most common cancer among Egyptian women. The Egypt National Cancer Institute (NCI) in Egypt reported that breast cancer represents 18.9% of all cancer cases "35.1% in women and 2.2 % in men" **(Omar *et al*, 2003)**. The incidence of breast cancer in Egypt (24 per 100, 000) is not different when compared with other countries, and the mortality rate related to breast cancer is 9.3% of all cancers **(Seif and Aziz, 2000)**. According to **Khatib and Modjtabai (2006)**, Egyptian women under the age of 50 are more likely to develop breast cancer, while women aged 50 years and older are the most commonly affected group. In Egypt, breast

cancer is usually detected at late stages (around 60% of the cases are detected in the third stage of breast cancer), when treatment options are limited; therefore, breast cancer has a high fatality rate **(Bender *et al*, 2005 and Ibrahim *et a*l, 2010)**. In Aswan, contrary to the overall Egyptian statistics, breast cancer is the most frequent cancer among both males and females **(Ibrahim et al, 2010)**. In fact, it represents 63.9% of all cancer cases among Aswan females, and women aged 40-59 years are the most commonly affected group. According to **Ibrahim *et al* (2010)**; "after the age of 20 years, breast cancer became the most frequent cancer with a peak in the age group 40-59 years". Most cases are diagnosed at later stages, as only 3.1% cases are diagnosed in the first stage. In fact around 96.2% of breast cancer cases are diagnosed in the second and the third stage, when treatment options are limited, making chances of survival of affected patients' poor. Hence, it is important to understand the Aswan females' perceptions about BSE and early detection of breast cancer. Moreover, the high incidence and mortality rates of breast cancer, as well as the high cost of treatment and availability of limited resources, require that BSE should continue to be a focus of attention for health care providers. The benefits of fighting breast cancer, including the positive impacts of early detection and screening need to be carefully addressed and stressed on.

Diagnosis of breast cancer during the early stage of the disease has been positively linked to a decrease in the mortality and morbidity of the illness and 'Mammography and breast self-examination' have been used as screening strategies for this purpose **(Budden, 1998; Gray, 1990; Mele *et al*, 2005)**. The two principal components of an early detection program for breast cancer are education to promote early diagnosis and screening. Several screening methods are available for breast cancer: breast self-examination (BSE), clinical breast examination (CBE), and mammography **(Khatib and Modjtabai, 2006)**. BSE remains the most commonly controversial recommended strategies for breast cancer screening. Although, all these various methods of breast cancer screening can be considered, BSE is considered to be comparatively more effective, cheap, and less painful; however, it is dependent on knowledge and attitude towards BSE practice among women, and its effect has not been established **(Miller *et al*, 1985)**. As far as clinical breast examination is one of the primary modes of screening for breast cancer and its effectiveness is dependent upon the skills of the health care providers and the facilities available. Mammography is known to reduce breast cancer mortality among women, but its benefits are dependent upon several factors, such as equipment

used, skills of the technician, and it is quite costly **(Budden, 1998; Gray, 1990; Mele *et al*, 2005; Khatib and Modjtabai, 2006)**.

There are also many barriers to breast cancer screening. According to **George (2000)** these barriers to breast cancer screening can be classified as personal, or as related to caregivers and demographic. Personal barriers include attitude and lack of information. At the caregiver level, the assumption is lack of knowledge, skills, attitude, and consistency. Demographic factors related to age, education level, or culture. Moreover, according to the researcher's experience of working in a general hospital in Aswan, Egypt, females avoid breast cancer screening because they are scared about having any breast abnormalities. So, the fear of detecting a lump is also considered as one of the breast cancer screening barriers.

Egypt here is an introduction about the study setting. Egypt is derived from the Greek 'Aegyptos', which probably comes from ancient Egyptian words referring to the land (Wikipedia). According to **Walter (1996)** the Egyptian population is quite homogeneous. In addition, Islam is practiced by the majority of the Egyptian population (90%) and it rules their personal, economic, political, and legal lives. In Egypt, men and women have equal legal rights. However equality is not determined only by law, as culture plays a role. Aswan was selected as the study setting; it is one of the cities located in Upper Egypt. Egypt is geographically divided into Upper and Lower Egypt, according to the flow of the River Nile, which starts from the South and ends in the North. So, the South part of Egypt is called Upper Egypt. Women in Upper Egypt remain considerably limited in terms of education, lifestyle, family life, and health care **(Singerman & Amar, 2006; Iskander, 2008)**. Many females in Upper Egypt are illiterate and leave school at an early stage. According to the **UNICEF (2005)**, it is estimated that only 38% of the females in Upper Egypt are literate. They also estimated that 250,000 girls drop out of school each year. The USAID indicates that 800,000 girls between the ages of 6 and 15, and 600,000 between the age of six and ten are out of school **(Anton, 2011)**. According to Iskandar **(2005)**, there were 41.23% illiterate Egyptian adult females in 2004 versus 50.23% in 1996. Today, Upper Egypt is still considered as a "neglected impoverished region" of the country and it's under improvement has been considered as one of the main factors leading to political fighting **(Al Ahrâm Weekly, 1996)**. The traditions, dietary patterns, daily activity, dressing, way of living, and even the dialect of Upper Egypt, are quite different. Specific to Upper Egypt, there is gender discrimination, such as men are autonomous to select their lifestyle but for women they are required to follow rules set by the male members of their families; father, brother, husband, and even the son. Thus, women need the approval of their male members for all kinds of decisions, including selection of their friends, completion of education, and selection of husbands. Families in Upper Egypt consider their daughters as their honor; therefore, they are required to be married as soon as their menstrual cycle starts. In addition, the principle of equal salary applies only in the government sector. Women working in the private sector are often paid less salary than men. Women do not have the same legal rights as men in the personal domain; such as marriage, divorce, and child custody **(**Miller 2000**)**. All the above factors from female illiteracy, gender discrimination and early marriage represent one of the classified barriers "personal barriers" of female breast screening.

