Women Perception of Breast Self Examination at Obstetric Clinic, Wad Medani Police Hospital, Gezira State, Sudan, (2013)

Mohammed Malik YagoubHabeeb

B.Sc. in Nursing

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Community Health Nursing
Department of Nursing
Faculty of Applied Medical Sciences

February, 2014
Women Perception of Breast Self Examination at *Obstetric Clinic, Wad Medani Police Hospital*, Gezira State, Sudan, (2013)

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**Supervision Committee:**

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<tr>
<td>Dr. HananMabrouk Ramadan</td>
<td>Co-supervisor</td>
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Date:February, 2014
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Examination Committee:

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<td>Dr. Faiza Ali NasorTaha</td>
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Date of Examination: 4,February, 2014
Dedication

To My Mother
To My Father,
To My Brothers
To My Sisters
Acknowledgment

I am heartedly thankful to my main supervisor Dr. Ietimad Ibrahim Kambal, and co-supervisor Dr. Hanan Mabrouk Ramadan Mohammed for their support from the initial to the final level support and limited consultation enabled me to develop an understanding of the subject.

I would like to express my appreciation and sincere gratitude to my mother and my father not only in this research but for their support and advice in all life.

Thanks for all those who helped me in collection, analysis and typing of this thesis.
Women Perception of Breast Self Examination at Obstetric Clinic, Wad Medani Police Hospital, Gezira State, Sudan, (2013)  
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Abstract

Breast self examination is a screening method used in an attempt to detect early breast cancer or lumps. The method involves the woman herself looking at and feeling each breast for possible lumps, distortions or swelling. This was study aimed at assessing women Perception about Breast Self Examination at Wad Medani police Hospital, Gezira State, Sudan, during the period from April to November (2013). The sample size consisted of (110) available women in the obstetric clinic during the study period. The data collected by using a questionnaire designed for the purpose of the study. The data analyzed using statistical package for social sciences (SPSS). The results showed that 70.9% of the study sample their age group more than 20 years, while 72.7% of the study samples were workers. Regarding educational level 56.3% of the study samples had a university education. (71) of the study sample oriented about breast self examination with percentage of 64.5%. Regarding to the source of information about breast self examination it was found that 85.9% from mass-media. 44.5% of the subject their techniques for breast self examination were ideal and correct but 49.10% not sure that their method of examination were correct or ideal. The result showed that (60.7%) of the study sample said there were changes during breast self examination while 53.5% of them went to doctor for check-up. Most of the study sample stated that they must go to the doctor for check-up if there were any changed or abnormal things found in their breast as fixed tumors animations change in appearance of breast or found granules (69.1%, 90%, 82.7% and 78.2%) respectively. The results revealed that 74.5% of the study sample believed that the best time to do a breath self examinations after the end of the menstrual period immediately while 25.5% don't know. 99.10% of the study sample believed that the awareness of screening help in early detection of cancer. The study concluded that the majority of the study subject had adequately aware about the breast self examination as well as their attitude toward breast self examination were positive but their practice of breast self examination done in wrong method. The study recommended continuous health education program for all the women attending the obstetric clinic at the hospital.
تقييم معرفة إدراك السيدات عن الفحص الذاتي للندي بمستشفى الشرطة ومدني، عيادة النساء والتوليد، ولاية الجزيرة، السودان 2013م

محمد مالك يعقوب حبيب

ملخص الدراسة

الفحص الذاتي للندي هو الوسيلة المستخدمة في الكشف عن سرطان الثدي في وقت مبكر أو لأي أورام أخرى بالثدي. يجب على المرأة أن تقوم بالفحص الذاتي للثدي نفسها بالبحث أو الشعور عن أي كتل، تشوهات أو تورم بالثدي. هذه الدراسة وصفية دفعت إلى تقييم معرفة إدراك السيدات عن الفحص الذاتي للثدي بمستشفى الشرطة ومدني، ولاية الجزيرة، السودان أثناء الفترة من أبريل وحتى نوفمبر 2013م. استناداً إلى 110 من السيدات وهم اللائي تلقين على عبادة النساء أثناء فترة الدراسة. تم جمع البيانات باستخدام استمارة استبيان صممته للفحص الدراسة. تم تحليل البيانات باستخدام SPSS. أظهرت النتائج الدراسة أن 70.9% من عينة الدراسة كانت الفئة العمرية أكثر من 30 سنة، وذين أن 72.7% من عينة الدراسة عاملات. بالنسبة للمستوى التعليمي وجد أن 6.3% من عينة الدراسة كان تعلمتهم جامعي. (71) من عينة الدراسة يمارس الفحص الذاتي للندي بنسبة 64.5%. بالنسبة لمصدر المعلومات حول الفحص الذاتي للندي كانت 61 سيدة من عينة الدراسة معرفتهن من وسائل الإعلام (85.9%). (44.5%) أمكن أن ممارستهن للفحص الذاتي بكميات مناسبة ولكن نسبة (49.10%) غير صحيحة. كما أظهرت النتائج أن (60.7%) من عينة الدراسة أكنت أن هناك تغيرات خلال الفحص الذاتي للندي ونسبة (53.5%) منهن ذهبن إلى الطبيب. معظم عينة الدراسة ذكر أنهم يجب أن يذهب إلى الطبيب للفحص إذا كانت هناك أي أشياء غير طبيعية في الثدي مثل تغير اللون أو وجود الأورام الثابتة أو المتحركة في الثدي أو وجود حبيبات أو سحونة بالثدي بالمقابل التالية (69.1%، 90% و 82.7%). على التوالي، أظهرت النتائج أن (74.5%) من عينة الدراسة يعتقد أن أفضل وقت للقيام بالفحص الذاتي للندي بعد انتهاء فترة الحيض مباشرة في حين أن نسبة (25.5%) غير مرتقبه. (99.10%) من عينة الدراسة يعتقد أن الفحص الذاتي للندي يساعد في الكشف المبكر عن سرطان الثدي. خلصت الدراسة إلى أن غالبية عينة الدراسة على علم كيف حول الفحص الذاتي للندي أو أي أورام أخرى بالثدي، وكذلك موقفين تجاه الفحص الذاتي للندي كانت ايجابية ولكن ممارسة الفحص الذاتي للندي تحتضن القدرة غير صحيحة. أوصت الدراسة بإمضاء برنامج التثقيف الصحي المستمر لجميع النساء اللائي تلقين على عبادة النساء بالمستشفى.
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1. Introduction

