KNOWLEDGE AND PRACTICES OF BREAST SELF-EXAMINATION AMONG WOMEN ADMITTED AT A PRIVATE CLINIC, ZIMBABWE

by

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DECLARATION

I declare that **KNOWLEDGE AND PRACTICES OF BREAST SELF-EXAMINATION AMONG WOMEN ADMITTED AT A PRIVATE CLINIC, ZIMBABWE** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references and that this work has not been submitted before for any other degree at any other institution.

SS Muchirevesi

15 August 2016

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ABSTRACT

Monthly breast self-examination (BSE) is an extremely important part of health care for all women in every stage of life as a primary tool in the prevention of breast cancer. The purpose of this study was to determine the knowledge and practice of BSE among women at a private clinic in Zimbabwe.

 A non-experimental cross-sectional descriptive research design was used. The accessible population was one hundred women admitted to the selected private clinic. Data collection was done using a questionnaire which consisted of three parts: socio-demographic characteristics, knowledge about BSE and practices of BSE. Data obtained was analysed using EPI INFO version 3.3.2.

Results showed that respondents were knowledgeable about breast cancer early warning signs and symptoms and BSE. About 28% of the respondents were aware of when to initiate BSE and 74% performed BSE, but their practice was poor. Educational materials should be freely available at hospitals and schools to enhance BSE awareness.

KEY CONCEPTS

Breast cancer; breast self-examination practices; knowledge.

ACKNOWLEDGEMENTS

Dedication

This study is dedicated to my family for their support throughout the entire period of the study. I appreciate the financial support and encouragement rendered.

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LIST OF ABBREVIATIONS

ACOG American College of Obstetrics and Gynaecology

ACS American Cancer Society

BSE Breast self-examination

BRCA Breast cancer

BRCA 1 Breast cancer 1

BRCA 2 Breast cancer 2

CBE Clinical breast examination

MRI Magnetic resonance imaging

NBCF National Breast Cancer Foundation

WHO World Health Organization

CHAPTER 1

ORIENTATION TO THE STUDY

1.1   INTRODUCTION

Chapter 1 presents the background to the research problem, the aim, objectives and significance of the study; describes the research design and methodology; defines key terms, and outlines the structure of the dissertation.

1.2   BACKGROUND TO THE PROBLEM

Cancer is a complex group of diseases with many possible causes. *Collins English Dictionary* (1994:234) defines cancer as "any type of malignant growth or tumour, caused by abnormal and uncontrolled cell division; it may spread through the lymphatic system or blood stream to other parts of the body" [C14: from Latin: crab, a creeping tumour; related to Greek *karkinos*, crab, Sanskrit *karkata*].

Although the underlying cause of breast cancer is still unknown, Allen, Van Groningen, Barksdale and McCarthy (2010:446) identify the following risk factors:

Age – Breast cancer is frequently diagnosed in women older than 50 years. This might be due to an increased probability of mutagenic changes occurring over a long span of life.

Gender – Breast cancer almost exclusively affects women (99%) and seldom men (1%).

Heredity – The risk increases by two to three times if a mother or sister had breast cancer and is further increased if the relative was diagnosed during menopause and if the cancer was bilateral.

Reproductive history – Childless women have an increased risk as well as women who bear their first child at the age of 30 years or over. The implication is that a full-term

pregnancy at an early age promotes changes in breast development that protect the breast.

Early menarche and late menopause – The risk increases when menstruation begins before 12 years of age and menopause occurs after 55.

These risk factors show the importance of early detection, aided by screening, as required to greatly decrease the mortality associated with this cancer and it also allows for more treatment choices if breast cancer is diagnosed early.

Breast self-examination (BSE) is one of the screening methods for early detection of breast cancer. It is a check-up women do to look for changes or problems in the breast. BSE helps women to familiarise themselves with how their breasts look and feel, so that they are able to detect any changes and alert health professionals early. Adult women of all ages are encouraged to perform BSE at least once a month. Premenopausal women should do it on day 5 to day 7 of the menstrual cycle, (the first day of menses is considered day 1) and once monthly for postmenopausal women (Smeltzer & Bare 2004:1450, 1452).

Other screening methods available include mammography and clinical breast examination (CBE). Mammography can detect a tumour before it is clinically palpable (smaller than 1 cm). However, mammography has limitations. For example, it has a false negative rate ranging between 5% and 10%, and is largely not affordable. Clinical breast examination (CBE) is performed by advanced practice nurses and other health care providers. It is recommended that CBE be part of a periodic health assessment, at least every 3 years for women in their 20s and 30s and every year for asymptomatic women at least 40 years of age (ACS 2010:2).

In Zimbabwe, CBE may also not be appropriate or viable because most women in Zimbabwe do not present themselves for a physical examination. It costs between $15 and $30 US dollars to visit a general practitioner and $50 and $80 US to visit a specialist, which is far beyond the reach of most women. Ncube (2014:lifestyle 2) stresses that cancer is a serious disease affecting many women and it is important for women to constantly check their breasts so as to notice any changes or lumps. It is important for women to seek medical advice if they suspect anything and not to rely on

myths. At the same time, treatment for breast cancer is very expensive and most people are not on medical aid (Ncube 2014:lifestyle 2).

Breast cancer has become a major health problem in females because of its high incidence in recent years (Moodi, Mood, Sharifirad, Shahnaz & Sharifzadeh 2011:316). Moreover, breast cancer is the second leading cause of cancer-related deaths in women (Allen et al 2010:444). In Zimbabwe, cervical cancer was recorded as the leading cancer in women of all races (33, 2%) followed by breast cancer (11, 6%) in 2011 (Zimbabwe National Cancer Registry 2012:42). Sankaranarayanan*, Ramadas, Thara, Muwongwe, Prabhakar, Augustine, Venuqopal, Anju and Mathew (2011:1476) initiated a trial in the Trivandrum district in Kerala, India to evaluate whether three rounds of triennial clinical breast examination (CBE) could reduce the incidence rate of advanced disease incidence and breast cancer mortality. Sankaranarayanan et al (2011:1476) referred to Ferlay, Shin, Bray, Forman, Mathers and Parkin's (2010) report that globally, 1 383 500 breast cancer cases and 458 400 breast cancer-specific deaths were recorded in 2008, half of which occurred in low- and middle-income countries. More than half of breast cancer patients die of the disease because of limited access to early detection and mammography. Mammography screening is neither affordable nor feasible in low- and middle-income countries (Sankaranarayanan et al 2011:1476). Allen et al (2010:444) found that gene mutations such as breast cancer 1 (BRCA 1) and breast cancer 2 (BRCA 2) symbols for breast cancer genes are associated with high risk of developing breast cancer. The lifetime risk of a woman carrying BRCA 1 or BRCA 2 genes to develop breast cancer is 40-65%. The BRCA 1 and BRCA 2 genetic test available can be considered as primary prevention (Allen et al 2010:444). In Zimbabwe, economic hardship prevents most, if not all, women from accessing the test. Screening for early detection of palpable tumours through breast self-examination becomes a useful cost-effective means of reducing mortality (Allen et al 2010:445).

Late presentation for treatment is a problem because little can be done in terms of curative management. Disruption of life styles will be inevitable when patients have to make frequent visits for palliative management. Chemotherapy will be strongly indicated in the late stages and patients will be subjected to serious adverse effects. Chemotherapy costs between $150 and $200 US dollars per session and 12 sessions are done. Radiotherapy costs about $400 to $500 US dollars for 10 sessions. Early detection therefore, aided by screening, decreases the mortality associated with breast

cancer and allows for more treatment choices if breast cancer is diagnosed (Allen et al 2010:444)

1.3   STATEMENT OF THE RESEARCH PROBLEM

Breast cancer is a serious disease affecting many women in Zimbabwe. Zimbabwe cancer statistics revealed that cervical cancer (33,2%) and breast cancer (11,6%) were the leading cancers among women of all races (Chokunonga, Borok, Chirenje, Nyakabau & Makunike-Mutasa 2011:30). In 2011, of 375 (11,5%) women newly diagnosed with breast cancer, 329 were blacks and 46 were whites (Chokunonga et al 2011:30, 33). In 2012, 406 (11,6%) women were newly diagnosed with breast cancer. Of these, 381 were blacks and 25 were whites (Chokunonga, Borok, Chirenje, Nyakabau & Makunike-Mutasa 2014:36, 39). This shows an increase in breast cancer especially among black women. At present the BRCA1 and BRCA2 genetic test available, which can be considered the primary prevention method, is not accessible to many women in Zimbabwe for economic reasons. Screening by means of BSE for early detection becomes a useful cost-effective means of reducing mortality.

There are three effective screening techniques available, namely mammogram, CBE and BSE. Of these, BSE is the most effective and accessible screening technique in Zimbabwe. Most developing countries are unable to provide mammograms to all women at high risk, and most women do not have the financial means to cover the cost.

Strengthening women's knowledge of the early warning signs and symptoms of breast cancer, therefore, remains the cornerstone in effective prevention of late presentation of breast cancer for treatment.

1.4   PURPOSE OF THE STUDY

The purpose of the study is to find out what women know about breast self-examination. The information will be used to   improve health education to ensure that breast cancer is detected and treated at an early stage.

1.4.1 Objectives of the study

In order to achieve the purpose, the objectives of the study were to

- determine the knowledge of breast self-examination among women admitted at a private clinic in Zimbabwe
- identify and describe the level of women's practice of breast self-examination (BSE)

1.4.2 Research questions

The study therefore wished to answer the following research questions:

- Do women admitted at a private clinic in Zimbabwe have knowledge of breast self-examination?
- What are the levels of breast self-examination practice of women admitted at a private clinic in Zimbabwe?

1.5   FOUNDATIONS OF THE STUDY

Research is based on theory. A theory consists of an integrated set of defined concepts, existence statements and relational statements that present a view of a phenomenon and can be used to predict, explain, describe and control the phenomenon (Brink, Van der Walt & Van Rensburg 2006:21). A framework helps the researcher to organise the study and provides a context in which to examine a problem, and gather and analyse data (Brink et al 2006:24). A theoretical framework is a group of statements composed of concepts related in some way to form an overall view of a phenomenon (Fitzpatrick & Kazer 2012:508). It consists of concepts that are identified and defined; assumptions that clarify the basic underlying truths from which theoretical reasoning proceeds; the context within which the theory is placed, and relationships between and among the concepts identified. A conceptual framework is "the abstract, logical structure of meaning that guides the development of the study and enables the researcher to link the findings to the existing body of knowledge" (Burns & Grove 2011:37).

Theoretical frameworks serve as guides for researchers by organising existing knowledge and aiding in making new discoveries to advance nursing practice. They provide two types of explanation: descriptive, which indicates the interaction among a set of variables, or prescriptive, which anticipates particular outcomes (Fitzpatrick & Kazer 2012:508).

Researchers develop frameworks through identifying and defining concepts and proposing relationships between them. By developing a framework in which ideas are organized, researchers are able to show that the proposed study is a logical extension of current knowledge (Brink et al 2006:24).

This study was guided by Dorothea Orem's (1959-2001) self-care theory. Orem's theory defines nursing as the "act of assisting others in the provision and management of self-care to maintain or improve human functioning at home levels of effectiveness". For Orem, individuals' ability to perform self-care, namely doing activities on their own behalf to maintain life, health and well-being, was essential. Orem's four central concepts in nursing are persons (humans), environment, health, and self-care.

1.6   RESEARCH DESIGN AND METHODOLOGY

1.6.1 Research design

A research design is "a plan of how the research aim and objectives will be achieved" (Moule & Goodman 2009:168). A research design is the overall plan for answering research questions (Polit & Beck 2014:173). In this study, the researcher chose a non-experimental cross-sectional descriptive research design. The study wished to describe breast self-examination and what exists, and present frequency measures that can be used to develop hypotheses for testing (Moule & Goodman 2009:177-180). A descriptive study can provide information about the status, behaviour, attitudes or other characteristics of a particular group (Nebeker 2011:1).

1.6.2 Research methodology

Polit and Beck (2014:175) refer to research methodology as "steps, procedures and strategies taken to investigate the problem being studied and to analyse the collected

data". The researcher chose a quantitative approach to the study in order to quantify data and generalise results from a sample of the population of interest. A quantitative approach may be used to measure the incidence of various perceptions in a chosen sample (MacDonald & Headlam 2011:8-10). In quantitative studies, results are more readily analysed and interpreted (Hughes 2006:3). This method was chosen because it offered the researcher control and precision, and data was analysed using statistical techniques (Hughes 2006:6).

1.7   SCOPE OF THE STUDY

The study was conducted at a private clinic in Zimbabwe among women aged 20 years and older who were free from pain, conscious, and fluent in English. It focused on identifying the women's level of knowledge of early warning signs and symptoms of breast cancer and breast self-examination (BSE), and their practice of BSE.

1.8   SIGNIFICANCE OF THE STUDY

The findings should assist the Department of Health to review nursing curricula and plan education strategies and campaigns that focus on identified areas of knowledge deficit.

Hospitals and clinics in Zimbabwe should benefit by gaining knowledge on the areas they need to improve and emphasise in giving health education about breast cancer and screening. Early detection means early intervention thereby reducing the number of people undergoing surgery and chemotherapy because of late presentation.

Nursing as a discipline will benefit because the findings will add to the existing knowledge base for the nursing profession. Nurses should be equipped to educate patients on BSE and screening which will lead to increased patient attendance and knowledge.

The study should improve women's self-awareness by educating them and promoting BSE for their own personal breast health care. Early detection and diagnosis of breast cancer will help improve women's survival rate and allow for more treatment choices.

1.9   ETHICAL CONSIDERATIONS

Ethics deals with matters of right and wrong. Polit and Beck (2008:167) emphasise that when people are used as study respondents, "care must be exercised in ensuring that the rights of the respondents are protected". Accordingly, the researcher obtained permission to conduct the study and upheld the respondents' rights to respect for human dignity, beneficence and justice (Brink et al 2006:31). The ethical considerations are discussed in detail in chapter 3.

1.10   DEFINITIONS OF KEY TERMS

In this study, the following key terms are used as defined below.

- **Knowledge.** Knowledge is information and skills obtained through experience or education (*Concise Oxford English Dictionary* 2008:789).

- **Breast cancer.** Breast cancer is a malignant neoplastic disease of the breast tissue (Anderson, Anderson & Glanze 1998:223).

- **Breast self-examination (BSE).** Breast self-examination is an option of examination given to women starting in their 20s to help them become familiar with how their breasts look and feel, and to report any new changes to a health professional. It is the skill of examination done by women to familiarise themselves with the way their breasts feel (Weber & Kelly 2014:400).

- **Knowledge of BSE.** Knowledge of BSE referred to the participants' knowledge of the practice.

- **BSE practice.** This referred to the participants' actual performance of BSE.

1.11   STRUCTURE OF THE DISSERTATION

The dissertation consists of five chapters:

Chapter 1 introduces the study.

Chapter 2 presents the literature review.

Chapter 3 describes the research design and methodology.

Chapter 4 discusses the data analysis and interpretation, and the findings.

Chapter 5 concludes the study and makes recommendations for practice and further research.

1.12   CONCLUSION

This chapter outlined the background to the study; stated the problem, purpose and significance of the study; briefly described the research design and methodology; defined key terms, and presented the structure of the dissertation.

Chapter 2 discusses the literature review conducted for the study.

CHAPTER 2

LITERATURE REVIEW

2.1   INTRODUCTION

Chapter 2 discusses the literature review conducted for the study. A literature review is "the selection of available documents (both published and unpublished) on a topic and the effective evaluation of these documents in relation to the research being proposed" (Moule & Goodman 2009:139).

A literature review helps researchers establish what is known about the topic; questions and problems that have been addressed to date, and gaps in the body of research, (Moule & Goodman 2009:138-139). A literature review provides a comprehensive summary of the findings from previous studies thus preventing duplication. According to Polit and Beck (2010:105), a literature review assists researchers to comprehend and extend their knowledge of the phenomenon under study. It should encompass both positive and negative findings of studies on the topic.

The review covered early warning signs and symptoms of breast cancer; breast self-examination (BSE); knowledge and practice of BSE among women; the BSE controversy; conducting BSE; breast cancer risk-factor and screening awareness; screening methods for breast cancer, and the theoretical framework for the study.

2.2   EARLY WARNING SIGNS AND SYMPTOMS OF BREAST CANCER

The clinical manifestations of breast cancer include a firm lump or thickening in breast, usually painless, 50% located in upper outer quadrant of the breast; enlargement of axillary or supraclavicular lymph nodes, which may indicate metastasis; bloody, clear or serous spontaneous nipple discharge; breast asymmetry; a change in the size or shape of the breast or abnormal contours, and nipple retraction or scaliness, especially in Paget's disease (Nettina 2010:902). Late signs include pain, which may be due to inflammation indicative of fibrocystic breasts or a malignant tumour; ulceration; oedema caused by blockage of lymphatic drainage, and orange peel skin (*peau orange*)

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resulting from oedema seen in metastatic breast disease (Weber & Kelley 2014:406-408).

According to the ACS (2014), the most common symptom is a new lump or mass which is painless, hard with irregular edges which are likely to be cancerous. Breast lumps can be tender, soft or rounded and can even be painful. For this reason, it is important to have any new breast mass or lump, or breast change checked by a health care professional experienced in diagnosing breast disease or other possible signs of breast cancer. These signs include swelling of all or part of a breast (even if no distinct lump is felt); breast or nipple pain; skin irritation or dimpling; nipple retraction; redness, scaliness or thickening of the nipple or breast skin, and nipple discharge other than breast milk. Sometimes a breast cancer can spread to lymph nodes under the arm or around the collar bone and cause a lump or swelling there, even before the original tumour in the breast tissue is large enough to be felt on palpation.

According to the World Health Organization (WHO) (2013) (in Ncube 2014:lifestyle 2), cancer claims more than 7,6 million people annually and this ranks it as one of the leading causes of death globally. About 70% of all cancer deaths occur in low- to middle-income countries. Deaths from cancer worldwide are projected to rise to over 13, 1 million by 2030 (Ncube 2014:lifestyle 2).

In 2011, 375 (11, 5%) women of all races were newly diagnosed with breast cancer in Zimbabwe. Of those, 329 were blacks and 46 were whites (Chokunonga et al 2011:30, 33). In 2012, 406 (11, 6%) women were newly diagnosed with breast cancer. Of those, 381 were blacks and 25 were whites (Chokunonga et al 2014:36, 39).