The study aim to answer to that question "What are the perception of middle age women in rural areas of Aswan, Egypt regarding breast self examination in relation to their knowledge, attitude and practices?".

2. Material and Methods
Significance of Study to Nursing:

Incidence of breast cancer has increased and it seems that it will continue to rise, as predicted by scientists, physicians and previous studies. To decrease breast cancer morbidity and mortality rate, early detection is important. BSE is an important tool and should be practice to help in early diagnosis of breast cancer **(**Saarmann, *et a*l, 2002**)**.This study will enable researchers to understand perception of BSE among middle age women. Nurses who are working in the hospital or other health institute should be aware of breast cancer's knowledge, attitude and practice among women. Hence, nurses can help women in early detection and intervention of breast cancer. In addition, the findings of this study will enhance awareness among health professionals and women BSE acceptance in relation to their knowledge, practice and attitude. It also highlights the need to plan an intervention program about awareness of breast cancer's and its early detection, and improvement of knowledge, attitude and practice of BSE. As patient education is an integral component of nursing role; so those who are working in different areas in different states, nurses, health workers, health visitor and nurse practitioners should be able to provide health education according to their socio-cultural and arrange sessions on sharing the women experience, perception of BSE and guide in understanding early detection techniques. Moreover the research can be expanded and may help others in further researches if they want to search for more information on BSE in relation to specific aspects such as culture and religion.

Methodology
Study Design

Focus Group Discussions; are group discussions of 6-12 persons guided by a facilitator, during which group members talk freely and spontaneously about a certain topic. Conducted to obtain in-depth information on concepts, perceptions, ideas and they can be used to explore controversial topics, supplement already available information on community knowledge, attitudes, and beliefs and develop appropriate messages for health education programs. Focus group discussions are considered as a qualitative descriptive-exploratory study design. **Polit and Beck (2008**) defined a qualitative approach as conducting the study within a naturalistic pattern and dealing with the experiences of human beings in real life by exploring them directly. This helps in understanding the phenomenon in- depth, by giving rich and the most appropriate information. As suggested by the **Pope and Mays (1995)** qualitative research helps in understanding complex behaviors and attitudes. The purpose of an exploratory study is to examine a specific concept about which little is known (Burns and Grove, 2007). It emphasizes the identification of factors related to a phenomenon of interest. As the aim of this study is to explore perceptions related to breast self-examination (BES) knowledge, attitude, and practice of middle aged women in Egypt; a qualitative exploratory descriptive method was the best suited to this study. This design has been selected as a majority of studies carried out on women's knowledge, beliefs, attitudes, and practices related to BSE have been done using the quantitative design **(**Kearney, 2006**)**. To date, published researches have chiefly been designed to describe the demographic variables associated with breast cancer; to increase the compliance or proficiency of women treated; or to evaluate a screening technique of breast cancer. As a result little is actually known about women's experience of BSE.

Study Setting and Population

Two health care clinics (Atwani and Tounnap) in the rural areas in (Edfu) of Aswan province, Egypt, were selected as location for recruiting participants. The study population was middle aged (40-60 years) women coming to the health care clinics. The target population was all middle aged women who met the following inclusion criteria: (i) women aged between 40-60 years (ii) women who had not been diagnosed with breast cancer (iii) women who were living in the selected rural areas (iv) women who spoke Arabic or English (v) women who were willing to participate in the study and get their interviews Audiotapes. Women who were working as health care givers; or women who had any psychological health problems were excluded from the study, as this may affect their judgment, and also women who were not willing to participate in the study were excluded.

Study Sample and Size

The purposive sampling method was used. This type of sampling is often used by qualitative researchers when the aim is to contact participants who can give rich, in-depth information about the study phenomenon **(Polit & Beck, 2008)**. This study's sample comprised of 12 middle aged women from the rural areas; 6 from Tounnap village and another 6 from Atwani village. Face-to-face interviews of the participants were audio recorded.

Participants' Recruitment

The researcher met the physicians and nurses, who was working in health care clinics in the rural areas in Aswan- Egypt, to inform them about the study and requested them to identify potential participants. The women who came to the health care clinics, and who met the inclusion criteria for the study, were given an invitation and consent letter. The women who were willing to participate were asked to sign a written and oral consent form. Then, the researcher met them and scheduled the time and venue for the one to one interview, according to the women's convenience. The interview was held in a noise free setting at the health care clinics (Conference Room).