1.1 Background

Cancer is one of the most important diseases which threatens human health nowadays. Breast cancer is the most commonly seen type of cancer in women (Sambanje et al., 2012). Breast cancer is the leading malignant tumor and it consists 30% of cancers among. Screening methods such as mammography, clinical breast examination, and breast self-examination are described as health improvement activities and play important roles in the early diagnosis of breast cancer. (Sambanje et al., 2012)

1-2 Problem statement

Worldwide breast cancer is one of the most common cancers. It has been reported that each clinical breast examination and breast self-examination year over 1.15 million women worldwide are diagnosed with breast cancer and 502,000 die from the disease. Thus, it is a fatal disease that has clutched women (Wilson CM, et al., 2004).

In India, breast cancer is the second most common cancer (after cervical cancer) with an estimated 115,251 new diagnoses and the second most common cause of cancer-related deaths with 53,592 breast cancer deaths in 2000 (Ferlay J BF, et al., 2001).

In Egypt, breast cancer is the most common cancer among women, representing 18.9% of total cancer cases (35.1% in women and 2.2% in men) among the Egypt National Cancer Institute’s series of 10,556 patients during the year 2001, with an age-adjusted rate of 49.6 per 100,000 people. (Elatar, I.2001)

In Sudan the breast cancer is common type of cancer accounting 34.5% of all female cancer (Mohammed, et al. 2011)
1.3 Justification and Rationale

Breast cancer is one of the main cause of death in a women in different age and different area. The breast self examination doesn't have a great interest to apply due to lack of awareness about the breast self examination as a rotation examination to detect early abnormality or change in the breast, as well as there was no previous study done in this field in Gezira State before.

1.4 Objectives

1.4.1 General Objective

- To assess the women perception about breast self examination at Gezira state, Wad Medani Police Hospital Obstetric Clinic, Gezira State, Sudan, during the period from April to November 2013

1.4.2 Specific Objectives

- To identify the women knowledge about breast self examination.
- To assess the women knowledge about breast cancer.
- To identify women attitude regarding breast cancer.
- To identify practices of the women regarding breast self examination.
2. Literature Review

2.1. Definition of the cancer

**Definition of breast cancer:** Cancer that forms in tissues of the breast. The most common type of breast cancer is ductal carcinoma, which begins in the lining of the milk ducts. Another type of breast cancer is lobular carcinoma, which begins in the lobules (milk glands) of the breast. Invasive breast cancer is breast cancer that has spread from where it began in the breast ducts or lobules to surrounding normal tissue. Breast cancer occurs in both men and women, although male breast cancer is rare. (*J Clin.*et al 2007)

2.2 Causes of breast cancer

There are many risk factors that increase the chance of developing breast cancer. Although we know some of these risk factors, we don't know how these factors cause the development of a cancer cell.

- Tobacco is, the single most important risk factor for cancer. Worldwide, it caused 22% of cancer deaths (1.7 million in 2008) and 71% of lung cancer deaths (almost 1 million in 2008) of breast cancer risk factors (Shin HR *et al* 2008)

- Specific Infections represent other major cancer risk factors with an estimated 2.1 million (16.4%) of the 12.7 million new cases in 2008 attributable to infection. This fraction is substantially higher in less developed regions of the world (23.4% of all cancers) than in more developed regions (7.5%). The most important infectious agents are Helicobacter pylori, Hepatitis B and C viruses and Human papillomaviruses, which together are responsible for 1.9 million cases of gastric, liver and cervix uteri cancers, respectively (De Martel, *et al* 2008)
2.3 Factors increase a woman’s risk of breast cancer

The strongest risk factor for breast cancer is age. A woman’s risk of developing this disease increases as she gets older. The risk of breast cancer, however, is not the same for all women in a given age group. Research has shown that women with the following risk factors have an increased chance of developing breast cancer. Genetic alterations (changes): Inherited changes in certain genes (including \textit{BRCA1}, \textit{BRCA2}, and others) increase the risk of breast cancer. These changes are estimated to account for no more than about 10 percent of all breast cancers. However, women who carry changes in these genes have a much higher risk of breast cancer than women who do not carry these changes. (Bray F, \textit{et al.}2008)

Mammographic breast density: The glandular (milk-producing) and connective tissue of the breast are mammographically dense—that is, they appear white on a mammogram. In contrast, fatty tissue of the breast is not mammographically dense and appears dark. Women who have a high percentage of breast tissue that appears dense on a mammogram have a higher risk of breast cancer than women of similar age who have little or no dense breast tissue. In general, younger women have denser breasts than older women. As a woman ages, the amount of glandular tissue normally decreases and the amount of fatty tissue increases. Abnormalities, such as tumors, in dense breasts can be more difficult to detect on a mammogram because tumors often also appear white.