Ncube (2014:lifestyle 1) reported that breast cancer was increasing in Zimbabwe and emphasised that women should constantly check their breasts so as to notice any changes or lumps. Moreover, women should seek medical advice if they suspected anything and not rely on myths. Treatment for breast cancer is very expensive and beyond the reach of most people. It is imperative, therefore, that women know the early warning signs and symptoms, and what to look for when doing breast self-examination.

2.3   BREAST SELF-EXAMINATION (BSE)

Anderson et al (1998:1469) define breast self-examination (BSE) as "a procedure done by a woman by examining her breasts and their accessory structures for evidence of changes that could indicate a malignant process". BSE is usually performed one week to ten days after the first day of the menstrual cycle, when the breasts are smallest and cyclic nodularity is least apparent. BSE is encouraged during all phases of a woman's adult life. A woman who regularly and carefully performs BSE is better able to detect small abnormalities than a woman who is unfamiliar with her breasts (Anderson et al 1998:1469). Doing BSE regularly is one way for women to know how their breasts normally look and feel.

Weber and Kelly (2014:400) refer to BSE as an option for women, starting in their 20s, to familiarise themselves with the appearance of their breast tissue to be able to detect any changes. Women who choose to do BSE should have their practice reviewed during their physical examination by a health professional. BSE plays a minor role in finding breast cancer. Some women feel comfortable doing BSE regularly monthly after their menses whilst others are more comfortable looking and feeling their breasts whilst showering or getting dressed (Weber & Kelly 2014:400). Women who have had a breast lumpectomy, augmentation, or breast reconstruction may also perform BSE. Some women may still decide not to do BSE even with the knowledge of its advantages and disadvantages.

2.3.1 BSE practice

In a study on BSE among female secondary school teachers in a rural community in Oyo state, Nigeria, Faronbi and Abolade (2012:111-115) found that 82% of the respondents were aware of BSE. Of the respondents, 55% indicated that their source of this information was mass media and 25% indicated friends, while 54% had little, if any, knowledge of BSE. In addition, the respondents who practised BSE did not know what to look for, and many did not do so regularly. This indicated poor knowledge of and attitude towards BSE practice among the respondents (Faronbi & Abolade 2012:115).

In a study on the practice of BSE among 250 women in Malaysia, Al-Naggar, Bobryshev and Al-Jashamy (2012:3829-3833) found that race, marital status, residency, regular

exercise, awareness about breast cancer, and other socio-demographic characteristics significantly influenced the practice of BSE among Malaysian women. Ghodsi & Hojjatolesmi, (2012:2561-2565) did a survey on educational needs of breast cancer and BSE in Iranian women and found that most of the participants had no previous information about BSE. The study emphasised the need for women to be equipped with information to keep their families healthy and share the knowledge gained with family and friends.

Yavan, Akyüz, Tosun and Iyigun (2010:189-201) examined women's breast cancer risk perceptions and knowledge of and their attitudes to screening tests in Gulhane Military Medical Academy, Ankara in Turkey. The study found that few of the women performed BSE, or had CBE and mammography at least once. The main reason given for not performing BSE was that they did not know how to do it. Risk perception and educational status increased CBE and mammography rates and BSE knowledge positively, but because of insufficient BSE application the rate of practice did not increase as expected (Yavan et al 2010:201).

2.3.2 BSE controversy

There is no consensus on the efficacy of BSE. Regarding the controversy on BSE, Allen et al (2010:444-451) point out that it is important to know that the sensitivity and specificity values of BSE are difficult to determine. BSE has the disadvantage of increased number of healthcare visits and twice the number of benign biopsy results leading to increased healthcare cost. Moreover, increased biopsies lead to a higher risk of breast cancer.

According to the ACS (2011), BSE does not reduce mortality from breast cancer. BSE is only recommended for women who wish to use it since its usefulness is questioned and it may lead to unnecessary biopsies. The ACS (2011) points out that four out of every five breast biopsy specimens are benign. When women discover abnormalities in their breasts, feelings of anxiety and depression are likely to increase concerning what could possibly be a benign condition.

BSE as a diagnostic measure allows women to gain a sense of control over their health and to become comfortable with their own breasts. It is a simple, non-invasive

procedure that can be performed by non-medically trained individuals (Allen et al 2010:5).

According to the National Breast Cancer Foundation (NBCF), up to 70% of breast cancers are found by women performing their own BSE. The American College of Obstetrics and Gynaecology (ACOG) recommends the use of BSE as a tool for breast cancer screening since palpable lesions can be detected through BSE (Allen et al 2010:5). The purpose of breast assessment is to identify signs of breast disease and initiate early treatment. The incidence of breast cancer in women is rising, but early detection and treatment have resulted in increased survival rates (Weber & Kelly 2014:405).

Ignatavicius and Workman (2013:1594) maintain that nurses working with women should educate them on the importance of familiarising themselves with the appearance and feel of their breasts. Any changes detected should be reported to the health care provider. Premenopausal women should be educated about lumps that appear and disappear with the menstrual cycle. Proper timing for BSE for premenopausal women to examine their breasts should be one week after the menstrual period, when hormonal influence on breast tissue is decreased, so fluid retention and tenderness are reduced.

Women who are in menopause or after a hysterectomy should be taught to pick a day each month to do BSE, since their breast tissue is no longer influenced by hormonal fluctuations (Ignatavicius & Workman 2013:1594)

2.3.3 Conducting BSE

Step 1: The woman stands in front of a mirror, pressing her hands firmly down on her hips. This position helps to contract the chest wall muscles and enables visualisation of any breast changes.

She will be looking at the size, shape, colour .and contour noting any dimpling, redness, scaliness of the nipple or breast skin.

Step 2: .The woman raises her arms and looks for the same changes as mentioned above. The woman must examine both underarms while sitting up or standing with her arms slightly raised

Step 3: While at the mirror, the woman looks for any discharge coming from the nipples; for example, watery, milky or yellow fluid or blood.

Step 4: The woman lies down with her right arm behind her head. This position spreads the breast tissue evenly over the chest wall, making it easier to feel. The woman uses the three middle finger pads of her left hand to feel for any right breast lumps. The woman needs to apply light pressure to feel the tissue closest to the skin; medium pressure to feel deeper, and firm pressure to feel the tissue close to the chest and ribs.

The woman examines her left breast by putting her left arm behind her head and using her right-hand finger pads to do the examination.

Step 5: Finally the woman feels her breasts while she is standing or sitting. Most women find that the easiest way to feel their breasts is when their skin is wet and slippery, so they like to do this in the shower. The woman has to cover her entire breast, using the same hand movements described in step 4. Finally the woman feels her breasts while she is standing or sitting.

Figure 2.1   Five steps in breast self-examination

(Source: Breastcancer.org.2016)

2.4   KNOWLEDGE OF BREAST CANCER RISK FACTORS AND SCREENING

Semarya, Worknish, Mignote, Mesfin and Alemseged (2011:1-9) conducted an assessment of knowledge of breast cancer and screening methods among nurses in University Hospital in Addis Ababa, Ethiopia. Semarya et al (2011:9) found that only 57, 8% of the participants were knowledgeable about breast cancer and its screening methods and 42, 2% had no knowledge thereof. The findings emphasised the need to improve the nursing curriculum and introduce ongoing workplace training in the area of breast cancer and screening methods.

In Jordan, cancer is the second leading cause of death. Madanat and Merrill (2002:276-282) examined breast cancer risk-factor and screening awareness among women nurses and teachers in Amman, Jordan. Madanat and Merrill (2002) wished to determine two dimensions of breast cancer awareness, namely knowledge of risk factors associated with the disease, and knowledge of BSE and mammography. The study found that of the respondents, the nurses were more aware than the teachers of the importance of breast cancer screening and its techniques. Profession, age and family history significantly influenced breast cancer screening awareness.

2.5   SCREENING METHODS FOR BREAST CANCER

There are three main screening methods, namely clinical breast examination (CBE), mammography, and magnetic resonance imaging (MRI).

2.5.1 Clinical breast examination (CBE)

Clinical breast examination (CBE) is an alternative screening option, but its effectiveness in reducing breast cancer mortality is not known. CBE is performed by advanced practice nurses and other health care providers. The ACS (2010) recommends that CBE be part of a periodic health assessment, at least every 3 years for women in their 20s and 30s and every year for asymptomatic women at least 40 years of age. This offers a chance for women and their doctors or nurses to discuss changes in their breasts, early detection testing. Women should be given information

about the benefits and limitations of CBE and BSE (ACS 2010). The chance of breast cancer occurring is very low for women in their 20s and gradually increases with age.

Sankaranarayanan et al (2011:1476-1480) conducted a study in Kerala, India to evaluate whether three rounds of triennial CBE could reduce the incident rate of advanced disease incidence and breast cancer mortality. A cluster randomised controlled trial was initiated in January 2006 to evaluate the effectiveness of CBE in reducing breast cancer mortality compared with no screening in Trivandrum district, Kerala, India. The study found substantially higher numbers of early-stage breast cancers in the intervention (CBE screening) group compared with the control group (no CBE screening). A major limitation of the study, however, was that only interim outcomes were reported, and the mortality data was not available.

2.5.2 Mammography

Mammography is a breast imaging technique that has been shown to reduce breast cancer mortality rates. It can detect non-palpable lesions and assist in diagnosing palpable masses. Two views are taken for each breast: when the breast is mechanically compressed from top to bottom (cranio-caudal view) and side to side (mediolateral oblique view) (Smeltzer & Bare 2004:1452). Mammography can detect a breast tumour before it becomes clinically palpable (smaller than 1 cm) but it has limitations: the false negatives range between 5% and 10%. Younger women or women on hormonal therapy may have dense breast tissue making it more difficult to detect lesions with mammography (Smeltzer & Bare 2004:1452).

Doctors who question the value of mammograms say that while they do save lives, for each breast cancer death prevented, three to four women are over-diagnosed meaning that a mammogram

- Finds a suspicious area that would eventually have been diagnosed as cancer by other means, without any effect on prognosis.
- Finds a suspicious area that never would have affected a woman's health if it hadn't been found or treated.

This shows that a mammogram can have false positive results when it shows an abnormal area that resembles cancer. The suspicious area will require follow up with more than one doctor, extra tests, e.g. biopsy. These pose psychological, physical and economic costs that come with a false positive. The conclusion is that mammography could potentially miss more than 75% of breast cancers in women in their 40s thereby eliminating most of the survival benefit from screening mammography (Joe 2014:1).

According to the ACS (2014) guidelines for the early detection of breast cancer:

- Women aged 40 years and older should have a mammogram yearly and should continue doing so regardless of whether they are in good health.
- Current evidence supporting mammograms shows that they offer substantial benefits for women in their 40s of detecting breast cancer early.
- Women in their 20s and 30s should have a CBE by a health professional every three years.
- Starting at the age of 40, women should have CBE by a health professional yearly.

2.5.3 Magnetic resonance imaging (MRI)

MRI is more sensitive than mammograms and also has a higher false-positive rate when it finds something that turns out not to be cancer. This then leads to unnecessary biopsies and other tests which predispose women to anxiety and worry (ACS 2010).

For most women at high risk, screening with MRI and mammograms should begin at the age of 30 years and continue as long as a woman is in good health. There is no evidence at present that MRI is an effective screening tool for women at average risk (ACS 2010).

2.6   THEORETICAL FRAMEWORK

Orem's self-care theory was chosen as a theoretical framework for the study due to its success in guiding research. Muchena (2010) examined the relationship between malaria self-care knowledge and self-care actions taken by primigravidas aged 18-35 years attending antenatal care at Harare Central Hospital, Harare in Zimbabwe.

Muchena (2010) focused on a supportive educative nursing system, in which the nurse-midwife provided education and support for the primigravida to enable her to successfully meet her self-care requirements. The study was based on the premise that as knowledge of malaria prevention increased, episodes of malaria would decrease. Pswarayi (2010:1-85) investigated the relationship between induced hypertension self-care knowledge and hypertension control among pregnant mothers aged 18-49 years in Bindura district in Zimbabwe. Pswarayi (2010:1-62) used Orem's self-care theory to guide their research. Orem's concepts most applicable were self-care agent, self-care agency, self-care deficit, and supportive educative nursing system.

Orem describes a person as "an individual who is able to appraise situations, reflect upon them and reason" (Fitzpatrick & Kazer 2012:358). In this study a person is equated to the woman aged 20 years and above admitted in the ward who is supposed to take a leading role in BSE to detect breast cancer early. The person is also the self-care agent who is able to perform self-care independently (Kozier, Erb, Berman & Snyder 2004:39). The self-care agency will be equated to the knowledge of BSE. The woman aged 20 years and above has a therapeutic self-care demand of practising BSE in order to detect breast cancer early or any breast changes. When the self-care demand is higher than the self-care agency, this will lead to self-care deficit which will compromise self-care which is equated to health.

The environment is viewed in the context of basic conditioning factors that have human and environmental properties that affect the person's self-care agency and therapeutic self-care demand. These factors include a person's family systems, socio-cultural orientation as well as the health care system factors and resource availability and adequacy. If the environment has negative cultural practices and lacks necessary reinforcement through health education on early warning signs and symptoms, BSE, and screening, the self-care agency in this regard would be limited (Kozier et al 2004:39). Ultimately breast cancer will be detected late and the woman will present to hospital in the late stages of the disease.

Orem (1991:85) defines nursing as a specialised health service necessitated by adult's inability to maintain the amount and quality of self-care i.e. therapeutic in sustaining life and health, in recovering from disease or injury, or in coping with the effects. According

to Orem, the goal of nursing is to help the person meet the therapeutic self-care demands which in this study refers to BSE practice.

Orem (1991:85) describes nursing as "doing for the person with a disability, by helping her to do for herself and/or by helping her to learn how to do it herself. Orem proposed three nursing systems: wholly compensatory, partly compensatory, and supportive-educative (Kozier et al 2004:39). This study used the supportive-educative nursing system whereby the nurse provides health education and support in terms of equipping the women with knowledge and skills on BSE practice. To determine the need for nursing, the nurse considers whether the person's self-care agency is adequate to accomplish the self-care demand. When the self-care demand exceeds self-care agency, then a self-care deficit is said to exist. Inability to meet self-care demands reflects the need for nursing (Fitzpatrick & Kazer 2012:358). In this study, knowledge deficit will need nurses to provide health education and skills on BSE. Figure 2.2 illustrates the relationships between the concepts.

Environment

- basic conditioning factors
- person's family systems
- socio-cultural orientation
- health care system factors
- resource availability and adequacy
- woman aged 20-60 years who needs to be taught and encouraged to perform BSE independently, thereby helping in early detection of breast cancer

Person

- Is the self-care agent
- Woman aged 20 years and above

Self-care agency

- Knowledge on BSE

Self-care

- BSE practice regularly
- Early reporting to health care centre

Nursing

- supportive educative system
- health education on BSE and practices

Therapeutic self-care demand

- Practice of BSE

Figure 2.2: Orem's self-care of model as applied to BSE

2.7   CONCLUSION

This chapter discussed the literature review related to the focus of the study. The literature indicated the importance of being aware of the early signs and symptoms of breast cancer, BSE, and screening methods for breast cancer.

Chapter 3 describes the research design and methodology.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1   INTRODUCTION

Chapter 3 describes the research design and methodology used for the study. The purpose of the study was to explore and determine the knowledge and practice of breast self-examination (BSE) among women admitted in a private clinic in Zimbabwe. The findings would be used to improve health education to women to enable breast cancer to be detected and treated at an early stage.

In order to achieve the purpose, the objectives of the study were to

- determine the knowledge of breast self-examination among women admitted at a private clinic in Zimbabwe
- identify and describe the level of women's practice of breast self-examination (BSE)

3.2   RESEARCH DESIGN

A research design is an "overall plan for obtaining answers to research questions" (Polit & Beck 2014:173).

Moule and Goodman (2009:168) describe a research design as "the plan of how the research aims, objectives and hypothesis will be answered. It is a map of the way in which the researcher will engage with the research subjects in order to achieve the outcomes needed to address the research aim and objectives."

The researcher used a quantitative, non-experimental, cross-sectional and descriptive design in this study to assess the knowledge and level of practice of BSE among women 20 years and older admitted at a private clinic in Zimbabwe at the time of data collection. In a quantitative design, numerical data are obtained through formal methods of data collection, which are objective and free from bias (Moule & Goodman 2009:172).

A quantitative approach aim to quantify data and generalise results from a sample of the population of interest. Numerical data are obtained through formal methods of data collection, which are objective and free from bias, and the data can be analysed using statistics (Moule & Goodman 2009:172). The quantitative design used a post-positivist approach, which looks at relationships or correlations between variables (Moule & Goodman 2009:177).

Non-experimental (observational) designs include descriptive studies that summarize the status of a phenomenon and correlational studies that examine relationships among variables (Polit & Beck 2014:174).

A cross-sectional design was used to generate nursing knowledge for practice (Polit & Beck 2014:162). Cross-sectional designs are economical and easy to manage. Descriptive designs describe what exists and present frequency measures that can be used to develop hypotheses for testing (Moule & Goodman 2009:178).

3.3   RESEARCH METHODOLOGY

Research methodology refers to the "steps, procedures and strategies taken to investigate the problem being studied and to analyse the collected data" (Polit & Beck 2014:172). The research methodology includes the population; sample and sampling; data collection and analysis; validity and reliability; pilot study or pre-test, and ethical considerations.

3.3.1 Population

A research or target population is the entire aggregation of cases in which the researcher is interested. It is all the elements (individuals, objects, events, or substances) that meet the criteria for inclusion in a study and from which the sample is selected. The target population for this study were all women from 20years and older in Zimbabwe. The accessible population is the portion of the target population to which the researcher has reasonable access (Polit & Beck 2014:172).   The accessible population were   women 20 years and older admitted at the private clinic who were chosen basing on the criteria that they were conscious, post-operative day 2 onwards and willing to participate in the study.

3.3.2 Sampling and sample

Sampling is the process by which researchers reduce the total research population to a number that is practically feasible and theoretically acceptable (the sample) (MacDonald & Headlam 2011:69). Sampling involves the selection of a portion of the population to represent the population (Polit & Beck 2014:177). A sample is a subset of the population selected through sampling techniques (Polit & Beck 2014:177). Ideally, the sample should be representative of the target population. There is no formula to determine how big a sample should be, but a large sample is better than a small one because it has less sampling error (Polit & Beck 2014:182).The researcher discovered that an average of a thousand women were admitted yearly   in the surgical ward and would stay at the private clinic for 3 to 5 days depending on the procedure done and the patient's condition, as such a 10% (100 women) were obtained to participate in the study.