Data Collection

According to Polit and Beck (2008) a pilot study helps assess the "adequacy of the study and quality of instruments". Hence prior to collecting the data, the pilot testing of the interview guide was done on 1 middle aged women who came to the health care clinic in Aswan, Egypt, after taking the participant consent. The objectives of the pilot study were to evaluate the understanding of the semi structured questions, to assess the comfort level of the women, to identify the amount of time required by the participants for the interview and to determine the time of the day that is most suitable for the interview to be conducted. The data collected from pilot testing were used as part of the actual data. Data was collected from April 2011 to May 2011 in Aswan, Egypt. The data were collected using semi structured questions to guide an in-depth interview. This process (filling of demographic form, conducting interviews) required approximately 30-35 minutes. Individual interviews help to explore individual perceptions in detail, while maintaining confidentiality. As anticipated, the participants felt more comfortable and free while expressing and sharing their experiences in private. Audio tapes were used to record the interview, and notes were taken of observations made on things that might be relevant to the study, such as participants' nonverbal communication (facial expressions and other body language). At the end of

the session, the data were verified and cross checked with the participants for clarity and consistency. After audio-taping of the interview, the data were transcribed, translated, and was checked and matched with the verbal and nonverbal communication.

Interview Process

A written consent was taken from the participants prior to the interview. As the interviews were conducted in Arabic, the participants understood the questions readily and it helps in reducing bias. Probes were used to explore more information and to provide direction to the participants. Field notes were taken and observations such as nonverbal communications of the participants were noted, and observations, related to the environment that may provide clues related to the data or experience, to see whether the nonverbal and verbal communications matched or not. Codes were used for each participant, so that their names may not be revealed. The data was kept under lock and key and only the principal investigator had the access to it.

Data Analysis Plan

As data analysis in qualitative research begins with data collection (Polit & Beck, 2008), the researcher started analyzing data just after taking the first interview. Data analysis was carried out manually during research and data was read over and over again in search of meaning and deeper understanding. This careful reading of the interview data helped in obtaining a general sense of situation experience. According to Morse and Field **(2005)**, gathering responses according to the question is a significant procedure for semi structured interviews. Therefore, the researcher read the transcripts and gathered the responses to each question in a separate file. The gathered responses to each question were organized in a text that had three columns. The center column contained the participants' responses, the left column showed the coding and the right column included the researcher's comments and thoughts concerning the text. For coding, the researcher re-read the text, underlined words or phrases, and copied them into the left hand column of the document. Codes and identification numbers (W + number) were assigned to each individual text.

The data analysis was conducted based on the guidelines of **Unrau and Coleman (1997)**: (a) coding the transcribed interviews of the participants for analyzing data, (b) identifying emerging themes in the data, (c) labeling the themes with significant code words, (d) clustering and labeling using broader themes and sub themes throughout the analytic process, and (e) the weaving thematic strands together into an integrated picture of the phenomena under investigation. The codes of each category were identified through their origin, using an identification number. Each category was compared, as this helps the researcher in creating sub categories. After sorting the major categories into smaller ones, the researcher looked for atypical and representative cases that help in explaining the significant experiences found in the research. The researcher also looked for relationships amongst categories to find common themes. The researcher also referred to the notes that had the nonverbal expressions of the participants and her own feelings in the analysis process. The researcher kept the committee members and supervisor involved in the research throughout the analysis process.

Ethical Considerations

Informed consent and permission were obtained from the Aswan Directorate of Health. The principle of autonomy was followed, which meant that the participants were approached to seek their consent for voluntary participation. They had freedom to choose to terminate their participation at any time during the study. No potential physical or psychological harm was uncovered during the course of the study. Those willing to participate signed a consent form and a copy of the consent form was provided to the participants. Complete information about the study was provided to the participants. The participants were informed about the study purpose, risks, and the benefits of participating. Since confidentiality refers to the researcher's assurance to the participants that the shared information will not be publicized (**Burkhardt and Nathaniel, 2002**), the confidentiality in this study was maintained by not sharing the participants' data with any other participant, and this was observed throughout the study. Further, as anonymity and confidentiality are the key principles in maintaining privacy (**Burkhardt and Nathaniel, 2002**), the participants' identity was not revealed at any point in the study and codes were used instead of names. The researcher assured the participants that confidentiality would be maintained at all stages and data would not be utilized for any other purpose. If the need for secondary analysis of data arises, permission would be obtained from the relevant bodies.

This study helped middle aged women to verbalize their perceptions, feelings and experience about breast cancer and BSE. Women got emotionally upset in the process of sharing their experience about breast cancer and BSE. In these instances, break provided during the interview. The researcher answered all the participants' queries in order to provide complete information regarding the study to ease tensions and promote comfort.

In this study, rigor was maintained throughout by utilizing **Lincoln and Guba (1985)** guidelines, which identified by four criteria for maintaining the trustworthiness of a qualitative research: (i)

Credibility (truth value), (ii) dependability, reliability or auditability, (iii) confirmability or neutrality, and (iv) transferability and fittings. The research was described clearly; and the interview guide was used to ensure that the data was recorded accurately. The researcher ensured that the findings and the themes were logical and reflective of the data. Credibility, dependability, confirms ability, and transferability was maintained.