Family history: A woman’s chance of developing breast cancer increases if her mother, sister, and/or daughter have been diagnosed with the disease, especially if they were diagnosed before age 50. Having a close male blood relative with breast cancer also increases a woman's risk of developing the disease. (Bray F, \textit{et al.}2008)

Personal history of breast cancer: Women who have had breast cancer are more likely to develop a second breast cancer.
Certain breast changes found on biopsy: Looking at breast tissue under a microscope allows doctors to determine whether a suspicious finding (one detected by a mammogram, for example) represents cancer or another type of breast change. Most breast changes turn out not to be cancer, but some may increase the risk of developing breast cancer. Changes that are associated with an increased risk of breast cancer include atypical hyperplasia (a noncancerous condition in which cells have abnormal features and are increased in number), lobular carcinoma in situ (LCIS) (abnormal cells are found in the lobules of the breast), and ductal carcinoma in situ (DCIS; abnormal cells are found in the lining of breast ducts). Because some cases of DCIS will eventually become cancer, this type of breast change is actively treated. Women with atypical hyperplasia or LCIS are usually monitored carefully and not actively treated. In addition, women who have had two or more breast biopsies for other noncancerous conditions also have an increased risk of developing breast cancer. This increased risk is due to the conditions that led to the biopsies and not to the biopsy procedures themselves. (Shin HR et al 2008)

Radiation therapy: Women who had radiation therapy to the chest (including the breasts) before age 30 have an increased risk of developing breast cancer throughout their lives. This includes women treated for Hodgkin lymphoma. Studies show that the younger a woman was when she received treatment, the higher her risk of developing breast cancer later in life. (Shin HR et al 2008)

Alcohol: Studies indicate that the more alcohol a woman drinks, the greater her risk of breast cancer.

Reproductive and menstrual history: Women who had their first menstrual period before age 12 or who went through menopause after age 55 have an increased risk of developing breast cancer. Women who had their first full-term pregnancy after age 30 or who have never had a full-term pregnancy are also at increased risk of breast cancer.
Long-term use of menopausal hormone therapy: Women who used combined estrogen and progestin menopausal hormone therapy for more than 5 years have an increased chance of developing breast cancer.

DES (diethylstilbestrol): The drug DES was given to some pregnant women in the United States between 1940 and 1971 to prevent miscarriage. Women who took DES during pregnancy have a slightly increased risk of breast cancer. Women who were exposed to DES in utero—that is, whose mothers took DES while they were pregnant—may have a slightly increased risk of breast cancer after age 40.

Body weight: Studies have found that among postmenopausal women who have not used menopausal hormone therapy, the chance of getting breast cancer is higher in women who are overweight or obese than in women of a healthy weight.

Physical activity level: Women who are physically inactive throughout life may have an increased risk of breast cancer (Cogliano, 2012)

2.4 Signs and symptoms of breast cancer

The first and common sign of breast cancer is often a painless lump or thickening in the breast. But early breast cancer is often found on a mammogram (for women 45 years and older) before a lump can be felt. Most breast lumps are not cancerous. Other symptoms of breast cancer may not appear until the cancer is more advanced. These include:

- A spontaneous clear or bloody discharge from the nipple, often associated with a breast lump
- Retraction or indentation of the nipple
- A change in the size or contours on the breast
- Any flattening or indentation of the skin over the breast
- Redness or pitting of the skin over the breast, like an orange peel
- A change in the color or feel of the skin around the nipple (areola).
A number of conditions other than breast cancer can cause the breasts to change in size or feel. Breast tissue changes naturally during pregnancy and menstrual cycle. Other possible causes of noncancerous (benign) breast changes include infection or injury. (Lewis, 2005).

2.5 Screening and investigation mammogram

Mammograms are probably the most important tool doctors have not only to screen for breast cancer, but also to diagnose, evaluate, and follow people who’ve had breast cancer. Safe and reasonably accurate, a mammogram is an x-ray photograph of the breast. The technique has been in use for about 40 years.

Screening mammograms are typically done every year to check the breasts for any early signs of breast cancer. Diagnostic mammograms are different from screening mammograms in that they focus on getting more information about a specific area (or areas) of concern usually due to a suspicious screening mammogram or a suspicious lump. Diagnostic mammograms take more pictures than screening mammograms do. A mammography technician and a radiologist would coordinate to get the images of doctor needs to address that concern. The technician may need to magnify a suspicious area to produce a more detailed picture that will help the doctor to make diagnosis. (Dubndar PE. et al, 2006).

2.6 Blood Chemistries

Blood chemistry tests measure levels of certain substances in the blood test may done

- the levels of liver enzymes (special proteins involved in vital chemical reactions) and bilirubin, to evaluate liver function
- levels of potassium, chloride, and urea nitrogen levels, which reflect the health of the liver and the kidneys during and after treatment
- calcium levels, to determine bone and kidney health
• blood sugar levels, which are important for people with diabetes and people taking steroids.

Abnormal blood chemistry results also may suggest that the breast cancer has spread to the bone or liver. In this case, your doctor would order an imaging study, such as a bone scan or CT scan, to gather more information. (Bray F, et al. 2008)

2.6.1 Blood cell count:

Before and during treatment for breast cancer, a doctor likely will order blood cell counts. These tests check to see whether the blood has normal amounts of various types of blood cells. The cancer itself and treatments such as chemotherapy and radiation therapy can reduce the levels of important blood cells your body needs to function properly. (Susan. 2013)

2.6.2 Blood cell counts typically measure:

White blood cells, which function as the immune system cells that defend the body against foreign substances and “invaders.” If you have a low white blood cell count, you have a higher risk of getting an infection. red blood cells, which carry oxygen throughout the body. In addition to measuring the number of red blood cells, a test will be done to measure the level of hemoglobin, an iron-rich protein found in red blood cells that carries oxygen from the lungs to the rest of the body. Another test will measure the hematocrit level, which is the fraction of whole blood volume that consists of red blood cells. platelets, which are cells that help the blood form clots to prevent bleeding. (Susan. 2013)

2.7 Breast biopsy

Breast biopsy removes a sample of breast tissue that is looked at under a microscope to check for breast cancer. A breast biopsy is usually done to check a lump found during a breast examination or a suspicious area found on a mammogram, ultrasound, or magnetic resonance imaging (MRI). (Healthwise, 2001)
2.8 Treatment of breast cancer

2.8.1 Surgery

Breast tumors in early stages can be completely removed by surgical resection. Surgical procedures have been evolving to attend to the high levels of associated morbidity. It was back in 1894 that Halsted proposed the classic radical mastectomy that has been the predominant technique for over half a century, consisting in the removal of the breast, both pectoral muscles and clearance of the axillary lymph nodes. This technique was associated with reduced range of motion of the shoulder, lymph edema, pain, numbness, and muscle weakness. So in the second half of the 20th century, the modified radical mastectomy was developed, which preserves the major or both pectoral muscles. As then, surgery became less extensive with breast-conserving treatment consisting of the excision, auxiliary clearance and breast irradiation (Gomide, et al. 2007).