In this study, non-probability sampling was used to recruit all the accessible population over a specific time interval or for a specified sample size (Polit & Beck 2014:179). A sample of one hundred women was selected to participate in the study. The sample consisted of thirteen (13) white, eighty-six (86) Black African, and one (1) Asian Zimbabwean women.

3.3.3 Data collection

Data collection is the process of collecting data from respondents by means of a data-collection instrument (Polit & Beck 2014:191; Moule & Goodman 2009:290). In this study, data was collected by means of a structured self-administered questionnaire designed by the researcher (Annexure E). According to Polit and Beck (2014:191), when structured questionnaires are used, the respondents are asked to respond to similar questions, in the same order and with the same set of response options. The questionnaire consisted of three sections:

- Section A: Respondents' demographic data
- Section B: Respondents' knowledge of breast cancer early warning signs
- Section C: Respondents' level of practice of BSE

A questionnaire was chosen because it is a self-completion tool, which was completed by the respondents without the researcher's input (Moule & Goodman 2009:300).

The questionnaire was submitted to the scientific review committee who scrutinised it and highlighted areas that needed correction. The instrument was also reviewed by the supervisor.

Data was collected at a private clinic situated along Mazoe Road and Corner Baines Avenue in Harare, Zimbabwe. The clinic comprises of accident and emergency department, medical, surgical ward, paediatric wards, labour wards postnatal wards, critical care unit which comprises of a 6 bedded intensive care unit, 4 bedded coronary care unit and 18 bedded high dependency unit and functional operating theatres.

Data was collected over a period of three months. Questionnaires were administered to the 100 respondents who were admitted in the surgical ward at the private clinic during data collection period, who were conscious, post- operative day 2 onwards who consented to take part in the study before discharge. All the questionnaires were returned completed.

3.3.4 Validity and reliability

The quality of research is determined by its validity and reliability. Validity is the degree to which an instrument measures what it is supposed to measure (Polit & Beck 2014:194). Reliability refers to "the degree of consistency or dependability with which the instrument measures the attribute it is designed to measure. If the instrument is reliable, the results will be the same each time the test is repeated" (Polit & Beck 2014:194).

The researcher conducted a pilot study or pre-test among 20 women to test the questionnaire for clarity of questions to the respondents.

Pilot study results were as follows:

Biographic data results showed that 10% (n=2) were whites and 90% (n=18) were black Africans. Age of the respondents was between 20-30 years 15% (n=3), 31-40 years 55% (n=11), 41-50 years, 15% (n=3) and 51 and more 15% (n=3). Level of education for respondents was 15% (n=3) had secondary education and 85% (n=17) had tertiary education. Results showed that 90% (18) were married, 5% (n=1) was divorced and 5% (n=1) was single. All the respondents were Christians, 75% (n=15) were from urban low density suburb, 20% (n=4) were from urban high density and 5% (n=1) from other areas.

On their employment record results showed that 30% (n=6) were self-employed, 15% (n=3) were housewives, 45% (n=9) were professionals and 10% (n=2) were others .The highest percentage of respondents 95% (n=19) were using medical aid and 5% (n=1) was using cash.

On **history of breast cancer** results showed that 10% (n=2) were diagnosed with breast cancer and 90% (n=18) had no history of breast cancer, 10% (n=2) had a family history of breast cancer and 90% (n=18) had no history of breast cancer. The respondents with family history of breast cancer 5% (n=1) was the aunt and 5% (n=1) was other.

Findings on respondents' **knowledge of breast cancer early warning signs and symptoms** were 54% (11) were knowledgeable, 15 (n=3) did not know and 31% (n=6) had no information.

Respondents' knowledge and practice of BSE

Results showed that all the respondents 100% (n=20) were knowledgeable on definition of breast self-examination. On what to inspect for during BSE results showed that 60% (n=12) were knowledgeable, 11,7% (n=2) did not know what to inspect for and 28% (n=6) had no idea. On what to feel for during BSE results revealed that 90% (n=18) knew about importance of feeling for a breast lump during BSE and 10% (n=2) said enlarged lymph nodes in the axillae.

On initiation of BSE results revealed that 50% (n=10) knew that BSE should start at the age of 20 years in order to familiarise with her breast and 50% (n=10) said it should

start as soon as a woman starts menstruating. On how often it is supposed to be done results revealed that 65% (n=13) indicated that they performed BSE monthly 1-7 days after menstruation, 10% (n=2) indicated once every fourth month and 25% (n=5) performed BSE when they suspected something abnormal was developing in the breast.

Respondents' knowledge of how BSE is performed results revealed that the majority knew how BSE was done and the method 64,4% (n=13) of the respondents answered agree, 15% (n=3) answered disagree and 20, 6% (n=4) had no idea.

On knowledge of BSE results reviewed that 75% (n=15) did BSE and 25% (n=5) did not. On period of menstruation cycle when BSE is performed results reviewed that 30% (n=6) did BSE after menstruation and 60% (n=9) did BSE any time. The results indicated that most of the respondents did BSE at the wrong time.

On time of initiation of BSE results reviewed that 13,3% (n=2) started BSE as soon as they started menstruating, 6,7% (n=1) started when a close relative was diagnosed with breast cancer and 73,3% (n=11) started after menstruation started.

On source of influence to do BSE, results showed that 53, 3% (n=8) were influenced to do BSE by mass media, 13,3% (n=2) by a family history of breast cancer and 33,3% (n=5) were influenced by age.

On sources of information on BSE results showed that 66,7% (n=10) were taught by mass media, 33,3% (n=5) were taught by health care personnel. On respondents' effects of breast cancer diagnosis on BSE practise results revealed that of the respondents who had breast cancer, 50% (n=1) now do BSE monthly regularly, 50% (n=1) now go for clinical examination yearly. Respondents who did not practise BSE 20% (n=1) went for breast examination by a health care practitioner and 80% (n=4) did nothing. On the frequency of going for other methods of breast examination results revealed that 20% (n=1) had a breast examination after every three years and 80% (n=4) had no examination done.

Those who participated in the pilot study did not take part in the actual study. The validity of a data-collection instrument is the extent to which it measures what the

researcher sets out to measure. Validity is concerned with accuracy. A research instrument is valid if it reflects the concept it is supposed to measure. External validity is the extent to which a study's results (regardless of whether the study is descriptive or experimental) can be generalised/applied to other people or settings (Huitt, Hummel & Kueck 1999:2).

Twenty respondents participated in the pilot study to ensure reliability of the research instrument. The pilot study respondents were not included in the main study of 100 respondents and the results of the pilot study were not included in the main study.

The questions were derived from the main objectives of the study and the literature reviewed, and covered the main areas of the problem under investigation. The pilot study results showed that important information was left out on "race" and this was added to the questionnaire.

3.3.5 Data analysis

Data analysis is the process of making sense of the collected data (Moule & Goodman 2009:349). In data analysis researchers manage the collected data to identify key patterns or features that are important when answering the research questions (Moule & Goodman 2009:323). A statistician analysed the data collected using EPI info version 3.3.2. Categorical data, such as gender, level of education, and marital status, were coded prior to analysis. To be able to make logical conclusions and inferences from the data collected, it must be analysed and interpreted (Polit & Beck 2014:215). The data was uploaded from all the questionnaires, which were coded as number 1 to number 100. Statistical procedures were used to organise and interpret numerical data (Polit & Beck 2014:215).

Descriptive statistics were used to synthesise and describe data (Polit & Beck 2014:215). Frequency distribution tables were used which is a systematic arrangement of values from lowest to highest, with a count or percentage of how many times each displayed graphically in a frequency polygon where scores will be on the horizontal line with the lowest value to the left and frequency count or percentage on the vertical line. Initial analysis was done by generation of frequency tables while further analysis involved cross-tabulation to explore statistical relationships between variables. Data

was analysed in frequencies according to race, age, level of education and at times according to respondents' residential places to determine whether these variables had an effect on the knowledge of BSE and practice. In most cases this had no effect. The mean percentage of knowledge was also analysed for breast cancer early warning signs and symptoms and BSE. Mean is the sum of all values divided by the number of participants. Data was also presented in the form of bar graphs.

An index of variability was used to express the extent to which scores in a distribution varied from each other. It consists of the range, which is the highest score minus the lowest score in a distribution (Polit & Beck 2014:231).

3.4   ETHICAL CONSIDERATIONS

Ethics deals with matters of right and wrong. Polit and Beck (2014:235) emphasise that when people are used as study respondents, "care must be exercised in ensuring that the rights of the respondents are protected". Accordingly, the researcher obtained permission to conduct the study and upheld the respondents' rights to respect for human dignity, beneficence and justice.

Ethical clearance was obtained from the University of South Africa Health Studies Higher Degrees Committee College Of Human Sciences who issued an ethical clearance certificate (see Annexure A). Permission to collect data was requested and obtained from the hospital management (principal nursing officer) of the private hospital (see Annexures B and C). A copy of the approval letter was given to the charge nurse of the ward where data was collected and times to collect data were agreed on which did not interfere with the care of the patients.

Informed consent was obtained from each respondent who met the selection criteria who agreed to take part in the study after being invited to participate voluntarily (see Annexure D).

The respondents were informed of the purpose of the study and that they were free to withdraw from the study at any time without penalty or refuse to take part if they wished to do so. The researcher explained the possible emotional trauma, which might occur for those who had been diagnosed with breast cancer, or had relatives who had died of

breast cancer. The respondents were informed that psychologist will be available to counsel those who experienced emotional trauma. The respondents signed informed consent. Anonymity, confidentiality and privacy were assured by not writing their names.

3.5   CONCLUSION

This chapter described the research design and methodology, including the population, sampling and sample, data collection and analysis, and ethical considerations. Chapter 4 presents the data analysis and interpretation.

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION, AND RESULTS

4.1   INTRODUCTION

Following the description of the research design and methodology in chapter 3, chapter 4 presents data analysis and interpretation, and the results. The results are presented in tables and graphs and discussed according to the sections of the questionnaire, namely

- Section A: Demographic data
- Section B: Knowledge of breast cancer early warning signs and symptoms
- Section C: Knowledge and practice of BSE

4.2   DATA ANALYSIS

Data collection took place over three months. The researcher distributed 100 structured self-designed questionnaires and 100 completed questionnaires were returned which gave a response rate of 100%.

Data analysis is the process by which the researcher manages the collected data to identify key patterns or features that are important when answering research questions (Moule & Goodman 2009:323). The statistician analysed the data using Epi Info version 3.3.2.

The respondents consisted of Black African, White and Asian Zimbabwean women so the findings were also analysed according to race. The researcher wanted to find out if knowledge of breast cancer early warning signs and symptoms, BSE and practice was affected by race, age, occupation or residential area. All the questionnaires were returned completed.

Statistical methods are methods used to collect, analyse and interpret quantitative data (Moule & Goodman 2009:324). Descriptive statistics were used. Data was analysed in frequencies according to race, at times according to age of participants. Frequency

distribution tables, including cross-tabulation, were used. A cross-tabs table is a two-dimensional frequency distribution in which the frequencies of two variables are cross-tabulated (Polit & Beck 2014:221).

4.3   RESULTS

4.3.1 Section A: Respondents' demographic data

Table 4.1   Respondents' socio-demographic characteristics (n=100)

Variable	Whites N=13		Black Africans N=86		Asian N=1		Total women N=100	
1) **Age category**	**Frequency**	**%**	**Frequency**	**%**	**Frequency**	**%**	**Frequency**	**%**
a) 20-30	0	0	18	18	0	0	18	18
b) 31-40	2	2	31	31	0	0	33	33
c) 41-50	6	6	25	25	1	1	32	32
d) 51 and above	5	5	12	12	0	0	17	17
2) **Level of education**								
a) primary	0	0	7	8,1	0	0	7	7
b) secondary	7	7	18	18	1	1	26	26
c) tertiary	6	6	61	61	0	0,0	67	67
Total	**13**	**13**	**86**	**100**	**1**	**100**	**100**	**100**
3) M**arital statuses**								
a) married	10	10	64	64	1	1	75	75
b) divorced	1	1	1	1	0	0	2	2
c) widowed	2	2	8	8	0	0	10	10
4) **Occupation**								
a) self employed	7	7	11	11	0	0	18	18
b) house wife	2	2	12	12	1	1	15	15
c) professional	1	1	54	54	0	0	55	55
d) other	3	3	9	9	0	0	12	12
Total	**13**	**13**	**86**	**86**	**1**	**1**	**100**	**100**
5) **Religion**								
a) Christianity	13	13	84	84	0	0	97	100
b) Muslims	0	0	2	2	1	1	3	3
6) **Area of residence**								
a) urban high	0	0	16	16	0	0	16	16
b) urban low	12	12	50	50	1	1	63	63
c) urban medium	1	1	14	14	0	0	15	15
d) rural	0	0	3	3	0	0	3	3
e) other	0	0	3	3	0	0	3	3
Total	**13**	**13**	**86**	**86**	**1**	**1**	**100**	**100**
7) H**ospital payment**								
a) medical aid	11	11	84	84	1	1	96	100
b) cash	2	2	2	2	0	0	4	4
Total	**13**	**13%**	**86**	**86%**	**1**	**1%**	**100**	**100**

Of the respondents, 13% (n=13) were Whites, 86% (n=86) were Black Africans, and 1% (n=1) was Asian.

Age

Of the respondents, 18% (n=18) were 20-30 years old (all Black Africans); 33% (n=33) were 31-40 years old (2 Whites and 31 Black Africans); 32% (n=32) were 41-50 years old (6 Whites, 25 Black Africans, and 1 Asian) and 17% (n=17) were 51 or older (5 Whites and 12 Black Africans). The average age was 40 years.

Level of education

Of the respondents, 7% (n=7; Black Africans) had primary education; 26% (n=26; 7 Whites, 18 Black Africans and 1 Asian) had secondary education, and 67% (n=67; 6 Whites and 61 Black Africans) had tertiary education. The results indicated that most of the respondents were educated beyond secondary school.

Marital status

Of the respondents, 75% (n=75; 10 Whites, 64 Black Africans and 1 Asian) were married; 2% (n=2; 1 White and 1 Black African) were divorced; 10% (n=10; 2 Whites and 8 Black Africans) were widowed, and 13% (n=13; Black Africans) were single.

Occupation

Self-employed respondents were 18% (7 Whites and 11 Black Africans) whites had the highest population of self-employment showing that they are the owners of businesses. House wives were 15% (2 Whites, 12 Black Africans and 1 Asian). Professionals were 55% (1 White and 54 Black Africans) showing how educated Blacks Africans are, and mostly relying on being employed. Other was 12% (3 Whites and 9 Black Africans).

Religion

Of the respondents, 97% (n=97; 13 Whites and 84 Black Africans) were Christians, and 3% (n=3; 2 Black Africans and 1 Asian) were Muslims. This is similar to Faronbi and Abolade's (2012:112) findings in Oyo state in Nigeria on BSE among female secondary school teachers where 65% were Christians and 33% were Muslims.

Area of residence

Regarding area of residence, 63% (n=63; 12 Whites, 50 Black Africans, and 1 Asian) of the respondents lived in urban low density suburbs, and 16% (n=16; 16 Black Africans) lived in high density suburbs. This would appear to indicate that Whites as business owners and highly paid, qualified professional Black Africans can afford to build or rent houses in the expensive low density suburbs.

Method of hospital payment

Of the respondents, 96% (n=96; 11 Whites, 84 Black Africans, and 1 Asian) were on medical aid, and 4% (n=4; 2 Whites and 2 Black Africans) paid cash.

History of breast cancer

Table 4.2   Respondents' diagnosis with breast cancer according to age category (n=100)

Variable	Frequency	Percentage
Age category		
20-30		
a) yes	1	1
b) no	17	17
Total	**18**	**18**
31-40		
a) yes	1	1
b) no	32	32
Total	**33**	**33**
41-50		
a) yes	8	8
b) no	24	24
Total	**32**	**32**
51&>		
a) yes	5	5
b) no	12	12
Total	**17**	**17**

Regarding the respondents' age when diagnosed with breast cancer, 1% (n=1) was 20-30 years old; 1% (n=1) was 31-40; 8% (n=8) were 41-50, and 5% (n=5) were 51 and

older. This shows that 14% (n=1) of the respondents had been diagnosed with breast cancer when they were 40 and older.