(i)Credibility

Lincoln and Guba (1985) explained credibly as presenting "such faithful descriptions or interpretations of a human experience that the people having that experience would immediately recognize it . . .". Furthermore, credibility is confirmed when others can recognize the experience when reading about it. To confirm the credibility of the findings, the researcher shared the outcomes with women who recognized the findings and confirmed that they were true to their experiences and perceptions. One technique for improving credibility is to give sufficient time for data collection activities in order to gain an in-depth understanding of an individual's experience.

(ii) Dependability/ Auditability

Dependability is maintained when another researcher can clearly follow the "decision trail" used by the investigator. In addition, another researcher should arrive at the same or comparable, but not contradictory, conclusions, given the researcher's data, perspectives and situation. To ensure dependability, the researcher applied and recorded the audit trial **(Lincoln and Guba, 1985)**. Dependability relies on three factors and should be ensured by the researcher: the sample size, the analysis approach, and the dissemination of the research result. The sample size was sufficient for the research design as the researcher interviewed until saturation was achieved. The researcher plans to disseminate the study findings through publication of articles and presentations at the national and international level. In this study, the audit trail and research plan were shared with the thesis supervisor who verified its dependability.

(iii) Confirmability

Lincoln and Guba (1985) explained confirm ability as a process that provides the student records in order to maintain the objectivity; and to verify the quality and adequacy of the results and interpretation. As suggested by **Lincoln and Guba (1985)** when audit ability, fittings, and credibility are established by an audit trail, confirm ability is automatically achieved. An audit trail which consisted of raw data, memos, communications, records of gestures, etc. was applied to meet these conditions.

(iv) Transferability

This will be achieved when study findings "fit" into contexts outside the study situation and when the audience views the findings as meaningful and transferable to the rest of the potential users. **Lincoln and Guba (1985)** termed transferability as the way of presenting adequate data such that external conclusions may be made about the findings. Through rich and extensive descriptions, the researcher has provided in-depth information about the context, the data, and the participants. The in-depth interviews, with rich descriptions about BSE perceptions, will allow the readers to decide about their transferability.

Findings Dissemination Plan

Results will be presented to nurses and nurse leaders of the Aswan Directorate of Health. The researcher will give recommendations and will work with Aswan nurses and their leaders to implement women BSE. The study will be presented at national scientific conferences and seminars, as well as published in local and international journals.

Findings

The data were collected with regard to two aspects; demographic information and obstetric history. The demographic and obstetric data that was collected at the commencement of each interview was documented on a sheet at the beginning of the interview.

The Demographic Profile

With regard to age, 9 participants (75%) were between 40-50 years of age while 3 participants (25%) were between 50-60 years. In education, half of the participants (50%) were illiterate. One participant (8.3%) had finished primary school passing 6th grade, three participants (25%) had a secondary level of education and had passed the 9th grade (note that in grades 7 to 9 English language was introduced) and two participants (16.7%) had the upper secondary level education (grade 10 till 12). Looking upon their employment status, eight of the participants (66.7%) were housewives, and only four of the participants (33.3%) were working women. Two were working as cleaners in primary schools and the third participant was a support staff at the Institute of Educational Administration. 3 participants (25%) were living in extended family as illustrated in (Table, 1).

The Obstetric Profile of the Participants

The obstetric profile revealed that the age of menarche was less than 15 years nearly for all the participants (91.7%) except one participant (8.3%) her age at menarche was more than 15 years old. All the participants (100%) were married. For the number of pregnancies, one (8.3%) had a history of less than four pregnancies, whereas the majority 10 participants (83.3%) had a history of 4-8 pregnancies, and one participant (8.3%) had more than eight pregnancies. With regard to the outcome of these pregnancies, all

the participants successfully delivered their babies; but the participant with a history of more than eight pregnancies had one abortion. Thus, 11 participants (91.7%) delivered between 4-8 children and one participant (8.3%) delivered three children. At the time of data collection half of the participants (50%), who had their menopause, reported that they were not using any method for family planning. These participants were not asked about their past practices of family planning. Among the remaining participants three (25%) reported using oral contraceptives as a family planning method, while three participants (25%) were on hormonal injections as illustrated in (Table, 2).

Table 1: Demographic profile of participants (n=12)

Variable	Number	Present (%)
Age		
40-50	9	75
50-60	3	25
Education level		
Uneducated	6	50
Primary	1	8.3
Secondary	3	25
Upper secondary	2	16.7
Graduate (Bachelors)	0	0
Above Bachelors	0	0
Occupation / Profession		
Housewife	8	66.7
Working woman	4	33.3
Family Structure		
Extended Family	3	25
Nuclear Family	9	75

Table 2: Obstetric History profile of participants (n=12)

Variable	Number	Percent %
Age at menarche		
Less than 15years	11	91.7
More than 15years	1	8.3
No. of pregnancies		
Less than 4	1	8.3
Between 4-8	10	83.4
More than 8	1	8.3
No. of children		
Less than 3	1	8.3
Between 3-8	11	91. 7
More than 8	0	0
Family planning		
Oral/Topical	3	25
Injection	3	25
IUD	0	0
Sterilization	0	0
None	6	50

Themes

The identified themes have been categorized under three main domains: cognitive, psycho-motor, and affective domains fig, 1.