2.8.2 Radiotherapy

Radiation therapy is treatment with high-energy rays or particles that destroy cancer cells. This treatment may be employed to kill any cancer cells that remain in the breast, chest wall, or lymph node areas after breast-conserving surgery. Radiotherapy has gained an increased importance, and a recent meta-analysis revealed that radiotherapy as a complement to surgery decreased the risk of loco-regional relapse by two-thirds compared to surgery alone (Clarke, M. et al 2005).

2.8.3 Medical therapy

Adjuvant treatment is systemic therapy given after surgery to patients with no evidence of cancer spread outside of the breast or the lymph nodes, with the purpose of destroying any microscopic cancer cells that might remain in the body and cause recurrence of the disease. Adjuvant therapy may consist of chemotherapy, endocrine therapy, and/or biological targeted therapies. Chemotherapy inhibits cell growth by
different mechanisms and thus reduces the rapid cell proliferation that is a characteristic of cancer cells. Endocrine therapies (tamoxifen or aromatase inhibitors) block the effect of oestrogen or reduce hormone levels, and have effect in types of BC where tumour growth is stimulated by estrogen (about two thirds of all cases). Biological targeted therapies selectively attack genetic expression that is typical for cancer cells. Adjuvant treatment is not recommended for all BC patients with early disease; adjuvant treatment decisions are guided by a risk-benefit assessment, weighting a patient’s risk of BC recurrence against adverse effects of adjuvant treatment (Ravdin, et al. 2006)

2.8.4 Patient follow-up

Regular follow-up is important in order to identify early signs of recurring disease. Follow-up is also important in order to identify toxicity of treatment, both short- and long-term. A recent systematic review of published evidence concluded that less intensive follow-up strategies based on periodical clinical exam and annual mammography were as effective as more intense surveillance schemes (Rojas. et al 2005)

2.9 Breast self examination

The purpose of breast self-examination is for a woman to learn the topography of her breast, know how her breasts normally feel and be able to identify changes in the breast should they occur in the future. Breast self-examination should be used in combination with mammography and clinical breast examination, and not as a substitute for either method. In fact, whether breast self-examination alone can reduce the number of deaths from cancer is currently a source of controversy(Lyon. et al 2002)

A working group of the International Agency for Research on Cancer has concluded that there is inadequate evidence that breast self-examination can reduce mortality from breast cancer. Though it is the easiest method of detection, it also the least precise. Breast self-
examination consists of two basic steps: tactile and visual examination of the breast. (Harris M et al 2002)

2.9.1 Tactile examination

An effective breast self-examination is one that is conducted at the same time each month, uses the techniques appropriately and covers the whole area of each breast, including the lymph nodes, underarms and upper chest, from the collarbone to below the breasts and from the armpits to the breastbone. Each area of examination should be covered three times, using light, medium and firm pressure. Breast self-examination can be done using vertical strip, wedge section, and/or concentric circle detection methods. In all three methods, the woman should use two or three fingers, thumb extended and using the sensitive palmar pads on the flat, inner surfaces of the fingers for a systematic and careful feel of the breast. It is best to use the palmar pads of the finger because fingertips are less sensitive and long nails can impede the movement of the hand. The breast should also not be compressed between fingers as it may cause the woman to feel a lump that does not really exist. (WHO, 2006)

2.9.2 Vertical strip

With the vertical strip method the woman should start in the underarm area of the breast, moving the fingers downward slowly until she reaches the area below the breast. The fingers are then moved slightly towards the middle and the process begins again, this time moving the hand upwards over the breast. This process continues up and down (WHO, 2006)

2.9.3 Wedge section

The wedge section technique was developed as some women find the circular movement of the hand easier to use during the breast self-examination. In this method, the breast is divided into wedges, moving the
palmer pads of the fingers towards the center of the breast or the nipple. Both breasts are examined wedge by wedge in this manner until completely covered. (Abdel-Fattah, et al 2000)

2.9.4 Concentric circle

In this method, the woman uses a circular motion starting with a small circle around the nipple area to feel the breast. The circle is widened as the woman moves over the surface of the breast. The breast, upper chest and underarm area are fully examined through this circular motion. As with other methods, both breasts should be fully examined (Abdel-Fattah, et al 2000)

2.10 Breast self-examination palpation technique

Divided into

- Lying down
- Standing in the shower

2.10.1 Lying down

For this position, the woman should start by lying on the bed, placing a pillow or folded towel under the left shoulder and the left hand behind the head. The shoulder should be slightly raised, sufficiently for the breast to fall towards the center of the top of the chest, and not towards the armpits. This allows the breast tissue to distribute evenly across the chest wall, making it easier to feel a lump in the outer upper quadrant of the breast, where the tissue is thickest and where most malignancies occur. Using the right hand, the woman should feel her breast using one of the examination techniques described above: vertical strip, wedge section or concentric circle. Once the left breast is examined with the left arm under the head, the entire examination should be repeated with the left arm in a relaxed position to the side. After this examination is complete, the woman should shift the pillow or towel to the right side, place the right arm under
her head, and examine the right breast using the left hand. Once again, the examination should be repeated with the right hand in a relaxed position to the side (Harirchi I et al 2001).