The study also examined the respondents' BC diagnosis according to race (see Figure 4.1).
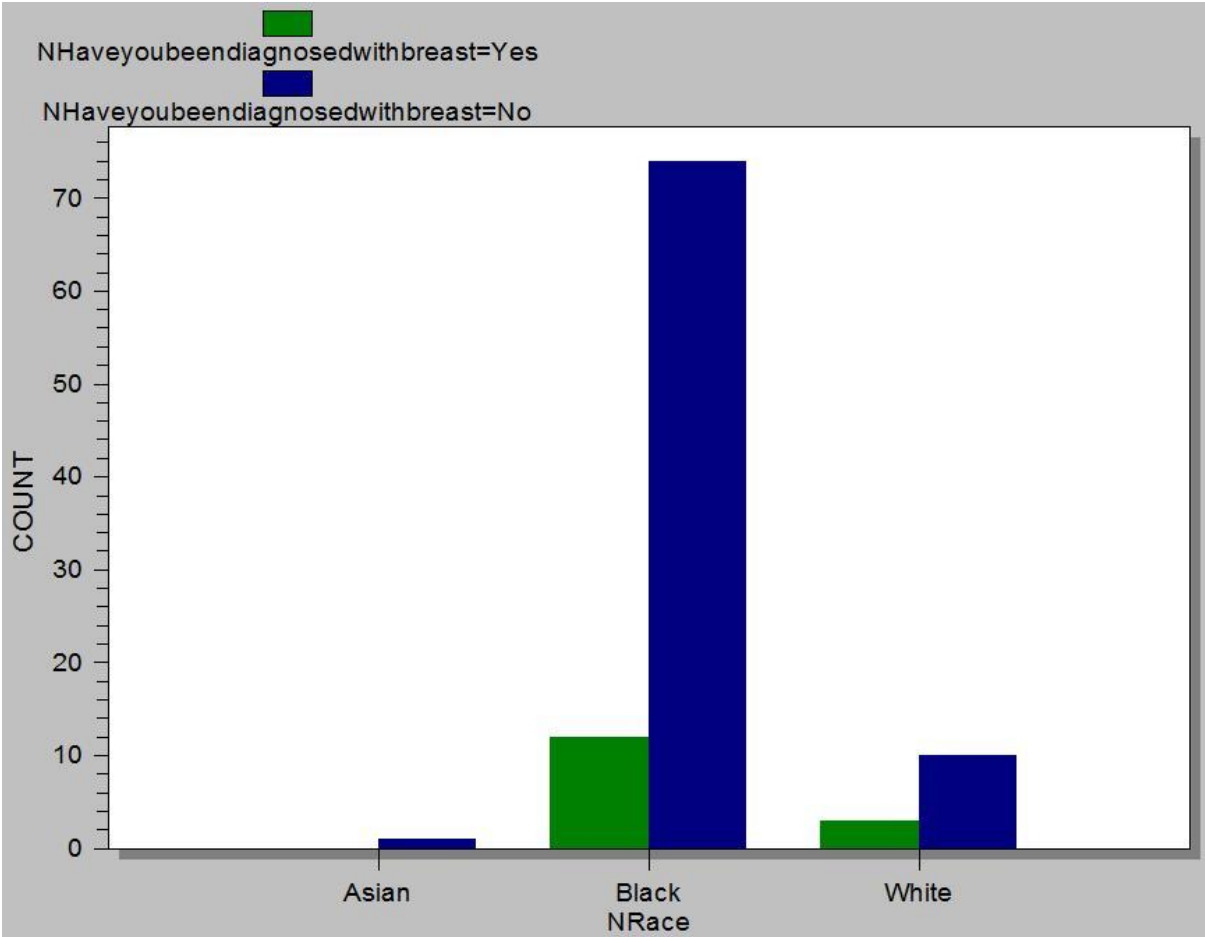
Figure 4.1: Have you been diagnosed with breast cancer (n=15)

Of the respondents, 12% (n=12; Black Africans) had BC, and 3% (n=3; Whites) had BC. In addition, 74% (n=74; Black Africans) did not have BC; 10% (n=10; Whites) did not have BC, and 1% (n=1; Asian) did not have BC.
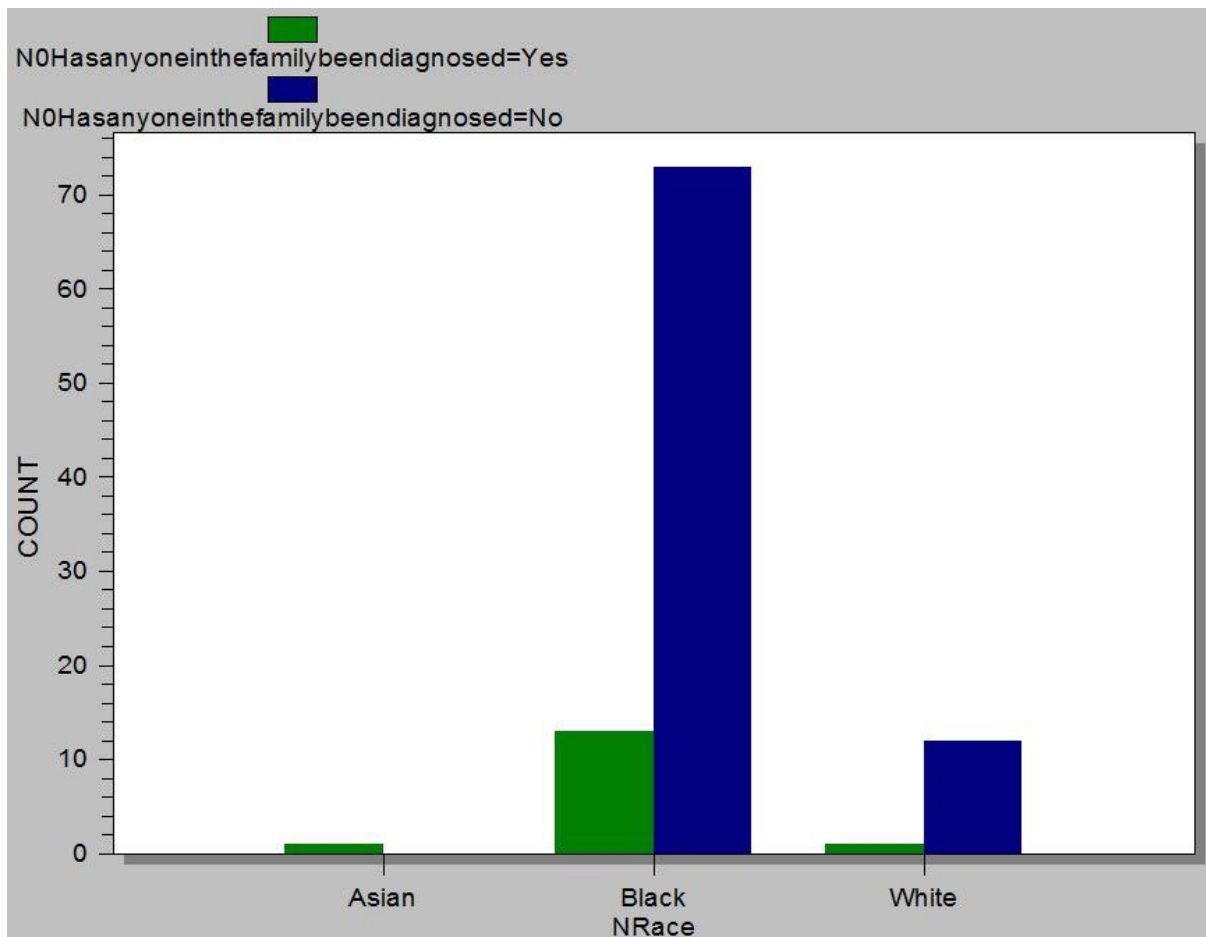
Table 4.3   Respondents' family history of breast cancer according to age (n=100)

Variable	Frequency	Percentage
Age category		
20-30		
a) yes	2	2
b) no	16	16
Total	**18**	**18**
31-40		
a) yes	5	5
b) no	28	28
Total	**33**	**33**
41-50		
a) yes	5	5
b) no	27	27
Total	**32**	**32**
51 &>		
a) yes	3	3
b) no	14	14
Total	**17**	**17**

Regarding the respondents' age who had a family history of BC, the results indicated that 15% (n=15) had a family history of cancer. Of these, 5% (n=5) aged 31-40 years and 5% (n=5) aged 41-50; 3% (n=3) aged 51 and older, and 2% (n=2) aged 20-30 had relatives diagnosed with breast cancer.

Figure 4.2: Respondents' family history of breast cancer according to race (n=26)

Of the respondents, 85% (n=85) had no family history of cancer. Of these, 73% (n=73) were Black Africans, and 12% (n=12) were Whites. Of the respondents who had a positive family history of breast cancer, 13% (n=13) were Black Africans; 12% (n=12) were Whites, and 1% (n=1) was Asian.

Table 4.4   Respondents with family members diagnosed with breast cancer (n=15)

Variable		Frequency	Percentage
Race			
a)	**Asian**		
a)	aunt	0	0,0
b)	mother	1	6,7
c)	sister	0	0,0
d)	other	0	0,0
Total		**1**	**6,7**
Black Africans			
a)	aunt	5	33,3
b)	mother	0	0,0
c)	sister	3	20
d)	other	5	33,3
Total		**13**	**86,6**
Whites			
a)	aunt	0	0,0
b)	mother	1	6,7
c)	sister	0	0,0
d)	other	0	0,0
Total		**1**	**6,7**

Of the respondents, 33, 3% (n=5) of the Black Africans had an aunt, 20% (n=3) had a sister, and 33.3% (n=5) had other relatives besides those listed with breast cancer; 1% (n=1) of the Whites and the Asian respondent (6.7%, n=1) had their mother with breast cancer.

4.3.2 Section B: Respondents' knowledge of breast cancer early warning signs and symptoms

Table 4.5   Respondents' knowledge of breast cancer early warning signs and symptoms (n=100)

Variable			Frequency	%
a)	breast lump that is fixed, not tender			
	i)	yes	85	85
	ii)	no	5	5
	iii)	do not know	10	10
Total			**100**	**100**
b)	skin or nipple retraction			
	i)	yes	55	55
	ii)	no	9	9
	iii)	do not know	36	36
Total			**100**	**100**
c)	nipple discharge in a non-lactating woman			
	i)	yes	65	65
	ii)	no	11	11
	iii)	do not know	24	24
Total			**100**	**100**
d)	enlarged lymph nodes in axillae			
	i)	yes	64	64
	ii)	no	12	12
	iii)	do not know	24	24
Total			**100**	**100**
e)	small pimple on the breast			
	i)	yes	26	26
	ii)	no	51	51
	iii)	do not know	23	23
Total			**100**	**100**

Table 4.5 indicates that of the respondents, 23, 4% (n=23) had no information about BC early warning signs and symptoms, 12, 6% (n=13) did not know, and 64% (n=64) were aware of breast cancer early warning signs and symptoms.

A survey about educational needs of breast cancer and BSE among 385 Iranian women found that 47% of the participants had inadequate knowledge; 20, 8% had quite adequate knowledge, and 4, 7% had adequate knowledge (Ghodsi & Hojjatoleslami 2012:2563).

Table 4.6   Summary of breast cancer early warning signs and symptoms with correct responses (n=100)

Knowledge of breast cancer early warning signs and symptoms		Correct answers (%)
a)	breast lump that is fixed not tender	85
b)	skin or nipple rétraction	55
c)	nipple discharge in a non-lactating woman	65
d)	enlarged lymph nodes in axillae	64
e)	small pimple on the breast	51

The respondents' mean knowledge level was 64%, and the range of knowledge from the lowest to the highest percentage level was 34%. Most of the respondents knew the symptom of a breast lump rather than the other symptoms.

4.3.3 Section C: Respondents' knowledge and practice of BSE

4.3.3.1   Part A: Knowledge on breast self-examination

Table 4.7   Respondents' knowledge of definition of BSE (n=100)

Variable		Frequency	%
a)	the assessment made on the breast by an individual to check for breast lumps	91	91
b)	the assessment made on the breast by a doctor or nurse to check for breast lump	4	4
c)	the use of X-ray to assess for breast cancer	5	5
Total		**100**	**100**

Table 4.7 reveals that of the respondents, 91% (n=91) were able to define BSE as individual assessment of the breast to check for breast lumps; 4% (n=4) defined it as assessment by a doctor or nurse to check for breast lumps, and 5% (n=5) defined it as use of X-ray to assess for breast cancer. In addition, the majority (91%; n=91) could define BSE as a primary tool of breast examination. A study on BSE practice among female secondary school teachers in a rural community in Oyo state, Nigeria found that only 22% of the respondents were able to define BSE (Faronbi & Abolade 2012:112).
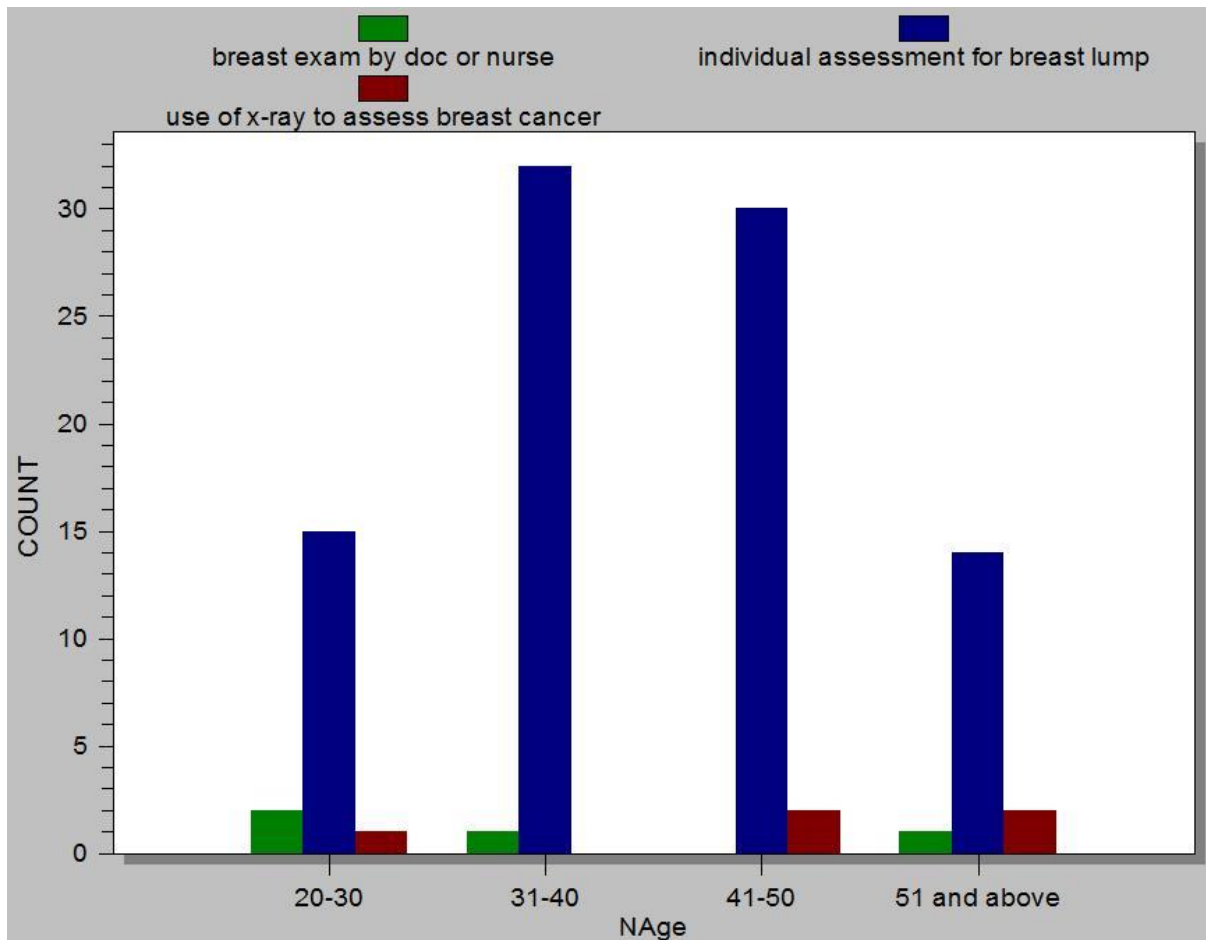
Figure 4.3: Respondents' knowledge of definition of BSE according to age category (n=100)

The analysis according to age showed that of the respondents, 18 were 20-30 years old. Of these, 2% (n=2) defined BSE as breast examination by a health care practitioner; 15% (n=15) defined it as assessment by an individual to check for breast lumps, and 1% (n=1) defined it as use of X-ray to assess for breast cancer.

Of the respondents, 33 were 31-40 years old. Of these, 32% (n=32) defined it as assessment by an individual to check for breast lumps, and 1% (n=1) indicated use of X-ray to assess for breast cancer. Thirty-two (32) of the respondents were 41-50 years old. Of these, 30% (n=30) defined BSE as assessment by an individual to check for breast lumps, and 2% (n=2) indicated BSE as the use of X-ray to assess for breast cancer. Finally, of the respondents, 17 were 51 years and older. Of these, 14% (n=14) defined BSE as individual assessment to check for breast lumps; 2% (n=2) as the use of X-ray to assess for breast cancer, and 1% (n=1) as assessment by a doctor or nurse.

The results indicate that the majority in all the age groups were highly aware of BSE as a primary method of breast examination.

Table 4.8   Respondents' knowledge of what is inspected during BSE (n=100)

Variable		Frequency	%
1)	fluid coming from the nipple in a non-lactating mother		
	a) yes	77	77
	b) no	12	12
	c) no idea	11	11
Total		**100**	**100**
2)	shape and size of the breast		
	a) yes	80	80
	b) no	11	11
	c) no idea	9	9
Total		**100**	**100**
3)	skin for changes in the contour, any swelling and nipple appearance		
	a) yes	88	88
	b) no	2	2
	c) no idea	10	10
Total		**100**	**100**

Table 4.8 reveals that the respondents were knowledgeable of what is inspected during BSE. On fluid coming from the nipple in a non-lactating mother, 77% (n=77) of the respondents answered yes; 12% (n=12) answered no, and 11% (n=11) had no idea.

On inspection of the shape and size of the breast, 80% (n=80) answered yes, 11% (n=11) answered no, and 9% (9) had no idea.

On inspection of the skin for changes in the contour, any swelling and nipple appearance, 88% (n=88) answered yes, 2% (n=2) answered no, and 10% (n=10) had no idea.

The mean knowledge for the respondents was 82% for those who knew what was inspected during BSE; 8, 3% for those who answered no, and 10% for those who did not know.

Table 4.9   Respondents' knowledge of what to feel for during BSE (n=100)

| Variable	Frequency	Percentage
a) breast lump which may be painless or painful and fixed	98	98
b) pimples on the breast	0	0
c) enlarged lymph nodes in the axillae	2	2
Total	**100**	**100**

Table 4.9 reveals that of the respondents, 98% (n=98) knew about the importance of feeling for a breast lump during BSE, and 2% (n=2) said enlarged lymph nodes in the axillae. No respondent answered pimples on the breast.

Table 4.10   Respondents' knowledge of the initiation of BSE (n=100)

Variable	Frequency	Percentage
a) as soon as she starts menstruating	64	64
b) at the age of 20 years in order to familiarise with her breast	28	28
c) at the age of 40 years	7	7
d) when she has been diagnosed with breast cancer	1	1
Total	**100**	**100**

Table 4.10 reveals that of the respondents, 64% (n=64) indicated that BSE should be initiated as soon as a woman starts menstruating; 28% (n=28) indicated that at the age of 20 years in order to familiarise with her breast; 7% (n=7) indicated at the age of 40 years, and 1% (n=1) indicated when she has been diagnosed with breast cancer.