Theme 1 (cognitive)

Category 1: Knowledge of Breast cancer

The participants defined breast cancer as a tumor and as a cyst. Nevertheless there were a few who could not use medical terminology to define it but said it is "a small amount or lump in the breast". However, there were a few who could not define what breast cancer meant to them. The participate state that the sources of knowledge were media, community and the physician. However, nobody mentioned the nurses' role in disseminating information about breast cancer. With regard to risk factors, the participants shared four main risk factors: gender, age group, marital status, and breast feeding. Regarding the gender only number 12 of the participants said that both men and women could be at risk for breast cancer. However the rest of the participants said that women are at risk for breast cancer. For the effect of the age as illustrated in (Fig., 2) Three of the participant (25 %) said the most common age for the risk of breast cancer is between30-35, another four participants (33.3%) said that there is no specific age for it. Nevertheless, one of the participant 8.3 %illustrated that the age of 25 at risk for breast cancer, while the rest four participants; two of them said that age 40 is most common risk for breast cancer and the other two said they don't know .

Concerning the Marital status; there were three opinions: 4 of the participants said that married women are more risk for breast cancer and 4 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, both single and married women could be diagnosed with breast cancer. In relation to breastfeeding practices, four of the participants who said that mother who breastfed their babies are at a higher risk for breast cancer; in contrast four said that mother who did not breast feed their babies are at a higher risk for breast cancer, and four said that breast feeding practices have no any effect on the occurrence of breast cancer.

Category 2: preventative Measures of Breast Cancer

As illustrated in (Fig., 1) we can find the answer for this question "if there are any preventative measures for breast cancer "? The answer could be divided into 4 sub-categories: breast feeding, large number of children, religious aspect, and examination and follow up. For the breastfeeding, it appears that half of the participants (6) agreed that breastfeeding was a preventive measure for breast cancer, because breastfeeding is the natural role of the breast. While, the rest indicated that mother who breastfeed could have the disease. Regarding, the large number of children (16.6%) of the participants agreed that having a lot of children could protect the women from being affected with breast cancer; more than those who have less number of children. About, Religious conviction

5 of the participants (41.6%), when they were asked about the preventive measure they agreed that breast cancer could be prevented only by God's will. Regarding the examination and follow up, 25% of the participants believed that breast examination and follow up could help in prevention of breast cancer. Also, examining the breast and doing regular follow–up with the doctor could prevent breast cancer.
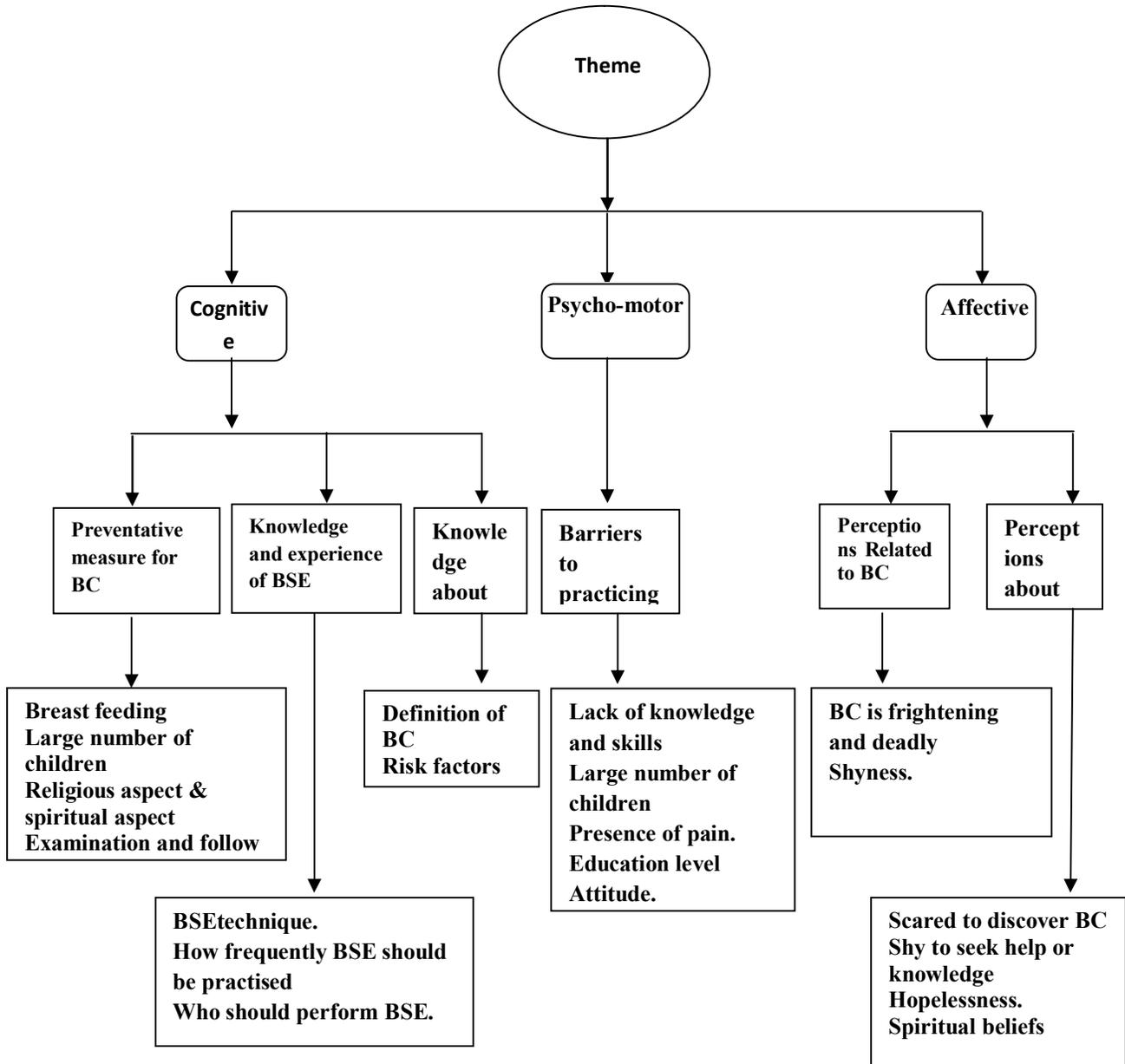