2.10.2 In the shower

As many lumps are felt when the breast and fingers are wet and slippery with lather (decreasing the friction), tactile examination of the breast in the shower is the method of choice for many women. If the breasts are small, the woman should place one hand on her head and examine the breast on that side with the other arm, using the vertical strip method. If the breasts are larger, it is best for the woman to immobilize the breast with the palm of her hand (first supporting from below and then pressing down from the top) and examine it with the other hand, again first from above and then from below (Bassey et al 2011)

2.10.3 Changes to look out for

In examining the breast, the woman should feel for changes in the texture and feel of the breast. Among the things that should be noted and reported to a physician are:

Any new lump or hard knot found in the breast or armpit; • any lump or thickening of the tissue that does not shrink or lessen after her next period; any change in the size, shape or symmetry of her breast; a thickening or swelling of the breast; any dimpling, puckering or indentation in the breast; dimpling, skin irritation or other change in the breast skin or nipple; redness or scaliness of the nipple or breast skin; discharge from the nipple (fluid coming from the nipples other than breast milk), particularly if the discharge is clear and sticky, dark or occurs without squeezing the nipple; nipple tenderness or pain; nipple retraction (turning or drawing inward or pointing in a new direction); any breast changes that may cause concern (Gwarzo et al 2009)
2.11 Visual examination

The visual examination of the breast is another tool in identifying possible breast disease. It should be noted that no woman has two breasts that are exactly identical; however, once a woman knows what her breasts look like, she is able to identify any changes in the shape, form, colouring or structure of the breast more quickly and can discuss these with the appropriate health care provider. (Gwarzo et al. 2009)

In preparing for the visual examination, the woman should stand in front of a mirror with her upper body unclothed. A good light should be placed to the side, rather than above, to better differentiate any irregularities. The woman should examine the breast with her arms relaxed and to the side; with her arms raised; and with her palms flat on the sides of her hips and pressing down. Two additional positions include clasping the hands in front of the forehead, palms squeezed together, to tighten the chest pectoral muscles and bending forward to examine the breasts. (W.H.O 2006)

When looking in the mirror, the woman must look for any changes in the contour or placement of the breasts, changes in colour and shape, discharge from the nipples and discoloration of the skin. Redness, irritation or prominent veins in the breast can signal an increased supply of blood to the breast, a sign that often accompanies tumour growth. Whitish scale on the nipples, ulcers and sores that do not heal properly are other signs of possible breast disease. An “orange peel” skin (swollen and shiny with large deep pores) has been found to be associated with blocked lymph ducts. A nipple that is flat, inverted or retracted, especially if this is new development, or one that is not inverted when the woman is upright but inverts when she leans forward, can also be associated with breast disease (Peltzer K, 2001)

2.12 Breast self-examination costs
The costs associated with the use of breast self-examination as a screening intervention are easy to identify and conceptualize. The direct monitoring costs include health education and outreach activities associated with training the trainers, providing information to the target population, offering scientific and diagnostic information to health care providers, and educating the general public regarding the benefits of early detection and use of breast self-examination. The indirect costs are related to the diagnostic and treatment services provided by health care workers associated with any findings as a result of breast self-examination (Susan G. Komen, 2004).

Surveys and studies have suggested the efficacy of breast self-examination techniques during gynaecological and physical health visits are among the most effective factors in promoting the use of breast self-examination. Availability of brochures, pamphlets and shower cards, for example, are important as a reminder to women to use breast self-examination on a regular basis. Finally, providing information on the effectiveness and importance of breast self-examination as an early detection tool is important.

2.13 Clinical breast examination

Clinical breast examination is an examination of the breast by a health care professional, such as a physician, nurse, or physician’s assistant. It includes both inspection (looking) of the breast and palpation (feeling). The areas examined include the entire breast/chest area (including the lymph nodes), above and below the collarbone, and under each arm. Clinical breast examination combined with mammography is considered essential to reducing mortality from breast cancer. Clinical breast examination is seen as an effective first step in determining the possible presence of the disease in women. However, it cannot be used...
alone, without the information provided through diagnostic mammography and find needle aspiration. The efficacy of clinical breast examination is dependent upon a number of factors: proper positioning of the patient, thoroughness of the search, use of a vertical strip technique, proper positioning and movement of the fingers, and an examination duration of at least 5 minutes per breast (Barton M, et al 2000)

2.14 Previous studies

A study done by Phumla Phungula, (2011), the titled "an investigation of knowledge and practice of Breast self examination Among female high school learners An intervention study" at Submitted in partial fulfilment of the requirements for the Degree of Master of Arts (Clinical Psychology) in the Department of Psychology, University of Zululand. Kwa-Dlangezwa. The main purpose of the study was to investigate whether female high school learners are knowledgeable of and practice breast self examination. The pre-measurement and post measurement single group design was used to ascribe differences between the pre- and post measurements to the experimental intervention. The sample was focused on two groups: multiracial (n = 56) and rural high school (n = 71) learners. These two groups were interviewed using a structured questionnaire (Pillay, 2002) assessing their knowledge and practice regarding breast self examination. The age range of the participants was between 14 and 21 years with a mean age of 16.65 years. Results showed that more than half (62.9%) of the total sample were aware of breast self examination. Older learners in higher grades were more knowledgeable about breast self examination than those who were younger and doing lower grades. Of those learners who were aware of breast self examination, 57.5% practiced BSE. Breast cancer awareness programme that was provided during the study had a great impact on the responses of the learners. Knowledge of BSE had a significant improvement. Public health education is a factor that impacts on young women’s knowledge and
understanding of breast cancer. Based on these young women’s responses, it has been concluded that current public health education is either not communicating its message or failing to reach enough women. Based on this assumption and the knowledge that most breast awareness campaigns are aimed at older women, it is recommended that an important improvement may be to target women at younger ages to educate them about what is normal or not, and what they should know and be aware of regarding their bodies.