The results show that of the respondents, the majority (64%; n=64) were not knowledgeable about when to start BSE and 28% (n=28) knew that it should start at the age of 20 years. This concurs with Faronbi and Abolade's (2012:112) finding among female secondary school teachers in Nigeria where only 16% (n=6) knew that BSE should be done from 20 years of age. Weber and Kelly (2014:400) state that BSE should start when women are 20 years of age.
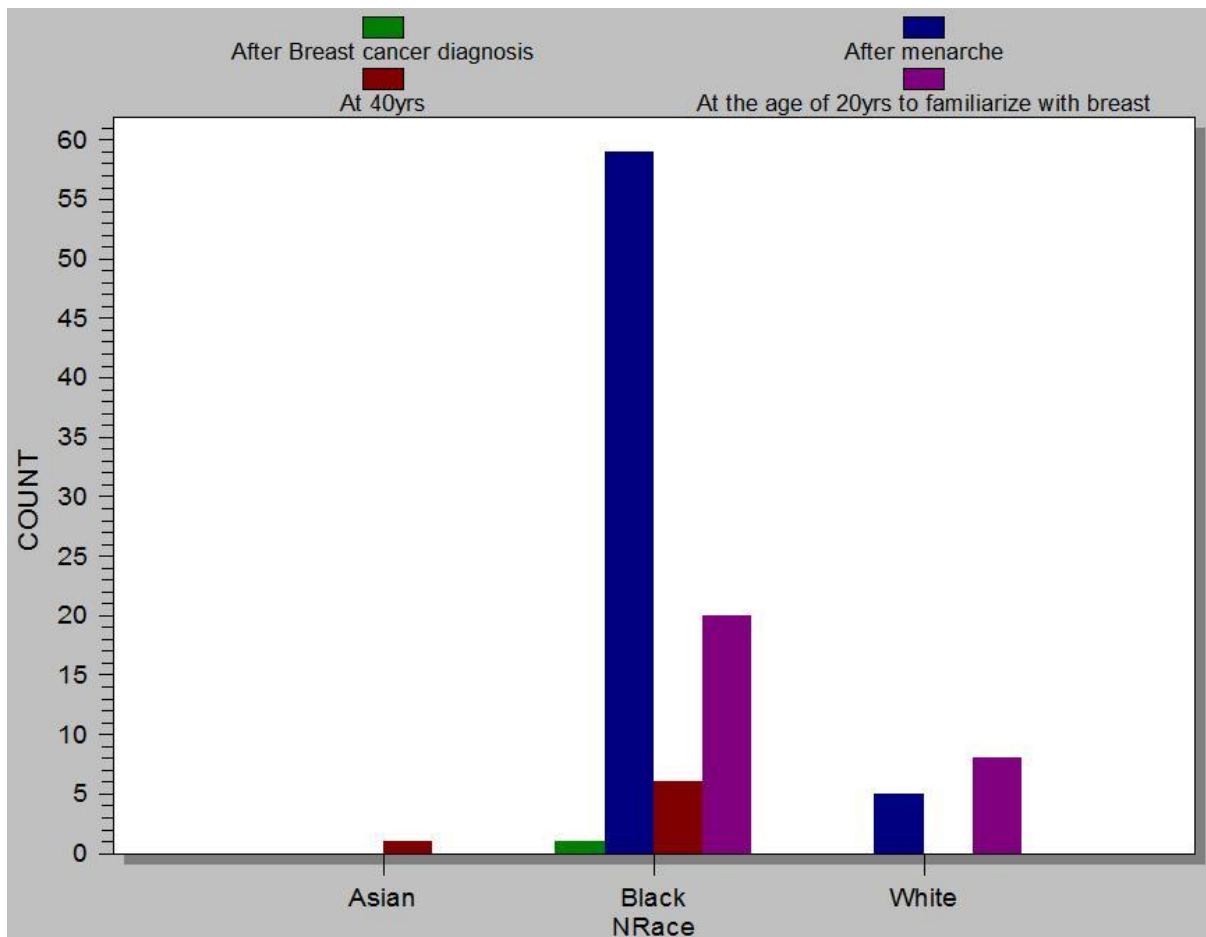
Figure 4.4: Respondents' knowledge of when to start BSE according to race (n=100)

Regarding the respondents' knowledge of when to start BSE according to their race, figure 4.4 reveals that of the Black Africans, 59% (n=59) indicated as soon as a woman starts menstruating; 21% (n=21) indicated from the age of 20 years, and 69% (n=59) did not know. Of the Whites, 5% (n=5) indicated as soon as a woman starts menstruating, and 8% (n=8) indicated at the age of 20 years. The Asian respondent (1%; n=1) did not know.

Table 4.11   When/how often, regularly the respondents did BSE (n=100)

Variable	Frequency	%
a) monthly 1-7 days after menstruation	64	64
b) once every 4th month	13	13
c) when one suspects something abnormal is developing in the breast	23	23
Total	**100**	**100**

Table 4.11 reveals that of the respondents, 64% (n=64) indicated that they performed BSE monthly 1-7 days after menstruation;13% (n=13) indicated once every fourth month, and 23% (n=23) performed BSE when they suspected something abnormal was developing in the breast. These results show that 36% (n=36) did not perform BSE.
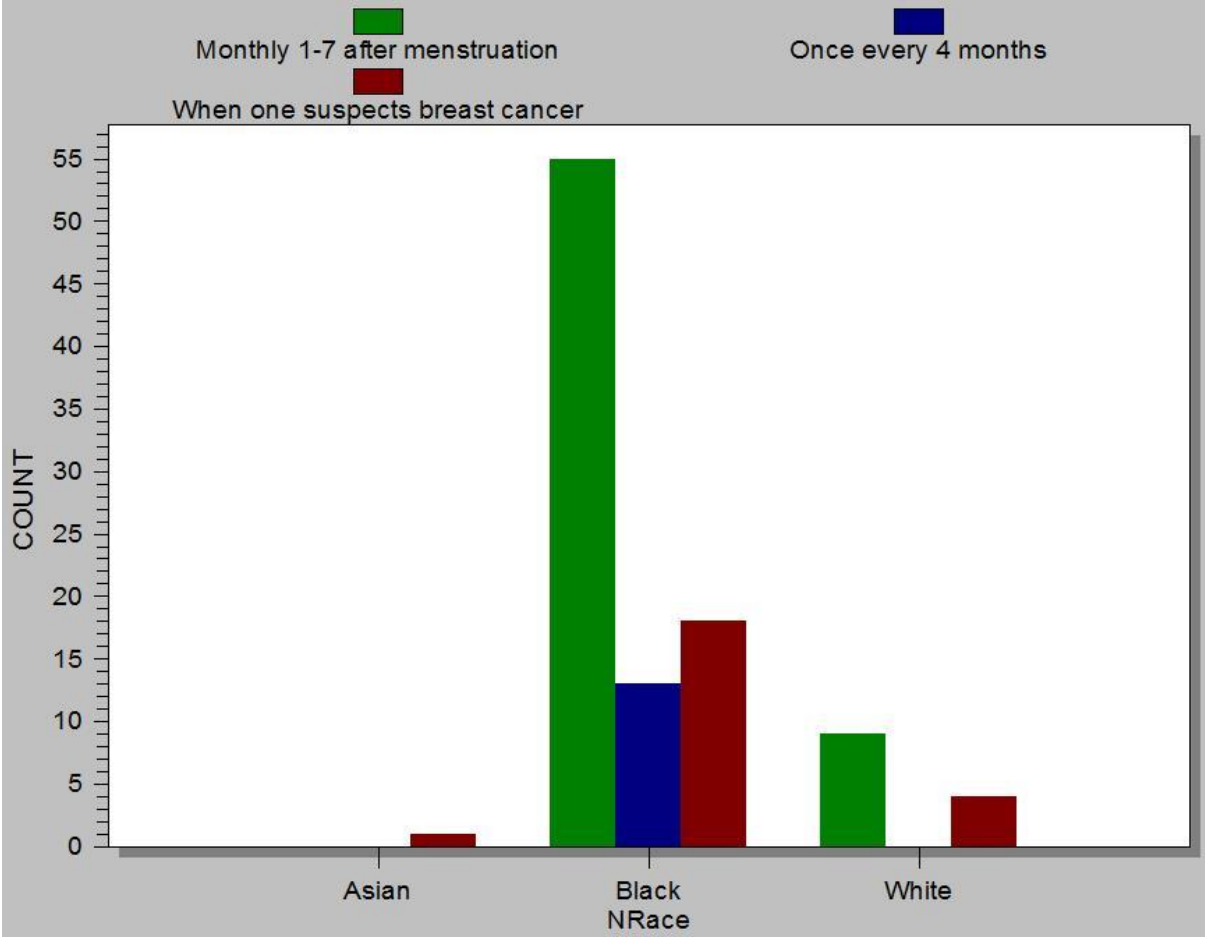
Figure 4.5:   Respondents' frequency of perfoming BSE according to race (n=100)

Figure 4.5 showed that of the respondents, 74,3% (n=55) of the Black Africans performed BSE monthly 1-7 days after menstruation; 17,5% (n=13) performed BSE

once every fourth month, and 24,3% (n=18) indicated when they suspected something abnormal was developing in the breast.

Of the White respondents, 12,2% (n=9) indicated that they performed BSE monthly 1-7 days after menstruation, and 30,8% (n=4) did so when they suspected something abnormal was developing in the breast.

The Asian respondent (1,4%; n=1) did so when she suspected something abnormal was developing in the breast. The results indicated that the respondents' practice of BSE was not influenced by race.

Table 4.12   Respondents' knowledge of how BSE is performed (n=100)

| Variable	Agree		Disagree		Have no idea		Total	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
a) In the shower or bath: using the pads of fingers, the woman should move around her entire breast in a circular manner moving from the outside to the centre, checking the whole breast and armpit.	80	80	11	11	9	9	100	100
b) Both breasts to be checked monthly feeling for a lump and thickening	82	82	12	12	6	6	100	100
c) In front of a mirror: the woman should visually inspect her breast with her arms at her sides, next raise her arms high overhead	87	87	8	8	5	5	100	100
d) Look for any changes in the contour, any swelling, or dimpling of the skin, or changes on the nipple. She has to rest her hips and press firmly to flex her chest muscles	88	88	6	6	6	6	100	100
e) Lying down: when lying down the breast tissue spreads out evenly along the chest wall, the woman to place a pillow under her left arm behind her head	78	78	12	12	10	10	100	100
f) Using her right hand, she moves the pads of her fingers around her left breast gently in circular motions covering the entire breast area and armpit	77	77	12	12	11	11	100	100
g) The woman should squeeze the nipple, check for discharge and lumps	75	75	13	13	12	12	100	100
h) The steps are to be repeated for the right breast	80	80	11	11	9	9	100	100
i) Visit her doctor for any changes detected	99	99	1	1	0	0	100	100

Table 4.12 revealed that the majority of the respondents knew how BSE was done and the methods. 82, 8% (n=83) of the respondents answered agree; 9, 6% (n=10) answered disagree and 7, 6% (n=7) had no idea. The mean knowledge for those who agreed was 83, 1%, 9, 4% for those who disagreed, and 7, 5% for those who had no idea.

4.3.3.2   Part B: Knowledge on breast self-examination

Table 4.13   Respondents' performance of BSE (n=100)

Variable	Frequency	%
Yes	74	74
No	26	26
Total	**100**	**100**

Table 4.13 revealed that of the respondents, 74% (n=74) did BSE and 26% (n=26) did not. The results were also analysed to find out whether the respondents' BSE was influenced by their race (see figure 4.6).
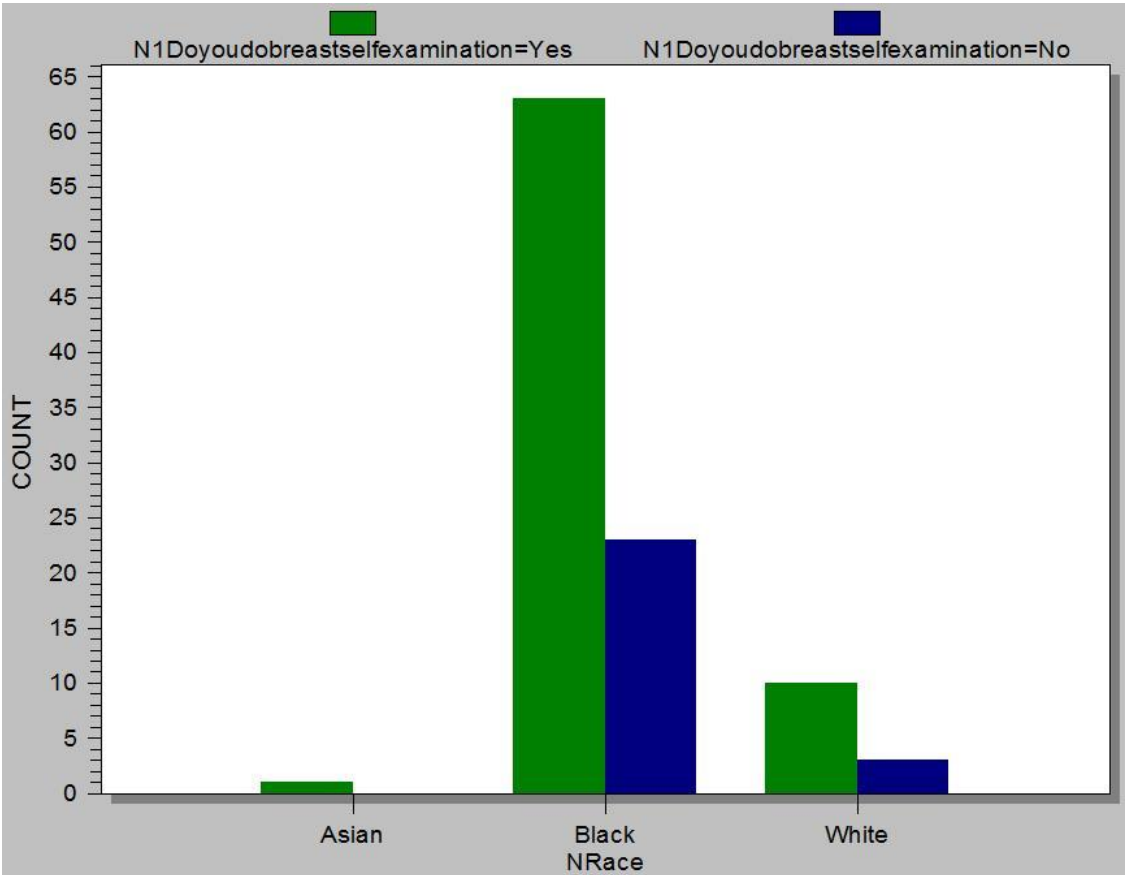
Figure 4.6: Respondents' BSE according to race (n=100)

The findings indicated that of the respondents, 63% (n=63) of the Black Africans did BSE, and 23% (n=23) did not; of the Whites 10% (n=10) did BSE and 3% (n=3) did not, and the Asian respondent (1%; n=1) did BSE.

Table 4.14   Respondents' BSE according to breast cancer diagnosis (n=74)

9 Have you been diagnosed with breast cancer?	Frequency	Percent	Cum Percent	
Yes	12	16,2	16,2	
No	62	83,8	100,0	
Total	**74**	**100,0**	**100,0**	

Table 4.14 reveals that of the 74 respondents who did BSE, 16, 2% (n=12) had breast cancer and 83, 8% (n=62) had no breast cancer. This shows that breast cancer diagnosis had no influence on BSE practice because 83, 8% (n=62) of the respondents who performed BSE had no breast cancer.

Table 4.15   Respondents who did not do BSE (n=26)

9 Have you been diagnosed with breast cancer?	Frequency	Percent	Cum Percent	
Yes	3	11,5	11,5	
No	23	88,5	100,0	
Total	**26**	**100,0**	**100,0**	

Table 4.15 reveals that of the 26% (n=26) who did not do BSE, 11, 5% (n=3) had breast cancer and 88, 5% (n=23) did not.
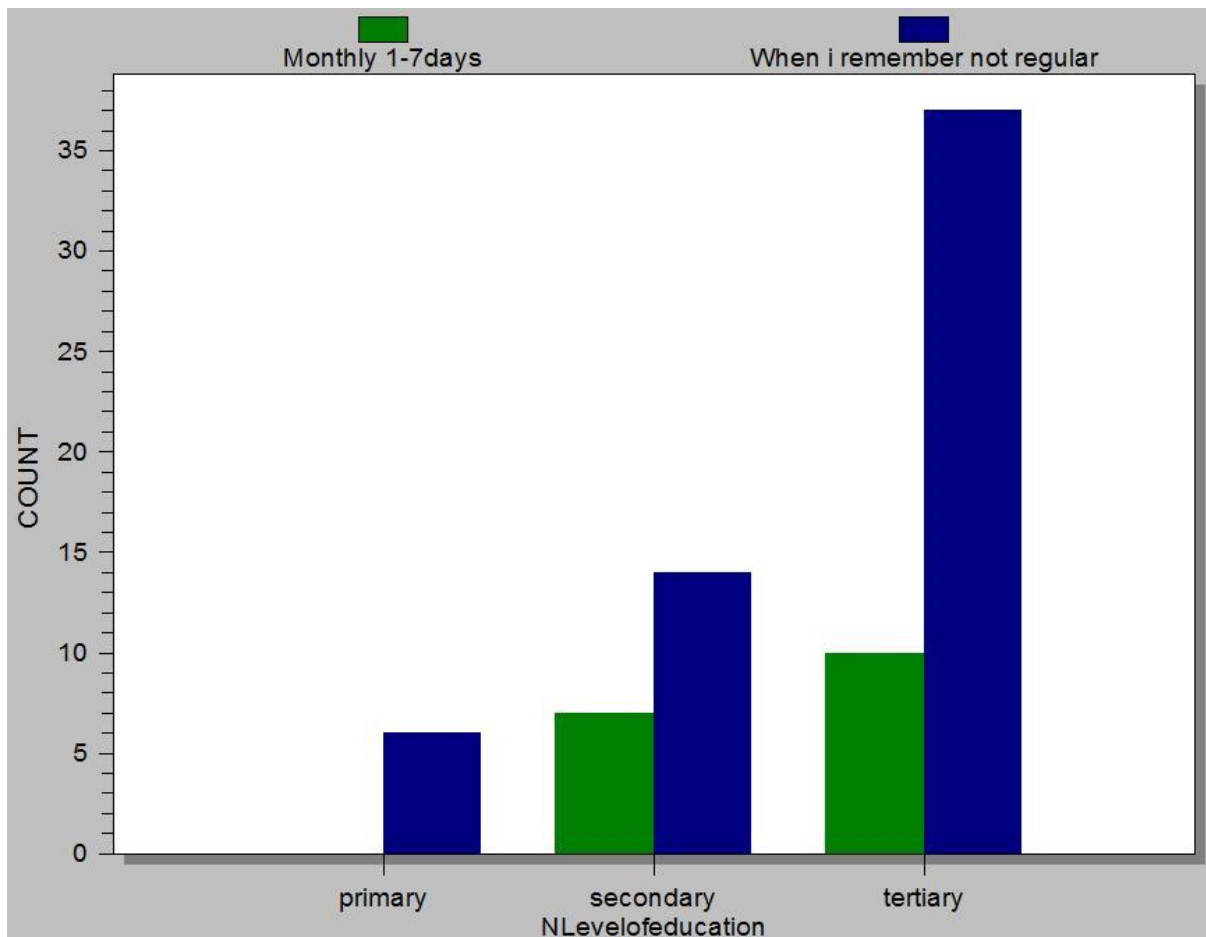
Figure 4.7: Respondents' BSE according to level of education (n=74)

Analysis was also done according to the respondents' level of education. Of the respondents, 8,1% (n=6) had a primary education and did BSE when they remembered, but not regularly. Of the respondents with a secondary education, 9,5% (n=7) did it 1-7 days after menstruation and 18,9% (n=14) did it when they remembered, but not regularly. Of those with a tertiary education, 13,5% (n=10) did it monthly 1-7 days after menstruation and 50% (n=37) did it when they remembered but not regularly.