Fig. 1: The main themes, categories, and subcategories that emerged from the interview data "Where: BC= Breast Cancer, BSE= Breast Self Examination"

Category 3: Knowledge and experience of breast self examination
       When asked about participants' knowledge of BSE, immediate responses received from 25% of the participants were "they don't know". Whereas the rest of the participants respond that they had heard about it (BSE) and their source of information where media, physicians, and community. However, these participants either had incomplete information or incorrect information. The participants' knowledge about BSE technique can be put in three categories:

1. They do not know: 25% of the participants stated clearly that they did not know what the meaning of BSE was.
2. Incomplete information: 50.3% of the participants shared the technique of BSE and the steps needed for breast self examination. However, they had incomplete information about the steps and techniques for BSE.
3. Incorrect information: 25% of the participants had incorrect information about BSE.

About knowledge of how frequently BSE should be practiced; all the participants were answered this question; but no one of the participants gave the correct answer about the appropriate time to practice BSE and its frequency. Some said that they do not know. The rest said every few days or every few months.

The majority of the participants (83.8%) agreed that the person who should perform BSE is the doctor (physician), for various reasons as trust in doctors' abilities, trust in the physician's skill and a doctor as being the only one who can diagnose it. On the other hand no one mentioned nurses in their answers.
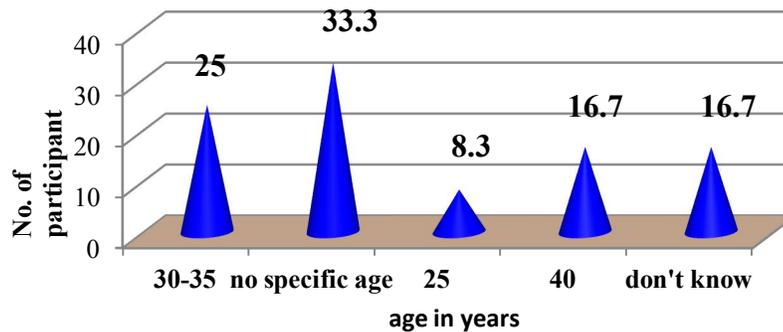

Fig.2: the proposed age for breast cancer risk by the participant

Theme 2 (Psycho-motor Domain)
Category 1: Barriers to practicing BSE practice
The participants shared the following as the reasons why they did not practice BSE.
Sub-category: Lack of knowledge and skill
As illustrated in (Fig, 1), 4 participants shared that one of the reasons why they did not practice BSE was a lack of knowledge and skill. While, other participants revealed that some of the reasons why they did not practice BSE as probably laziness, negligence, or a shortage of time, as most of the time they are busy with their children and housework. In addition, 41% participants identified a link between the practices of BSE with the presence of breast pain. They said if there is no pain they will not practice BSE. However, 25% of the participants shared that they were illiterate so they did not know how and why they should practice BSE. Nevertheless 16.7% of the participants shared that, there was no need to practice BSE as it made no difference to getting breast cancer at any stage.
Theme 3: Affective Domain
Category 1: Perceptions/ Feelings Related to Breast Cancer
Most of the participants were scared even to use the word breast cancer. They were afraid that if they mentioned the term (breast cancer) they might become victims of the disease and preferred to call "bad disease". The feelings that they expressed are categorized into the following sub-categories:
1. The pain and suffering from cancer: 25% of the participants said that they were scared about having pain and suffering related to breast cancer. While 33.3% of the participants said that may be they have breast cancer but they do not know.
2. Talking about consequences of breast cancer; the participants described their views and feelings using various terminologies, which are sub-categorized as follows:
    a. The participants perceived that women who are diagnosed with breast cancer will removed their breast.
    b. Some of the participants expressed that they are scared of breast cancer because it spreads all over the body.
    c. Cancer is deadly: All the participants said that breast cancer meant the end of life.
3. Shyness: In Upper Egypt, the culture does not give a female enough freedom to express her feelings, whereas for males there is no such restriction. They can report or complain about

whatever they feel. Since the breast is considered a sensitive and private organ of the body; so it is not easy to complain about it. It is not acceptable for females to complain about breast problems even to her mother.