Another study done in Sudan by: Samira Hamid et al, 2002. Self Examination Role of Medical Students in the Faculty of Medicine – University of Gezira – Sudan. In Sudan, breast cancer is the most common type of cancer accounting for 34.5% of all female cancers. Optimal chances for surviving breast cancer in women is by it early, either by breast self examination (BSE), clinical breast examination by health staff or by mammography. BSE has an important role in the early detection of disease and hence its management as it enables women to detect breast lumps of less than 1.0cm in diameter. The existing knowledge, attitude and practices (KAP) of 200 students and 340 women about BSE were assessed. Students conducted training of women in their assigned families. KAP of students and women was again assessed at the end of the study. In the pretest, 66.5% of students have heard about BES, 8.0% rated BSE as very important and only 7.2% used to practice it. After the intervation, the last figures rose to 100% and 73.9% successively. Prior to study, only 12.0% of women have heard about BSE. By the end of the students' intervention 60.5% of the women adhered to regular monthly BSE. No lump was detected by a student, while 4 women were referred by students for self-detected breast lumps. All received care at Wad Medani Teaching Hospital. The study revealed that medical students, through relevant curricula had a significant effect on the knowledge, practices and attitudes
of women in the community regarding early detection of breast cancer by regular BSE.

Another study done by Andrej P, et al (2009). Attitudes of midwifery students towards teaching breast-self examination. Faculty of Health Sciences, University of Ljubljana, Zdravstvena Pot 5, 10000 Ljubljana, Slovenia.

The purpose of this study was to assess the attitude of undergraduate midwifery students towards teaching other women in methods of breast self-examination (BSE). The study was performed at the beginning and at the end of students' study at the faculty of health Sciences in Ljubljana, Solvenia. It was carried out during the academic year 2002/2003 and involved 28 first and 25 third year undergraduate midwifery students. The data were gathered from questionnaire and processed with the use of descriptive and inferential statistics. All study participants were of the opinion that teaching other women in methods of BSE is of great importance for an early detection of breast cancer (BC) and that this task ought to be one of their duties. There were no significant differences between the two groups when the readiness to upgrade their own knowledge of BSE or when the optimism regarding the progress in breast cancer and therapy in the future were concerned. The readiness of midwifery students to pass the knowledge of BSE to other women could help to increase their breast health awareness and thus improve their willingness and ability to detect early changes, associated with BC.
3. Materials and Methods

3-1 Study design

A descriptive study conducted at Wad Medani Police Hospital to assess the perception of women about breast self examination during the period from April to November 2013.

3-2 Study area

This study conducted in Wad Medani Police Hospital Gezira state in Sudan. The one of the main hospital of police of the Gezira state, 189KM Southern Khartoum state, established at 2005, it received patients from neighbour states. It consist of four main departments (medicine, surgery, pediatric and obstetric and gynecology) including ten rooms or wards of medicine, seven rooms of surgery, one ward and five rooms of pediatric, ten rooms of obstetric and gynecology, intensive care unit, out patient of both medicine and pediatric and other supportive unit e.g. blood bank unit laboratory and radiological imaging unit, pharmaco unit and statistic unit. The capacity of hospital is 86 beds, daily average admission about 40 patients about obstetric clinic it’s a clinic providing health care for pregnant women (police and civilian) to detect and follow-up the clinic consists three consultants two of them are male and one female, two registrar. The medical officer, five house officers, two sisters and two midiwifes, distribute the clinic three days a week on Sunday, Tuesday and Wednesday, in the month according to the statistic at hospital found that the average per month police women about 200 and 60 women civilian.

3.3 Study Population

The women attended in Wad Medani Police Hospital at Obstetric Clinic, Gezira State, Sudan, during the period of the study from April to November 2013.
3.3.1 Inclusion Criteria

The available women at Wad Medani Police Hospital at Obstetric Clinic, Gezira State Sudan, during the period of the study from April to November 2013.

3.4 Sample Size

The available women (110) attending Obstetric Clinic, during the period of the study from April to November 2013.

3.5 Data Collection tools

A structured questionnaire was designed by the researcher and utilized to collect data about socio-demographic characteristics of the samples, their knowledge about breast self examination and breast cancer as well as their attitude.

3.6 Ethics

1- Official letters was taken to collect the data of this research from the director of the target hospital.

2- Pilot study was done to test the reliability of the selected questionnaire.

3- Permission was taken from the target subjects and simple explanation was carried out.

4- The researcher was filled the data collection tool from each women through direct interview.

3.6 Data analysis:

Data was analyzed and entered to the computer using statistical package for social sciences (SPSS). The data was tabulated in number and percentage.
4. Results and Discussion

4.1 Results:

Table (4.1) Distribution of the study sample according to their age groups, occupation and level of education:

<table>
<thead>
<tr>
<th>Age / years</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 20 years</td>
<td>32</td>
<td>29.1%</td>
</tr>
<tr>
<td>More than 20 years</td>
<td>78</td>
<td>70.9%</td>
</tr>
<tr>
<td>Total</td>
<td>110</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Occupation</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workers</td>
<td>69</td>
<td>72.7%</td>
</tr>
<tr>
<td>Housewife</td>
<td>41</td>
<td>37.3%</td>
</tr>
<tr>
<td>Total</td>
<td>110</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Educational level</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic level</td>
<td>8</td>
<td>7.3%</td>
</tr>
<tr>
<td>Secondary</td>
<td>31</td>
<td>28.2%</td>
</tr>
<tr>
<td>University</td>
<td>62</td>
<td>56.3%</td>
</tr>
<tr>
<td>Post graduate</td>
<td>9</td>
<td>8.2%</td>
</tr>
<tr>
<td>Total</td>
<td>110</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table (4.1) revealed that 70.9% of the study sample their age group more while 72.7% of the study samples were workers. Regarding educational level this table showed that 56.3% of the study samples had a university education.
Table (4.2) Distribution of the study sample according to their knowledge about breast self examinations and their sources of knowledge:

<table>
<thead>
<tr>
<th>Women had oriented about breast self examination?</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>71</td>
<td>64.5%</td>
</tr>
<tr>
<td>No</td>
<td>39</td>
<td>35.5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>110</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source of information regarding breast self examination</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mass-media</td>
<td>61</td>
<td>85.9%</td>
</tr>
<tr>
<td>Health education program</td>
<td>10</td>
<td>14.1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>71</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

This table showed that (71) of the study sample oriented about breast self examination with percentage 64.5%. Regarding source of information about breast self examination 61 women of the study sample were mass-media (85.9%).
Table (4.3) The subject knowledge during the process of breast self-examination:

<table>
<thead>
<tr>
<th>They are detected any changes during breast self examinations?</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>43</td>
<td>60.7%</td>
</tr>
<tr>
<td>No</td>
<td>28</td>
<td>39.3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>71</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>If there are detected any changes in breast, had require went to the doctor?</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>23</td>
<td>53.5%</td>
</tr>
<tr>
<td>No</td>
<td>20</td>
<td>46.5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>43</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Table (4.3) shows that (60.7%) of the study sample said there were changes during breast self examination 53.5% of them went to doctor for check.
Table (4.4) Distribution of the study sample according to their information about any of the following changes require going to the doctor:

<table>
<thead>
<tr>
<th>Change</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>%</td>
<td>No</td>
</tr>
<tr>
<td>A fixed tumors</td>
<td>76</td>
<td>69.1</td>
<td>34</td>
</tr>
<tr>
<td>Tumors animations</td>
<td>99</td>
<td>90.0</td>
<td>11</td>
</tr>
<tr>
<td>Difference in the appearance of the two breasts</td>
<td>91</td>
<td>82.7</td>
<td>19</td>
</tr>
<tr>
<td>Found granules</td>
<td>86</td>
<td>78.2</td>
<td>24</td>
</tr>
<tr>
<td>Change the color of the skin</td>
<td>83</td>
<td>75.5</td>
<td>27</td>
</tr>
<tr>
<td>Out any liquid from the breast</td>
<td>98</td>
<td>89.1</td>
<td>12</td>
</tr>
<tr>
<td>Breast pain</td>
<td>88</td>
<td>80</td>
<td>22</td>
</tr>
<tr>
<td>Heat sensation of breast</td>
<td>86</td>
<td>78.2</td>
<td>24</td>
</tr>
</tbody>
</table>

Table (4.4) showed that most of the study sample stated that they must go to the doctor for check-up if there were any changed or abnormal things found in their breast as fixed tumors animations change in appearance of breast or found granules (69.1%, 90%, 82.7% and 78.2%) respectively and also for other things like changes in color, chest pain liquid or heat sensation.
Figure (4.1): Are belief that the breast self-examination is an important?

This figure illustrates that most of all (99.1%) of the study sample considered the importance of breast self-examination.
Figure (4.2): Do you provide advice to others regarding breast self-examination

96% of the study sample offer advice to others about breast self-examination.
Table (4.5) What is the age group that should do the breast self-examination and the best position for breast self examinations:

No 110

<table>
<thead>
<tr>
<th>Age needed to BSE</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>I don’t know</td>
<td>19</td>
<td>17.3%</td>
</tr>
<tr>
<td>At any age</td>
<td>40</td>
<td>36.3%</td>
</tr>
<tr>
<td>From 20 – 70 years</td>
<td>51</td>
<td>46.4%</td>
</tr>
<tr>
<td>Total</td>
<td>110</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Different positions for breast self examinations</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>stand in front of the mirror position</td>
<td>71</td>
<td>64.5%</td>
</tr>
<tr>
<td>Not applicable</td>
<td>39</td>
<td>35.5%</td>
</tr>
<tr>
<td>Total</td>
<td>110</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table (4.5) illustrates that 46.4% of the sample of the study believe that from the age of 20 to 70 years is the important stage to do a breast self-disclosure, while 36.3% believe that the task of any age to do a breast self-examination. Regarding the best method 64.5% said stand in front of the mirror position.
Table (4.6) The best time to do the breast self-examinations in relation to menstrual cycle:

<table>
<thead>
<tr>
<th>The best time to do a self-examinations</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>After the end of the menstrual period immediately/ month</td>
<td>82</td>
<td>74.5</td>
</tr>
<tr>
<td>I don't know</td>
<td>28</td>
<td>25.5</td>
</tr>
<tr>
<td>Total</td>
<td>110</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table (4.6) revealed that 74.5% of the study sample believed that the best time to do a self examinations after the end of the menstrual period immediately while 25.5% don't know.
Figure (4.3): Are belief that the awareness of screening helps in early detection of the breast cancer?

This figure showed that 99.10% of the study sample believed that the awareness of screening help in early detection of cancer.
Figure (4.1) The methods had done for breast self-examination is an ideal or correct method?.

This figure illustrates that 44.5% of the subject be sure that their technique for breast self examination were ideal and correct but 49.10% not sure that their method of examination were correct or ideal.
Table (4.7) The Practices of the breast self examination:

No 43

<table>
<thead>
<tr>
<th></th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected</td>
<td>17</td>
<td>39.53%</td>
</tr>
<tr>
<td>Not Corrected</td>
<td>26</td>
<td>60.46%</td>
</tr>
<tr>
<td>Total</td>
<td>43</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table (4.6) revealed that 39.53% of the study subject done that correct practice breast self examination, while 60.46% not correct.
4.2 Discussion

Cancer is one of the most important diseases which threatens human health nowadays. Breast cancer is the most commonly seen type of cancer in women. Breast cancer is the leading malign tumor and it consists 30% of cancers among. Screening methods such as mammography, clinical breast examination, and breast self-examination (BSE) are described as health improvement activities and play important roles in the early diagnosis of breast cancer. (Sambanje et al, 2012). Descriptive study conduct at Wad Medani Police Hospital to assess the perception of women about breast self examination for cancer during the period from tenth April to November 2013. The sample size available women (110) at Wad Medani Police Hospital Gezira State Sudan, during the period of the study from April to November 2013. The data was collected by using a questionnaire designed by the researcher. The data was analyzed and entered to the computer using statistical package for social sciences (SPSS). The results showed 70.9% of the study sample their age group more while 72.7% of the study samples were workers. Regarding educational level this table showed that 56.3% of the study samples had a university education. (71) of the study sample oriented about breast self examination with percentage 64.5%. Regarding source of information about breast self examination 61 women of the study sample were mass-media (85.9%). 44.5% of the subject be sure that their technique for breast self examination were ideal and correct but 49.10% not sure that their method of examination were correct or ideal.