The findings indicate that the respondents' level of education did not significantly influence their practice of BSE because all levels had a high rate of inconsistency in practice.

Table 4.16 Respondents' methods of breast examination but not BSE (n=26)

Variable		Frequency	%
a)	mammogram	5	19,2
b)	breast examination done by a health care practitioner	4	15,4
c)	nothing	17	65,4
Total		**26**	**100,0**

Table 4.16 reveals that of the respondents who did not practise BSE (100%; n=26), 19, 2% (n=5) went for a mammogram; 15, 4% (n=4) went for breast examination by a health care practitioner, and 65, 4% (n=17) did nothing.
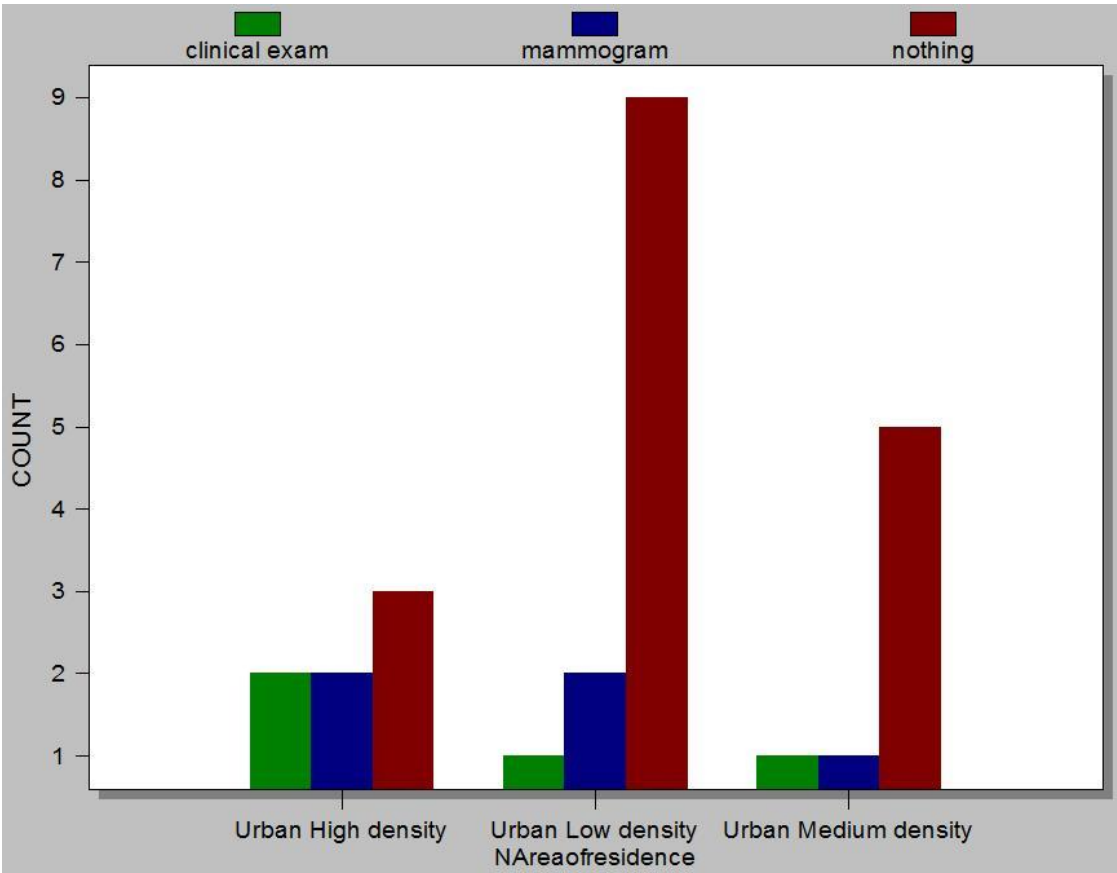
Figure 4.8: Respondents' area of residence (n=26)

Figure 4.8 reveals that of the respondents who did not practise BSE, 26, 9% (n=7) resided in urban high density. Of those, 7, 7% (n=2) used clinical examination; 7, 7% (n=2) used mammograms, and 11, 5% (n=3) had no method of breast examination. Of the respondents, 46, 2% (n=12) lived in urban low density. Of those 3, 8% (n=1) used clinical examination; 7, 7% (n=2) used mammograms, and 34, 6% (n=9) used no method of examination. Of the respondents, 26, 9% (n=7) stayed in urban medium

density. Of those, 3, 8% (n=1) used mammograms; 3, 8% (n=1) used CBE, and 19, 2% (n=5) used no methods.

Table 4.17 Respondents' frequency of going for other methods of breast examination (n=12)

Variable		Frequency	%
a)	once yearly	7	58,3
b)	did it once when I was diagnosed breast cancer	1	8,3
c)	after every 3 years	1	8,3
d)	not applicable	3	25.0
Total		**12**	**100,0**

Table 4.17 reveals that of the respondents, 58, 3% (n=7) went for a breast examination once a year; 8, 3% (n=1) went once when diagnosed of breast cancer; 8, 3% (n=1) had a breast examination after every three years, and 25% (n=3) had no examination done.
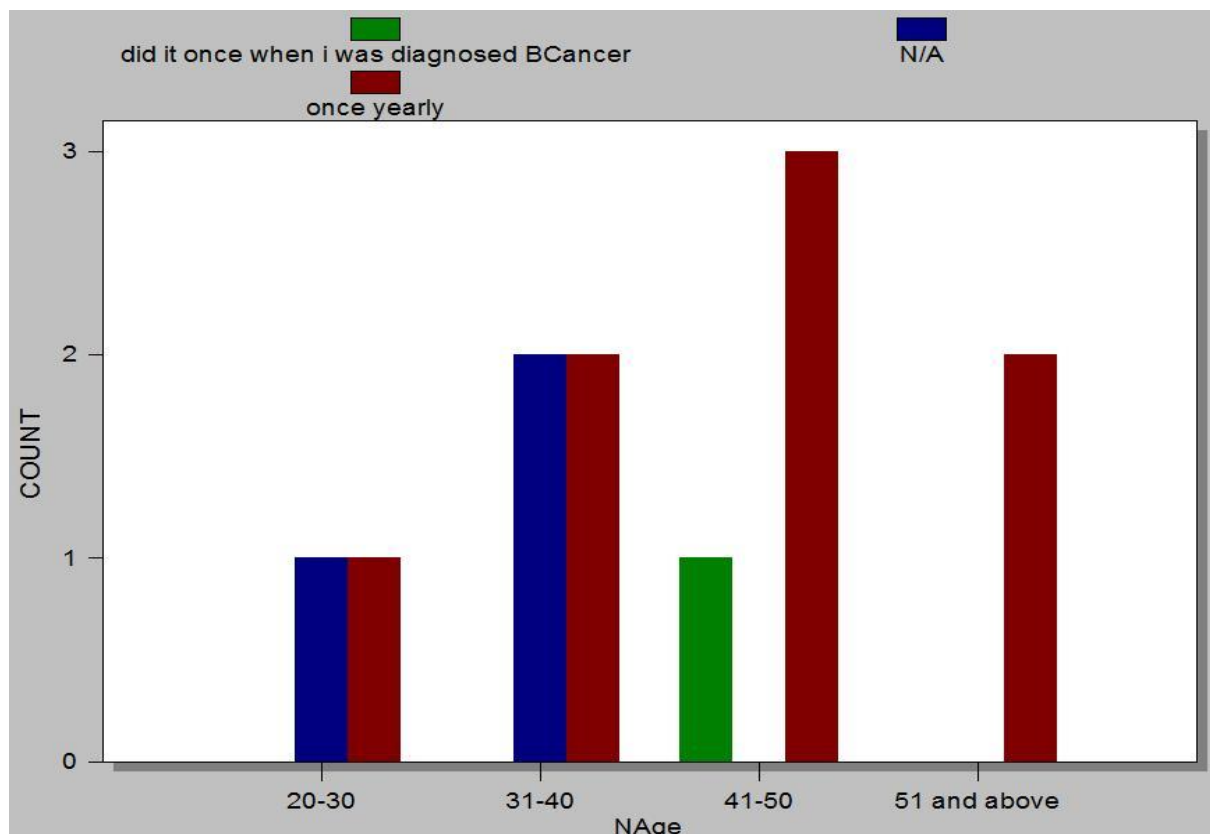
Figure 4.9: Respondents' use of other methods according to age (n=12)

The results reveal that of the respondents, 16,6% (n=2) were aged 20-30 years. Of those, 8,3% (n=1) went for the examination once yearly, and 8,3% (n=1) did no

examination. Of the respondents, 33,4% (n=4) were aged 31-40 years. Of those 16,7**%** (n=2) went for examination once yearly, and 16,7% (n=2) used no method. Of the respondents, 33,4% (n=4) were 41-50 years old. Of those, 25% (n=3) did it once yearly, and 8,3% (n=1) did it once when diagnosed with breast cancer. Of the respondents, 16,7% (n=2) were 51 and older, and both went for the examination once yearly.

The analysis indicates that respondents aged 20-40 years had no method of breast examination, but from 41 years and above all the respondents went for breast examination.

Table 4.18   Respondents' period of menstruation cycle when BSE is performed (n=74)

Variable	Frequency	%
a) before menstruation	4	5,4
b) after menstruation	16	21,6
c) any time	54	73,0
Total	**74**	**100,0**

Table 4.18 reveals that of the respondents, 5, 4% (n=4) did BSE before menstruation; 21, 6% (n=16) did BSE after menstruation, and 73% **(**n=54) did BSE any time. The results indicate that most of the respondents did BSE at the wrong time.

In their study of BSE practice among female secondary school teachers in a rural community in Oyo state, Nigeria, Faronbi and Abolade (2012:113) found that 42% did BSE before menstruation; 20% did BSE after menstruation, and 30% did BSE any time.
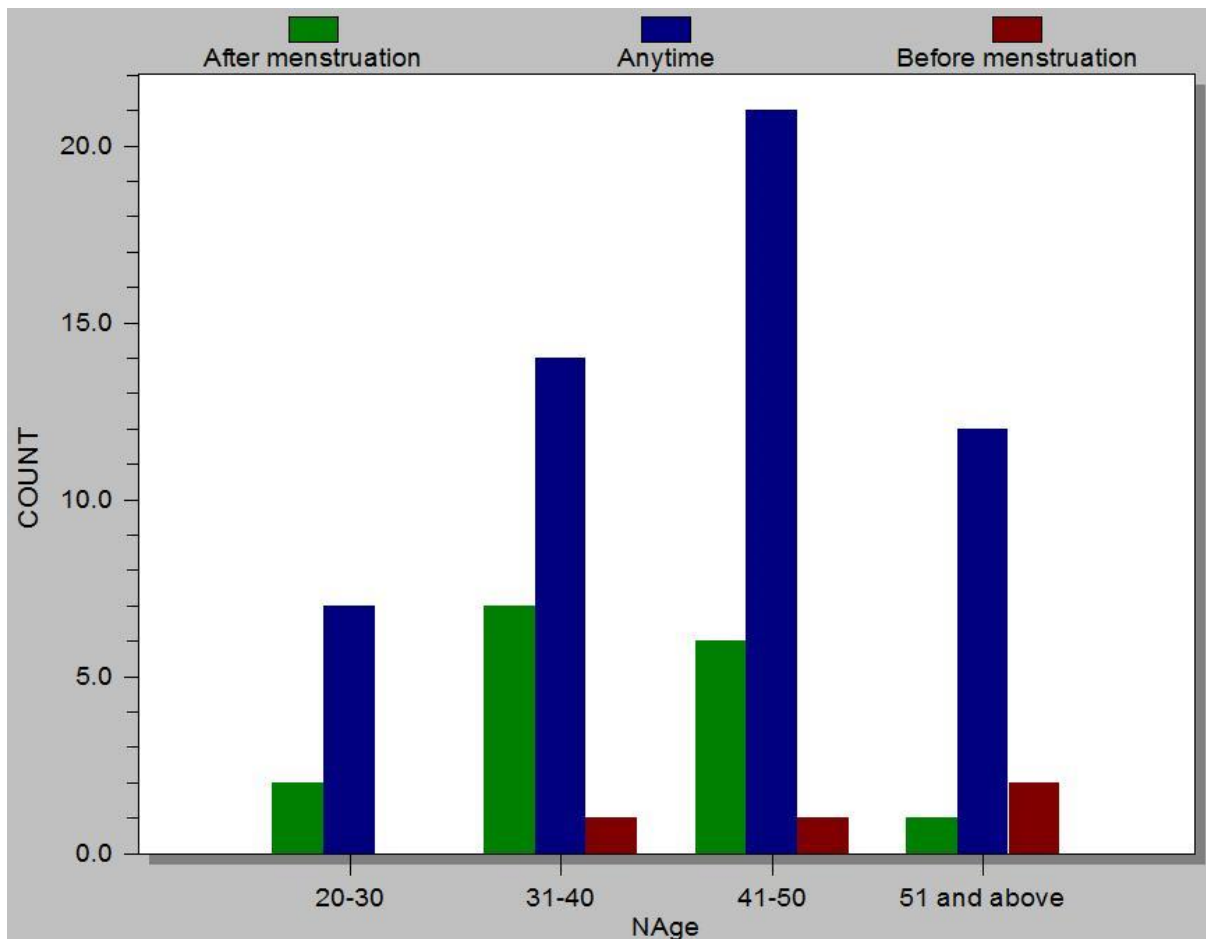
Figure 4.10: Respondents' period of menstruation cycle BSE is performed according to age (n=74)

Figure 4.10 shows that, of the respondents,

12,2% (n=9) were 20-30 years old. Of those 2,7% (n=2) did BSE after menstruation and 9,5% (n=7) did it any time.

29,7% (n=22) were 31-40 years old. Of those, 9,5% (n=7) did BSE after menstruation; 18,9% (n=14) did it any time, and 1,4% (n=1) did it before menstruation.

37,8% (n=28) were 41-50 years old. Of those, 8,1% (n=6) did BSE after menstruation; 28,4% (n=21) did it any time, and 1,4% (n=1) did it before menstruation.

20,3% (n=15) were 51 and older. Of those, 1,4% (n=1) did it after menstruation; 16,2% (n=12) did it any time because they were menopausal, and 2,7% (n=2) did it before menstruation.

Table 4.19   Respondents' time of initiation of BSE (n=74)

Variable		Frequency	%
a)	as soon as I started menstruating	4	5,4
b)	when I was diagnosed with breast cancer	1	1,4
c)	when my close relative was diagnosed with breast cancer	2	2,7
d)	at a later stage after menstruation started	67	90,5
Total		**74**	**100,0**

Table 4.19 shows that of the respondents, 5, 4% (n=4) started BSE as soon as they started menstruating; 1, 4% (n=1) started when she was diagnosed with breast cancer; 2, 7% (n=2) started when a close relative was diagnosed with breast cancer, and 90, 5% (n=67) started after menstruation started.

Table 4.20   Respondents' source of influence to do BSE (n=74)

Variable		Frequency	%
1)	age	12	16,2
2)	family history of breast cancer	4	5,4
3)	previous diagnosis of breast cancer	1	1,4
4)	mass media	57	77,0
Total		**74**	**100,0**

Table 4.20 reveals that of the respondents, 77% (n=57) were influenced to do BSE by mass media; 1, 4% (n=1) by a previous diagnosis of breast cancer; 5, 4% (n=4) by a family history of breast cancer, and 16, 2% (n=12) were influenced by age. In a rural community in Nigeria, Faronbi and Abolade (2012:113) found that 55% of their respondents had information about BSE from radio and television., Al-Naggar et al (2012:3831) examined the practice of BSE among women in Malaysia and found that 32% were influenced by a family history of breast cancer, and 57, 2% were influenced by their age (Al-Naggar et al 2012:3831).