Category 2: Perception of Breast Self-Examination
Sub-category: Scared to discover breast cancer

Some of the participants shared that they were scared of discovering breast cancer; so they were sacred to practice BSE. However, early diagnoses or discovery of breast cancer is important; however the consequences of this bad disease are so scary.

Sub-category: Shy to seek help or knowledge

33.3% participants expressed that they felt shy about doing BSE or seeing a doctor for BSE. As the culture in Upper Egypt is quite conservative, it is unacceptable for women seeking help or ask a male doctor about the intimate parts of the body; however they can seek advice from female doctors, if need to, but female doctors work mainly in urban areas; where it is about one hour driving distance by car. As this is a fairly poor rural area, few people can afford the cost of such a long trip.

Sub-category: Hopelessness

Participants between the age of 50 years and above believe that there is no need for them to practice breast self-examination. As they are old enough; they don't need to think about their future which is already ending. Whereas, respondents under 50 years of age shared their desire to learn about self-breast examination so that they could practice it.

Sub-category: Spiritual Beliefs

Among the study participants (41%) indicated that there is no need for breast examination; because only God (Allah) can protect women from such a devastating disease. So there is no need to practice BSE.

4. **Discussion**

This study showed that half of the participating women (50%) were illiterate, According to the **UNICEF (2005)** it is estimated that (38%) of the females in Upper Egypt are literate. In addition; the study revealed that, the majority of the participants (92%) had 6- 8 children.

Themes 1: Cognitive Domain (knowing)

In the present study, themes have been identified under three main domains; cognitive, affective, and psycho-motor domains. Each theme has further subdivided into categories. According to **Davis *et al*, (2004)** "The cognitive domain contains learning skills predominantly related to mental (thinking) processes. Learning processes in the cognitive domain include a hierarchy of skills involving processing information, constructing understanding, applying knowledge, solving

problems, and conducting research". There are two categories will be discussed under the cognitive domain; knowledge about breast cancer and knowledge and experience of breast self examination. The sources of knowledge as women stated in their interviews were media especially television (T.V), community and (female) physician. According to the researcher's experience the internet is available in Egypt, but still 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, **(Seif and Aziz, 2000; Alam, 2006)** indicated that the sources of women's knowledge about breast cancer and breast self examination are media, community, internet and health care givers. Regarding health care providers, the participants only mentioned the physician as their educators. None of the participants identified nurses as educators providing knowledge about breast cancer and its screening strategies.

Category 1: Knowledge about Breast Cancer

The study revealed that middle aged Egyptian women defined breast cancer as a tumor or lumps in the breast. The findings were coincidence with another study which evaluated the effect of breast self-examination and showed that only 10.6% and 11.5% of the total sample had knowledge about breast cancer and BSE **(Seif and Aziz, 2000)**. Similar studies in other countries agreed that women do not have enough knowledge about breast cancer and breast cancer screening **(Parsa and Kandiah, 2005; Powe *et al*, 2005; Chong et al, 2002 and Balogun and Owoaje, 2005)**.

The present study also showed that, the participants grouped the risk factors for breast cancer in four areas: gender, age group, marital status, and practice of breastfeeding. This finding that is in tune with the findings of other studies; which in addition to these risk factors reported early age of menarche, family history, hormonal and genetic factors as contributing factors for breast cancer (**Lester, 2007; Visvanathan et al, 2007**). 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 (**Weir *et al*, 2007; Lester, 2007; Omar et al, 2003**). The study's participants identified certain age groups as risk factors. However, a few did not consider age as a risk factor because breast cancer could occur at any age. On the contrary, those aged 40 and above were considered as high risk for breast cancer **(George, 2000, Omer *et al*, 2003; Alkhasawneh *et al*, 2009; Tara *et al*, 2008; Seif and Aziz, 2000)**. In regard to marital status as contributing factors for breast cancer the study participants voiced

three opinions. The first was that married women are at higher risk for breast cancer than unmarried women, the second opinion was against the first one and the third opinion was that there is no relation between marital status and the occurrence of 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, and a small number of children or 'nulliparity' as a risk factor for breast cancer **(Kelsey et al, 1993; Norsa'adah et al, 2005; Jaradeen, 2010 and Eaker et al, 2011)**. In addition; there seems to be general agreement that breast feeding protect women against breast cancer and that the protection increase with the duration of feeding, especially those women who feed their kids for 1 ½ years and above, gain more protection than other women with similar profiles **(Beral, 2002 and Zheng, 2001)**.

Category 2: Preventative Measures of Breast Cancer

The study participants shared that breastfeeding, large number of children and regular health screening; all are preventive measures for breast cancer. The last preventive measure as participants shared was that examination and follow up could be preventive aspect. There are studies reporting a number of preventive aspects of breast cancer, such as; breast feeding **(Norsa'adah et al, 2005; Jaradeen, 2010 and Eaker et al, 2011)**. Another number of participants (42%) reported that, nothing can prevent the disease from occurring unless 'Allah' (God) wants it to be prevented. This perception in this study is similar to the findings of a number of studies indicating that people believe that they get breast cancer by God's will **(Clark-Tasker, 1993)**.