Also the result showed that (60.7%) of the study sample said there were changes during breast self examination 53.5% of them went to doctor for check. And most of the study sample stated that they must go to the doctor for check-up if there were any changed or abnormal things found in their breast as fixed tumors animations change in appearance of breast or
found granules (69.1%, 90%, 82.7% and 78.2%) respectively and also for other things like changes in color, chest pain liquid or heat sensation.

The result illustrated that most of all (99.1%) of the study sample considered the importance of breast self-examination. (96%) of the study sample offer advice to others about breast self-examination. (46.4%) of the sample of the study believe that from the age of 20 to 70 years is the important stage to do a breast self-disclosure, while 36.3% believe that the task of any age to do a breast self-examination. Regarding the best method 64.5% said stand in front of the mirror method or examination on the bed.

The results revealed that 74.5% of the study sample believed that the best time to do a self examinations after the end of the menstrual period immediately while 25.5% don't know. 99.10% of the study sample believed that the awareness of screening help in early detection of cancer.

The study revealed that 39.53% of the study subject done that correct practice breast self examination, while 60.46% not correct. The results is differ to study done by Samira Hamid et al, 2002. Self Examination Role of Medical Students in the Faculty of Medicine – University of Gezira – Sudan. In Sudan, breast cancer is the most common type of cancer accounting for 34.5% of all female cancers. Optimal chances for surviving breast cancer in women is by it early, either by breast self examination (BSE), clinical breast examination by health staff or by mammography. BSE has an important role in the early detection of disease and hence its management as it enables women to detect breast lumps of less than 1.0cm in diameter. The existing knowledge, attitude and practices (KAP) of 200 students and 340 women about BSE were assessed. Students conducted training of women in their assigned families. KAP of students and women was again assessed at the end of the study. In the pre-test, 66.5% of students have heard about BES, 8.0% rated BSE as very important and only 7.2% used to practice it. After the intervention, the last figures rose to 100% and 73.9% successively. Prior to study, only 12.0%
of women have heard about BSE. By the end of the students' intervention 60.5% of the women adhered to regular monthly BSE. No lump was detected by a student, while 4 women were referred by students for self-detected breast lumps. All received care at Wad Medani Teaching Hospital. The study revealed that medical students, through relevant curricula had a significant effect on the knowledge, practices and attitudes of women in the community regarding early detection of breast cancer by regular BSE.
5. Conclusion and recommendation

5.1 Conclusion:

Based on the results of the study the researcher concluded that:

- The majority of the study subject adequately aware about the breast self examination as well as their attitude toward breast self examination were positive but their practice breast self examination in wrong way.
5.2 Recommendations:

Based on the conclusion of this study the researcher recommended the following:

- Continuous health education program for all women attending the obstetric clinic at the hospital.
- Offer all attending women to the obstetric clinic booklet and brochures about breast self examination and its advantages for early detection of cancer.
- Increase the awareness of all women in the public about breast self examination through mass-media.
Reference


Barton M, Harris R, Fletcher SW. Does this patient have breast cancer? The screening clinical breast examination: should it be done? Journal of American Medical Association, 2000, 282:1270–1280


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Appendix I
Questionnaire about women Perception about Breast Self Examination at
Wad Medani police Hospital, Obstetric Clinic  Gezira State, Sudan, (2013)

Part( 1):

Personal data

1-age.................................

2-educational level:

a- Basic Level (  ) b-Secondary school (  )

c-University level (  ) d-Post graduate (  )

3-occupation:

Worker (  )  House wife (  )

Part (2)information about breast self examination

1- Do you have an orientation about breast self examination?

a- yes (  )  b- no (  )

2-if answer yes what is your source of information?

a  –media (  ) b  -health education program (  )

c  –others (  )

3 The way you have done for breast self examination is an ideal and
correct method?

a  -yes (  ) b  –no (  ) c- I don’t sure (  )

4. have you applicated  for breast self examination before?

a  -yes (  ) b  –no (  )
5 - if you answer yes what is the mechanism of breast self examination you did?

a –standing up in front of the mirror during showering (  )
b –setting or laying down during rest (  )

6- Are detected any changes during breast self examination:

a -yes (  ) b –no (  )

7-when did you do breast self examination if there any changes you went to doctor?

a -yes (  ) b –no (  )

8- What are the following changes require going to the doctor?

a- A fixed tumors (  )
b- Tumors animations (  )
c- Difference in the appearance of the two breast (  )
d- Found granules (  )
e- Change the color of the skin (  )
f- Out any liquid from the breast (  )
g- Breast pain (  )
t- Heat sensation of breast (  )

9- Are you considered that breast self examination is important?

a -yes (  ) b –no (  )

10- Do you provide advice to others regarding breast self examination?

a -yes (  ) b –no (  )
11- What is the age group that should do the breast self examination?
  a- I don't know ( )  b- At any age ( )
  c- from 20 – 70 years ( )

12- What are different method for breast self examination?
  a- Stand in front of the mirror ( )
  b- I don't know ( )

13- The best time to do a breast self examination in relation to menstrual cycle?
  a- After the end of the menstrual period immediately/ month ( )
  b- I don't know ( )

14- Do you think that the awareness of screening help in early detection of cancer?
  a -yes ( )  b- no ( )

15- Explain the technique of breast-self examination you do your self?
  a- Correct ( )  b- Incorrect ( )