Table 4.21   Respondents' sources of information on BSE (n=74)

Variable	Frequency	%
a) mass media	54	73
b) friends	3	4,1
c) family	0	0,0
d) health care personnel	17	23,3
Total	**74**	**100,0**

Table 4.21 shows that of the respondents, 73% (n=54) were taught by mass media; 41, 1% (n=3) were taught by friends, and 23, 3% (n=17) were taught by health care personnel

In their study, Faronbi and Abolade (2012:113) found that 55% gained their information from the radio and television, and 25% gained it from friends. In an evaluation of BSE among female university students, Moodi et al (2011:322) found that 48, 6% of the respondents' source of information about BSE was from doctors and other health practitioners.
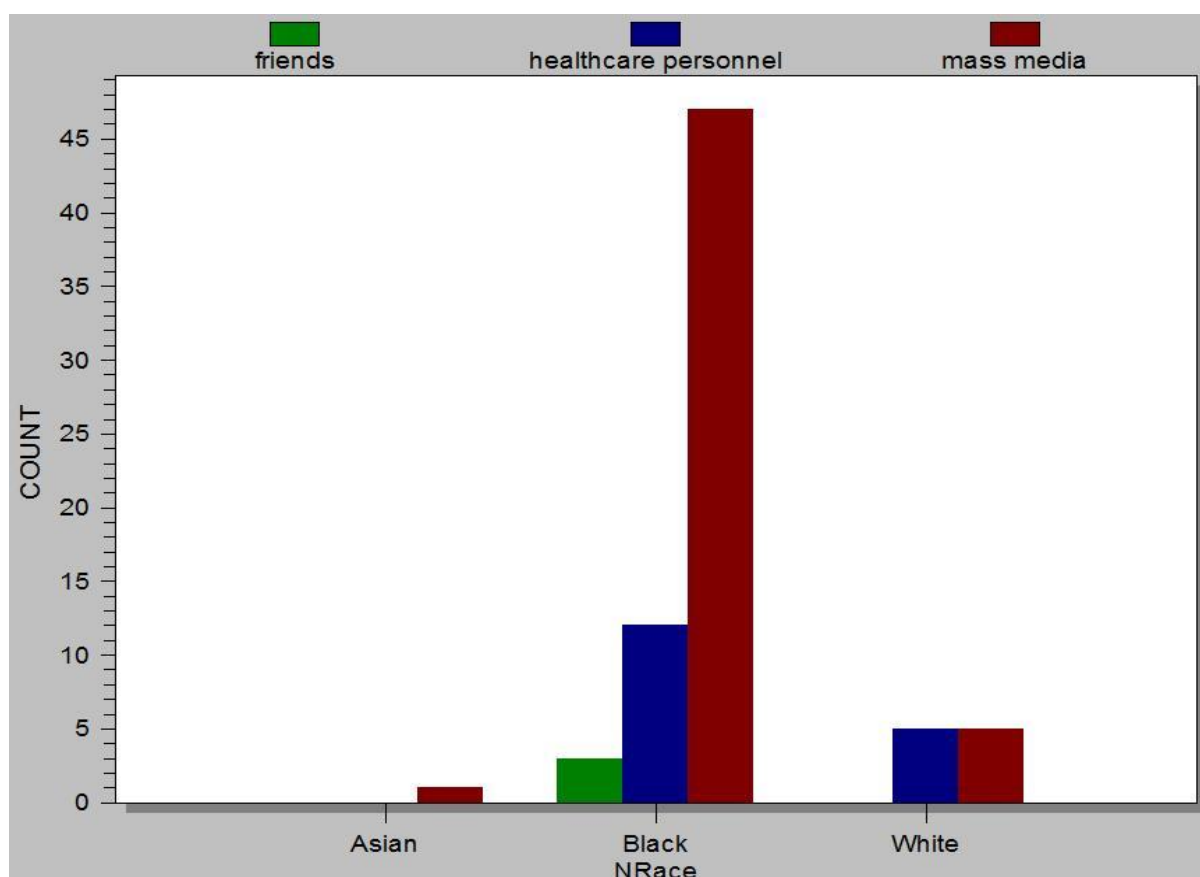

Figure 4.11: Respondents' sources of information per race (n=74)

Regarding the respondents' source of information on BSE per race, figure 4.11 shows that the Asian respondent (1, 4%; n=1) indicated mass media. Of the Black African respondents, 63, 5% (n=47) indicated mass media; 17, 3% (n=13) indicated health care personnel, and 4, 1% (n=3) indicated friends. Of the White respondents, 6, 8% (n=5) indicated mass media and 6, 8% (n=5) indicated health care personnel.

Table 4.22   Respondents' effects of breast cancer diagnosis on BSE practice (n=15)

Variable	Frequency	%
a) now do it monthly regularly	9	60,0
b) I do not do it for fear of detecting breast lumps in the other breast	1	6,7
c) I now go for clinical breast examination yearly	3	20,0
d) not applicable	2	13,3
Total	**15**	**100,0**

Table 4.22 reveals that of the respondents who had breast cancer, 60% (n=9) now do BSE monthly regularly; 6, 7% (n=1) do not do BSE for fear of detecting breast lumps in the other breast; 20% (n=3) now go for clinical examination yearly, and 13, 3% (n=2) indicated it was not applicable because they had a bilateral mastectomy.
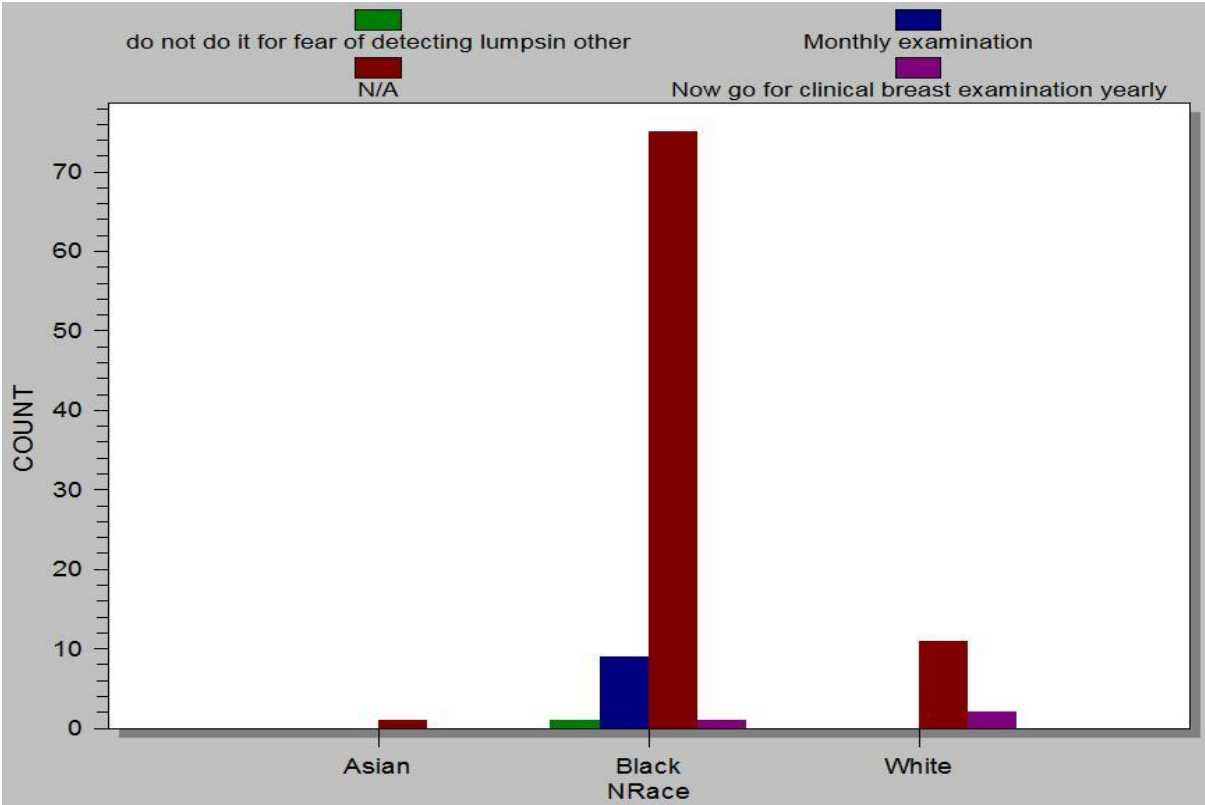
Figure 4.12: Respondents' effects of breast cancer diagnosis on BSE by race (n=15)

Figure 4.12 shows that of the respondents who had breast cancer, 11,9% (n=1) of the Black Africans do not do BSE for fear of detecting breast lumps in the other breast; 9% (n=1) go for CBE yearly, and 81,8% (n=9) do BSE monthly regularly. Of the White respondents, 100% (n=2) now go for clinical examination.

4.4   OVERVIEW OF RESULTS

4.4.1 Respondents' knowledge of breast cancer early warning signs and symptoms

The results show that of the respondents, 64% (n=64) were aware of the early warning signs and symptoms of breast cancer while 23, 4% (n=23) had wrong information, they answered no and 12, 6% (n=13) did not know.

4.4.2 Respondents' knowledge of BSE

Regarding the respondents' knowledge of BSE, almost all the respondents were aware of BSE as a primary tool of breast examination. Of the respondents, 91% (n=91) were able to define BSE and 9% (n=9) failed to define it correctly.

Of the respondents, 81, 7% (n=82) knew what to inspect for during BSE; 8, 3% (n=8) did not and 10% (n=10) had no idea. Moreover, 98% (n=98) were aware of the importance of feeling for a breast lump during BSE and 2% (n=2) were not.

Regarding initiation of BSE, 28% (n=28) of the respondents were aware that it should be initiated at the age of 20 to familiarise themselves with their breasts, while 64% (n=64) indicated as soon as they start menstruating, 7% (n=7) indicated at the age of 40 years and 1% (1) indicated after a woman has been diagnosed with breast cancer.

Regarding awareness of when to initiate BSE according to race, 24, 4% (n=21) of the Black Africans were aware and 75, 6% (n=65) were not. Of the White respondents, 61, 5% (n=8) were aware and 38, 5% (n=5) were not. The Asian participant (2%; n=1) was not knowledgeable.

Of the respondents, 64% (n=64) were aware of the frequency of performance of BSE, monthly 1-7 days after menstruation. Ignatavicius and Workman (2013:1594) state that premenopausal women should examine their breasts one week after the menstrual period when hormonal influence on breast tissue is decreased, so fluid retention and tenderness are reduced.

Of the respondents, 83, 1% (n=83) knew of the different ways of examining their breasts stated; 9, 4% (n=9) disagreed with some of the methods, and 7, 5% (n=8) had no information at all.

4.4.3 Respondents' level of practice of BSE

The results revealed that of the respondents, 74% (n=74) indicated that they did BSE and 26% (n=26) did not. Of the 74% (n=74) who practised BSE, however, only 23% (n=17) did it correctly monthly 1-7 days after menstruation.

Of the respondents, 77% (n=77) indicated that they did it when they remembered, but not regularly. This shows that the majority of those did BSE inconsistently which could affect the effectiveness thereof.

The results revealed that 23% (n=17) of the respondents performed BSE after menstruation and 73% (n=57) did it any time.

Analysis according to age category revealed that of the respondents,

12, 2% (n=9) were 20-30 years old. Of those, 77, 8**%** (n=7) did BSE at any time which was wrong considering that they were still menstruating.

29, 7% (n=22) were 31-40 years old. Of those, 18, 9% (n=14) did BSE any time, which is wrong, and 31, 8% (n=7) did BSE after menstruation.

20, 3% (n=15) were 51 and older. Of those, 80% (n=12) did BSE any time.

According to Ignatavicius and Workman (2013:1594), women in menopause should pick a day each month to do BSE because their breast tissue is no longer influenced by hormonal fluctuations.

With regard to initiation of BSE, the results showed that only 5, 4% (n=4) had started as soon as they started menstruation, while 90, 5% (n=67) indicated that they had started at a later stage after menstruation.

Of the respondents, 77% (n=57) were influenced by mass media to do BSE; 16, 2% (n=12) were influenced by age; 5, 4% (n=4) were influenced by a family history of breast cancer, and 1, 4% (n=1) was influenced by a previous diagnosis of breast cancer. Regarding their source of information on BSE, 73% (n=54) of the respondents indicated mass media; 23, 3% (n=17) indicated health care personnel, and 4, 1% (n=3) indicated friends.

Of the respondents, 100% (n=15) had breast cancer. Of those, 60% (n=9) now do BSE monthly regularly; 20% (n=3) now go for CBE yearly, and 6, 7% (n=1) do not do it for fear of detecting breast lumps in the other breast. Among the 26% (n=26) who did not do BSE, 15, 4% (n=4) went for breast examination by a health care practitioner; 19, 2% (n=5) went for a mammogram, and 65, 4% (n=17) had no method for breast examination.

The results showed that area of residence had no effect on the respondents' level of practice.

Regarding the frequency of going for other breast examination per age category, of the respondents,

50% (n=1) were 20-30 years old and used no other method.

100% (n=4) were 31-40 years old. Of those, 50% (n=2) did it once yearly and 50% (n=2) used no other methods.

100% (n=10) were 41-50 years old. Of those, 60% (n=6) did it once yearly, 12, 5% (n=2) did it once when diagnosed with breast cancer, and 12, 5% (n=2) did it every 3 years.

100% (n=8) were 51 and older. Of those, 37, 5% (n=3) did it every 3 years, and 62, 5% (n=5) did it once yearly.

4.5   CONCLUSION

Chapter 4 presented, described and discussed the data analysis, data interpretation and the results.

Chapter 5 summarises the findings, briefly describes the contribution and limitations of the study, and makes recommendations for practice and further research.

CHAPTER 5

FINDINGS, LIMITATIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

Chapter 5 concludes the study, briefly summarises the findings and describes the limitations, and makes recommendations for practice and further research.

5.2 PURPOSE OF THE STUDY

The purpose of the study was to explore and determine the knowledge and practice of breast self-examination (BSE) among women in Zimbabwe. The findings would be used to improve health education to women to enable breast cancer to be detected and treated at an early stage. The objectives of the study were to

- determine the knowledge of breast self-examination among women admitted at a private clinic in Zimbabwe
- identify and describe the level of women's practice of breast self-examination (BSE)

The study therefore wished to answer the following research questions:

- Do women admitted at a private clinic in Zimbabwe have knowledge of breast self-examination?
- What are the levels of breast self-examination practice of women admitted at a private clinic in Zimbabwe?

5.3 RESEARCH DESIGN AND METHODOLOGY

In this study, the researcher chose a non-experimental cross-sectional descriptive research design to assess the knowledge and level of practice of BSE among women admitted at a private clinic in Zimbabwe. The respondents were women 20 years and older admitted at the clinic at the time of data collection.

Data was collected using a self-administered questionnaire developed by the researcher after a literature review. The questionnaire was divided into three sections and consisted of closed questions. A statistician analysed the data using EPI info version 3.3.2 and presented the findings in frequencies, tables and diagrams.

5.4   SUMMARY OF THE FINDINGS

One hundred questionnaires were administered to female patients admitted at a private clinic in Zimbabwe, and all were returned completed. The respondents were between 20 and 60 years old. Of the respondents, 67% were educated beyond secondary school; 75% were married; 97% were Christians; 55% were professionals, and 63% resided in urban low density suburbs. Of the respondents, 96% were Black Africans; 15% had breast cancer, mainly from 41years and older, and several (13% Black Africans; 1% each Asian and White respondents, respectively) had a family history of breast cancer.

Of the respondents, 64% were aware of breast cancer early warning signs and symptoms; 91% were able to define BSE as a primary tool of breast examination and what is inspected for during BSE; 98% were aware of the importance of feeling for a breast lump during BSE, and 64% indicated that BSE was supposed to be initiated as soon as a woman starts menstruating and should be done monthly 1-7 days after menstruation. However, about 72% of respondents lacked knowledge on when to start BSE.

Of the respondents, 74% practised BSE and 26% did not. Among the 74% who practised BSE, however, only 23% performed it monthly regularly while most did so when they remembered. Of the 26% who did not do BSE, 19, 2% used mammogram, 15, 4% went for CBE by a health care practitioner, and 65, 4% had no breast examination method.

Among the respondents who had breast cancer, 60% did BSE monthly regularly; 20% went for CBE yearly; 6,7% did not conduct it for fear of detecting breast lumps in the other breast, and 13,3% indicated that it was not applicable because they had had bilateral mastectomy.

The results according to Orem's self-care model showed that **self-care agency** was there among respondents under study, 64% (n=64) were aware of the early warning signs and symptoms of breast cancer, 91% (n=91) were able to define BSE, 81, 7% (n=82) knew what to inspect for during BSE and 98% (n=98) were aware of the importance of feeling for a breast lump during BSE.

Self-care agency was poor since results revealed that of the respondents, 74% (n=74) indicated they did BSE and among these who did, only 23% (n=17) did it correctly monthly 1-7 days after menstruation. The highest percentage of respondents, 77% (n=77) were doing it irregularly and wrongly, 73% (n=57) did BSE any time.

These results showed that **therapeutic self-care demand** is high since practice for BSE is being done wrongly. There is need to improve on nursing that is on health education being given on BSE and practice to promote **self-care** among women.

5.5   LIMITATIONS OF THE STUDY

The study was conducted at a private clinic in Zimbabwe among women aged 20 years and older who were free from pain, conscious, and fluent in English. It focused on identifying the women's level of knowledge of early warning signs and symptoms of breast cancer and BSE, and their practice of BSE.

The private hospital catered mainly for patients who had medical aid and access to the services at the hospital and those who were able to pay cash. Consequently, the results cannot be generalised to the whole Zimbabwean population or state hospitals and clinics. The respondents were all educated and literate, which excluded many women from rural areas. Only one respondent was Asian therefore her performance cannot be generalised to all Asian women in Zimbabwe.

Finally, the questionnaire only covered the respondents' knowledge of breast cancer and BSE and did not assess their knowledge of or ability to correctly perform a BSE.

5.6   CONTRIBUTION OF THE STUDY

The study confirmed that theoretical knowledge does not necessarily or automatically indicate good practice. There is a need for practical demonstrations followed by return demonstration to assess whether women are able to do BSE correctly and regularly. The findings demonstrate the gap between knowledge and practice which needs to be corrected to improve health promotion through BSE. Moreover, the study emphasised that knowledge is not determined by area of residence, age or level of education therefore when giving health education all women should be given the same information correctly and have demonstrations of BSE practice.

5.7   RECOMMENDATIONS

Based on the findings, the researcher makes the following recommendations for practice and further research.

5.7.1 Practice

In order to bridge the gap between knowledge and practice of BSE, nurses and other health care personnel should ensure that all women are educated on proper BSE practice as a health promotion activity. The Ministry of Health should design and implement an intensive health education programme for schools, colleges, universities, hospitals and clinics.

Educational materials such as posters and leaflets should be freely available at hospitals and clinics to facilitate better learning.

Nurses should teach patients admitted in hospital about BSE and demonstrate the proper examination before they are discharged to improve awareness, knowledge and practice.

5.7.2 Further research

Further research should be done on the following topics:

- Knowledge of breast cancer and BSE among rural communities.
- Nurses' knowledge of breast cancer and BSE.
- Nurses' and doctors' perceptions of BSE as a method of preventing breast cancer.

5.8   CONCLUDING REMARKS

The study confirmed the importance of nurses in equipping patients with the correct information on women's health, breast cancer and BSE practice. The respondents expressed satisfaction that information obtained from the study would contribute to health education given to women to improve breast examination practice.

LIST OF REFERENCES

ACS see American Cancer Society.

Allen, TL, Van Groningen, BJ, Barksdale, DJ & McCarthy, R. 2010. Breast self-examination controversy: what providers and patients should know. *Journal for Nurse Practitioners* 6(6):444-451.
From: http://www.medscape.com/view article/725641 (accessed 23 July 2015).