Category 3: Knowledge and experience of breast self examination

The majority of the participants were not practicing BSE; but those who were practicing were not only irregular in their practice, but were also not knowledgeable about the correct technique; because they had not received any teaching from health care personnel. Community and media were their sources of information. These findings are consistent with a number of previous studies' **(Seif & Aziz, 2000; Georage, 2000; Omer et al, 2003; Sangchan et al, 2008)**. In addition, when the term BSE was used, it seems that the majority of participants had not heard about it previously and they related the word "examination" to laboratory tests. Also; the majority of the participants stated that the physician (doctor) is the one who is responsible for doing BSE. The participants could not get the clear meaning of word "self". Although the participants were interviewed in their local language 'Arabic' even then they could not relate the word 'self'. Additionally they linked examination as having to be done by a physician (like other physical assessments, such as heart and lung examination). Therefore, the participants could not relate BSE to something that is being done by the individuals themselves. Thus they reported that BSE is done by the physician (doctor). Furthermore, none of the participants could identify the proper time and the correct steps for BSE. Thus it was evident that the participants lack knowledge about BSE. However; this study's findings are different from a number of other studies which revealed that women have enough knowledge; yet they do not practice **(Alkhasawneh et al, 2009; Baron-Epel et al, 2004; Highton, 2002 and Demirkiran et al, 2007)**.

Category 1: Perceptions/ Feeling Related to Breast Cancer

This study found two main feelings related to breast cancer: one is breast cancer is frightening and deadly, and the second is shyness. These categories are further divided into subcategories and are discussed accordingly.

a. Breast cancer is a frightening and deadly disease

In this study the participants, through their verbal and nonverbal communications, expressed their feeling of being frightened of breast cancer. In Upper Egypt people used the words "bad disease" instead of the term cancer, as the participants believed that cancer is the most painful and deadly disease. In addition, they afraid of the consequences of breast cancer, as they believed that breast cancer lead to a mastectomy, then metastasis and lastly end of life with a very painful journey. This study finding matches previous studies' findings **(Okobia et al, _2006_; Hadi et al, 2010; Banning, 2010)**. Hence this highlights the need to educate women about the importance of breast self examination, as there is strong evidence that around 90% of breast cancer is detected by BSE. Thus, early detection can reduce mortality from breast cancer **(Smith, 2002 and Wilson and Ayers, 2007)**.

b. Shyness (Bashfulness)

The breast is considered a private organ and therefore; it is not discussed even if any abnormality is observed by the females residing in Upper Egypt. According to the Alliance for Arab Women **(AAW, 2009)** women in rural areas bashful about going to the health centers alone and it is difficult for them to get someone to accompany. In addition; women have to get their husband's permission to visit health centers and transport is not available all day. Thus only around 50% of women go to the governmental health facility to seek information. In addition; women reported that doctors are usually absent and there is no specialized female physician.

Category 2: Perceptions Regarding Breast Self-Examination

Although the participants did not have enough knowledge about BSE, the majority of them shared feelings of being scared of discovering breast cancer so; they were sacred to practice BSE. This powerful belief could discourage women from performing BSE. Similar findings were reported in other studies **(Banning, 2010)**. However; a few studies mentioned that women reported the benefits of BSE in early detection of breast cancer, which encouraged them to practice BSE **(Salazar, 1994; Mason and White, 2008)**. As mentioned earlier, women living in rural areas in the Upper Egypt get married early, around the age of 15 years, so by the age of 50 they are already grandmothers **(Singerman and Amar, 2006 and Iskander, 2008)**. Thus they feel that their objectives of their lives have been fulfilled and there is no need to think about self. Similarly, 75% of the study participants were between 50-60 years old, and they believe that there was no need to practice BSE as they were old enough and did not need to think about their future which is already ending. The findings in this study are dissimilar to the finding of a number of studies showing that the majority of the women had a positive attitude towards education about breast awareness and breast self-examination **(Haji-Mahmoodi *et al*, 2002; Kayode *et al*, 2005 and Chait, 2007)**.

Conclusion

The findings from this study reveal that the middle aged women living in the rural areas of Aswan, Egypt have lack of knowledge about breast cancer and BSE. In addition the participants reflected a negative attitude towards BSE which was affected by their lack of knowledge, thus the practice of BSE was low as well. This is mainly because healthcare personnel were not fulfilling their role of providing health education to women as individuals and as a community. Through education participants' perceptions about breast cancer could be corrected in the light of evidence based practice. The perception and attitude of women in Upper Egypt reflected their religious beliefs, so it would be helpful if they are provided health awareness in relation to religion.

Additionally they could be encouraged for BSE as one of the ways for the early detection of breast cancer, complementing this through provision of supportive mechanisms, such as clinical examination and access to the mammogram at an affordable cost. Through evidence-based practice it has been revealed that mammogram when used for diagnosis; "in case of any abnormality is detected through BSE or clinical examinations", it helps in the early detection of the cancer as well as in a better prognosis.

Recommendation

This study revealed that women lack updated knowledge about breast cancer and breast self examination. It is suggested that the Ministry of Health policies should be developed to provide free education regarding BSE as a strategy for the early detection of breast cancer. Additionally, at an affordable cost, screening programs such as clinical breast examination by female doctors in the rural areas and mammography should be made accessible and affordable to the community. As well as, the mass communication; i.e. media such as radio, television and print media should be involved to provide education to the community at large. Advocacy campaigns are recommended stating that individuals have the right to health.

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