Al-Naggar, RA, Bobryshev, YV & Al-Jashamy, K. 2012. Practice of breast self-examination among women in Malaysia. *Asian Pacific Journal of Cancer Prevalence* 13(8):3829-3833.
From: http://dx.doi.org/10.7314/APJCP.2012.13.8 3829 (accessed 24 July 2015).

Anderson, KN, Anderson, LE & Glanze, WD. 1998. *Mosby's medical, nursing and allied health dictionary*. 5th edition. St Louis: Mosby: pp1469.

American Cancer Society (ACS). 2010. *Breast cancer*. Atlanta, GA: ACS. From: www.cancer.org/cancer/breast cancer/detailed guide/breast cancer (accessed 26 February 2015).

American Cancer Society (ACS). 2011. *ACS recommendations (and rationale) for breast cancer screening.* Atlanta, GA: ACS. From: www.cancer.org/cancer breast cancer detailed/breast cancer detection (accessed 26 February 2015).

American Cancer Society (ACS). 2014. *Guidelines for the early detection of breast cancer*. Atlanta, GA: ACS. From: www.cancer.org/cancer breast cancer/detailed guide/breast cancer (accessed 27 February 2015).

Breastcancer.org. 2016. *The five steps of a breast self-examination*. Ardmore, PA: breastcancer.org.
From: www.breastcancer.org/symptoms/testing/types/self_exam/.bse_steps (accessed 22 March 2016).

Brink, H, Van der Walt, C & Van Rensburg, G. 2006. *Fundamentals of research methodology for health care professionals*. 2nd edition. Cape Town: Juta.

Burns, N & Grove, SK. 2010. *Understanding nursing research: building an evidence-based practice*. 5th edition. Arlington, TX: Elsevier/Saunders.

Burns, N & Grove, SK. 2011. *The practice of nursing research: appraisal, synthesis and generation of evidence*. 7th edition. St Louis: Elsevier/Saunders**.**

Chokunonga, E, Borok, MZ, Chirenje, ZM, Nyakabau, AM & Makunike-Mutasa, R. 2011. *Pattern of cancer in Zimbabwe 2010-2012*. Harare: Zimbabwe National Cancer Registry. From: http://afcrn.org/attachments/article/83/HARARE (accessed 18 July 2015).

Chokunonga, E, Borok, MZ, Chirenje, ZM, Nyakabau, AM & Makunike-Mutasa, R. 2014. *Pattern of cancer in Zimbabwe 2012-2013:* Harare: Zimbabwe National Cancer Registry.

Collins English Dictionary. 1994. 4th edition. Glasgow: HarperCollins.

Concise Oxford English Dictionary. 2008. Oxford: Oxford University Press.

Faronbi, JO & Abolade, J. 2012. Breast self-examination practice among female secondary school teachers in a rural community in Oyo state, Nigeria. *Open Journal of Nursing,* 2:111-115. From: http://www.scirp.org/journal/onj/ (accessed 24 July 2015).

Ferlay, J, Shin, HR, Bray, F, Forman, D, Mathers, C & Parkin, DM. 2010. *Cancer incidence and mortality worldwide*. Lyon: International Agency for Research on Cancer.

Fitzpatrick, JJ & Kazer, MW (Eds). 2012. *Encyclopedia of nursing research*. 3rd edition. New York: Springer.

Ghodsi, Z & Hojjatoleslami, S. 2012. A survey about educational needs of breast cancer and BSE in Iranian women. *Procedia – Social and Behavioural Sciences*, 46:2561-2565.

From: www.sciencedirect.com (accessed 21 July 2015).

Hughes, C. 2006. *Quantitative and qualitative approaches to social research*. Coventry: University of Warwick. From: www2.warwick.ac uk/research process/quantitative and qualitative approaches (accessed 9 September 2015)

Huitt, W, Hummel, J & Kaeck, D. 1999. *Internal and external validity: general issues*. Valdosta, VA: University of Valdosta.
From: www.edpsycinteractive.org/topics/intro/valdgn.html (accessed 3 March 2016).

Ignatavicius, DD & Workman, ML. 2013. *Medical-surgical nursing: patient-centered collaborative care*. 7th edition. St Louis, Missouri: Elsevier.

Joe, B. 2014. *Screening and testing: Mammography*.
From: http:www.breastcancer.org/research-news/risk-based-screening-misses-cancer-for-some (accessed 10 September 2015).

Kozier, B, Erb, G, Berman, A & Snyder S. 2004. *Fundamentals of nursing: concepts, process and practice*. 7th edition. Melbourne: Pearson Prentice Hall.

MacDonald, S & Headlam, N. 2011. *Research methods handbook: introductory guide to research methods for social research*. Manchester: Centre for Local Economic Strategies.
From: www.cles.org.UK/up-content/uploads/2011/01 (accessed 23 July 2015).

Madanat, H & Merrill, R 2002. Breast cancer risk-factor and screening awareness among women nurses and teachers in Amman, Jordan. *Cancer Nursing Journal*, 25(4):276-282.
From: http:journals./ww.com/cancer nursing online/pages/ (accessed 17 February 2016).

Moodi, M, Mood, MB, Sharifirad, GR, Shahnaz, H & Sharifzadeh, G. 2011. Evaluation of breast self-examination program using the health belief model in female students. *Journal of Research in Medical Science*, 16(3):316-322.
From: http://www.ncbi.nlm.nih.gov/pmc/articles/pmc 32143401 (accessed 21 July 2015).

Moule, P & Goodman, M. 2009. *Nursing research: an introduction.* Los Angeles: Sage.

Muchena, L. 2010. *Relationship between knowledge levels on malaria prevention and self-care actions in actions in primigravidae aged 18 to 35 years at Harare Central Hospital. National Research database of Zimbabwe: Harare: Zimbabwe.* From: http://researchdatabase.ac.zw/id/eprint/2941 (accessed 25 July 2015).

Ncube, T. 2014. *Breast cancer on the increase in Zimbabwe*. From: http://www.financial gazette.co.zw/breast cancer-on the increase-in-zim (Financial Gazette, 12-18 June 2014, p Lifestyle 2) (accessed 22 July 2015).

Nebeker, C. 2011. *Research design: descriptive studies*. San Diego, CA: University of San Diego.
From: http://ori.hhs.gov/education/products/sdsu/res- desI.htm (accessed 24 July 2015).

Nettina, SM. 2010. *Lippincott manual of nursing practice.* 9th edition. Philadelphia: Lippincott Williams and Wilkins.

Orem, DE.1991. Nursing concepts of practice.4th edition. St Louis, MO: Mosby

Polit, DF & Beck, CT. 2010. *Essentials of nursing research: appraising evidence for nursing practice.* 7th edition. Philadelphia: Lippincott Williams and Wilkins.

Polit, DF & Beck, CT. 2014. *Essentials of nursing research appraising evidence for nursing practice.* 8th edition. Philadelphia: Lippincott Williams & Wilkins.

Pswarayi, I. 2010. *The relationship between pregnancy induced hypertension (PIH)self-care knowledge and hypertension control among pregnant mothers aged 18-49 years in Bindura district, Harare: National Research Database Of Zimbabwe: Harare: Zimbabwe.*
From: http://researchdatabase.ac.zw/id/eprint/2943 (accessed 25 July 2015)

Sankaranarayanan, R, Ramadas, K, Thara, S, Muwonge, R, Prabhakar, J, Augustine, P, Venuqopal, M, Anju, G & Matthew, BS. 2011. Clinical breast examination preliminary results from a cluster randomised controlled trial in India. *Journal of the National Cancer Institute*, 103(19):1476-1480.

Semarya, BL, Worknish, S, Mignote, H, Mesfin, A & Alemseged, A. 2011. *Assessment of knowledge of breast cancer and screening methods among nurses in University Hospital in Addis Ababa, Ethiopia. ISRN Oncology Journal volume 2013 (Article ID 470981):*1-8 From: http://dx.doi.org/10.1155/2013/470981 (accessed 16 February 2016).

Smeltzer, SC & Bare, BG. 2004. *Brunner & Suddarth's Textbook of Medical-surgical Nursing*. 10th edition. Philadelphia: Lippincott Williams & Wilkins.

Taylor, SG. 2006. *Dorothea E Orem: self-care deficit theory of nursing.* St Louis, MO: Mosby.

Weber, JR & Kelly, JH. 2014. *Health assessment in nursing*. 5th edition. Philadelphia: Lippincott Williams & Wilkins.

Yavan, T, Akyüz, A, Tosun, N & IyigUn, E. 2010. Women's breast cancer risk perception and attitudes toward screening tests. *Journal of Psychosocial Oncology*, 28(2):189-201.
From: https://www.researchgate.net/publication/4313606 (accessed 20 July 2015).

ANNEXURES

ANNEXURE A: ETHICAL CLEARANCE CERTIFICATE

UNISA

UNIVERSITY OF SOUTH AFRICA
Health Studies Higher Degrees Committee
College of Human Sciences
ETHICAL CLEARANCE CERTIFICATE

REC-012714-039

HSHDC/500/2015

Date: 9 December 2015   Student No: 5763-871-3

Project Title: Knowledge and practices of breastself- examination among women
                   admitted at a private clinic, Zimbabwe.

Researcher: Muchirevesi Sophia Shungu

Degree: MA in Nursing Science   Code: MPCHS94

Supervisor   Dr MJ Mathibe-Neke
Qualification: PhD
Joint Supervisor: –

DECISION OF COMMITTEE

Approved | √ | Conditionally Approved | |

Prof.L Roets
CHAIRPERSON: HEALTH STUDIES HIGHER DEGREES COMMITTEE

Prof MM Moleki
ACADEMIC CHAIRPERSON: DEPARTMENT OF HEALTH STUDIES

PLEASE QUOTE THE PROJECT NUMBER IN ALL ENQUIRES

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ANNEXURE B: APPLICATION LETTER REQUESTING FOR PERMISSION TO CARRY OUT A STUDY AT MEDICAL INVESTMENTS LIMITED

House Number 5828

84 Crescent

Glen view 3

Harare

10 March 2015

Principal Nursing Officer

Medical Investments Limited (Avenues Clinic)

PO Box 4880

Corner Baines Avenues/ Mazoe Street

Harare Zimbabwe

Dear Madam

Reference: Requesting for permission to conduct a research study in ward 2 north at The Avenues clinic

I hereby apply for permission to do a research on: **KNOWLEDGE AND PRACTICES OF BREAST SELF- EXAMINATION AMONG WOMEN ADMITTED AT A PRIVATE CLINIC, ZIMBABWE.**

It is a requirement for the Masters in Arts in Nursing Science with the University of South Africa (UNISA.)

It is a requirement that I should have permission to carry out the project before enrolment for a dissertation. Find attached the research proposal and Ethical Clearance certificate.

The purpose of the study is to find out what women know about breast self-examination. The information will be used to improve health education to women to ensure that breast cancer is detected and treated at an early stage.

A non-experimental descriptive research design will be used. The target population of the study will be women admitted in a surgical ward of a private clinic. The accessible population will be women aged between 20-years and above who will be conscious, in day 2 postoperative care and willing to participate in the study.

Data collected will be coded and then analysed using a manual calculator.

Thank you in advance for your assistance

Yours faithfully

Sophia S Paso (Nee Muchirevesi)
Email adress:smuchirevesi@yahoo.com
Cell number: +263772 381 844

ANNEXURE C: LETTER FROM MEDICAL INVESTMENTS LIMITED GRANTING PERMISSION TO CARRY OUT RESEARCH

9 April 2015

LTR PT/ag /15/5541

Sr. S. Paso (Muchirevesi)

5828 84th Crescent

Glen View 3

HARARE

Dear Sr. Paso

PERMISION TO CONDUCT A RESEARCH STUDY IN WARD 2 NORTH AT AVENUES CLINIC.

I refer to your letter dated 27 March 2015 referring to the above subject.

I am pleased to inform you that permission is granted.   Just make sure that you share your results with us.

Let me take this opportunity to wish you the best in your studies.

Yours sincerely

For and on behalf of
Medical Investments Limited

P. TAVAZIVA (MRS.)
PRINCIPAL NURSING OFFICER

ANNEXURE D: LETTER OF CONSENT

"You are being invited to participate in a study on: **KNOWLEDGE AND PRACTICES OF BREASTSELF- EXAMINATION AMONG WOMEN ADMITTED AT A PRIVATE CLINIC, ZIMBABWE** being conducted by Sophia S Muchirevesi a post graduate student registered for the Master of Arts (Health Studies) programme at the University of South Africa.

-you were selected because you are a woman aged 20years and above admitted in a surgical ward of a private clinic.

The purpose of the study is to find out what women know about breast self-examination .The information will be used to improve health education to women to ensure that breast cancer is detected and treated at an early stage.

Procedure and duration

If you decide to participate, I will ask you to do the following:

- Complete a questionnaire asking some personal information on your knowledge and practices of breast self-examination.
- This should not take more than 20 minutes to complete but length of time will vary from patient to patient. You will only complete one questionnaire.

You may feel uncomfortable when answering the questions. If so, you are welcome to tell it to the researcher, who will then assist you in an appropriate way.

Benefits and/or compensation

There will be no direct benefit to you, but your participation is likely to help us find out more about how to improve screening of breast cancer to improve on early detection and treatment.

Anonymity and confidentiality

Your name should not appear anywhere on the questionnaire. If you indicate your willingness to participate in this study your information will be kept private. It will only be shared to the supervisor and others involved in the research project.

Voluntary participation

Your participation in this study is voluntary. If you decide not to participate, it will not affect the health care being rendered to you.

Right to refuse or withdraw

If you do not want to take part in the research you are free to do that. If you consent to take part, you still have the right to stop participating at any time you wish to do so.

Reimbursement

You will not be provided any incentive to take part in the research.

Sharing the results

Information obtained from you will not be shared to anybody outside the research team and nothing will be attributed to you by name. Knowledge obtained from this study will be shared with you, the hospital where the study is done and the University of South Africa.

Results will be used for research purposes and may be reported in academic and scientific journals.

Who to contact

If you have any questions, you can ask them now or later. If you wish to ask questions later you may contact any of the following:

Dr JM MATHIBE –NEKE (Supervisor)

Contact detail: mathijm@unisa.ac.za/0124296524

SOPHIA S MUCHIREVESI

Contact detail:smuchirevesi@yahoo.com/0772381844

Offer to answer questions

Before you sign this form, please ask any questions on any aspects of this study that is not clear to you. You may take as much time as necessary to think it over.

You are making a decision whether to participate or not in this study. Your signature indicates that you have read and understood the information provided above, have had all your questions answered, and have made a decision to participate.

The date you sign this document to enroll in this study is today's date. The date indicates that this form is valid when you enroll in the study but do not reflect how long you may participate in the study.

Name of research participant (please print): _____ Date: _____

Signature of participant: _____

Signature of witness: _____

You will be given a copy of this consent form to keep.

ANNEXURE E: QUESTIONNAIRE

Research title

KNOWLEDGE AND PRACTICES OF BREAST SELF- EXAMINATION AND AMONG WOMEN ADMITTED AT A PRIVATE CLINIC, ZIMBABWE

The purpose of this study is to find out what women know about breast self-examination. The information will be used to improve health education to women to ensure that breast cancer is detected and treated at an early stage.

Instructions

   i.   Please respond to all questions to the best of your ability and knowledge
   ii.   Tick the appropriate box

Section A: Demographic Data

1) Age

a) 20-30years

b) 31-40years

c) 41-50years

d) 51 and above

2) Level of education

a) Primary level

b) Secondary level

c) Tertiary level

3) Marital status

a) Married

b) Divorced

c) Widowed

d) Single

e) Living with
partner

4) Occupation

a) Self-employed ☐

b) House wife ☐

c) Professional ☐

d) Other specify_____

5) Religion

a) Christianity ☐

b) Moslem ☐

c) Other specify_____

6) Area of residence

a) Urban high

density ☐

b) Urban low

density ☐

c) Rural ☐

d) Other specify_____

7) Race

a) Black ☐

b) White ☐

c) Asian ☐

d) Other specify_____

8) Method of hospital payment

a) Medical aid

b) Cash

9) Have you been diagnosed with breast cancer?

a) Yes

b) No

10) Has anyone in the family been diagnosed with breast cancer?

a) Yes

b) No

11) If you answered "yes" to question 9, who was diagnosed with breast cancer?

a) Mother

b) Sister

c) Aunt

d) Other specify_____

Section B: Knowledge on breast cancer early warning signs and symptoms

12) Which of the following features could be early warning signs and symptoms of breast cancer?

Feature	Yes	No	Do not know
a) breast lump that is fixed , not tender			
b) skin or nipple retraction			
c) nipple discharge in a non-lactating woman			
d) enlarged lymph nodes in axillae			
e) small pimple on the breast			

Section C: Knowledge on breast self-examination and practices

Part A: knowledge on breast self-examination

13) What do you understand by the term breast self-examination?

a) The assessment made on the breast by an individual to check for breast lumps	
b) The assessment made on the breast by a doctor or nurse to check for breast lump	
c) The use of X-rays to assess breast cancer	

14) What do woman inspect for during breast self-examination?

Variable	Yes	No	No idea
a) fluid coming from the nipple in a non-lactating mother			
b) shape and size of the breast			
c) skin for changes in the contour, any swelling and nipple appearance			

15) What does a woman feel for when doing breast self- examination?

a) breast lump which may be painless or painful and fixed	
b)pimples on the breast	
c) enlarged lymph nodes in the axillae	

16) When should a woman start doing breast self-examination?

a) As soon as she starts menstruating	
b) At the age of 20 years in order to familiarise with her breast	
c) At the age of 40 years	
d) When she has been diagnosed with breast cancer	

17) How often should breast self-examination be performed?

a) Monthly 1-7 days after menstruation	
b) Once every 4th months	
c) When one suspects something abnormal is developing in the breast	

18) How is breast self- examination performed?

Activity	Agree	Disagree	Have no idea
a) in **the shower or bath**: using the pads of fingers, the woman should move around her entire breast in a circular manner moving from the outside to the centre, checking the whole breast and armpit area.			
- both breasts to be checked monthly feeling for a lump and thickening			
b) **in front of a mirror**: the woman should visually inspect her breasts with her arms at her sides, next raise her arms high overhead			
- Look for any changes in the contour, any swelling, or dimpling of the			

skin, or changes on the nipple.			
- she has to rest her hips and press firmly to flex her chest muscles		87	
c) **Lying down:** when lying down, the breast tissue spreads out evenly along the chest wall, the woman to place a pillow under her left shoulder and her left arm behind her head.			
Using her right hand, she moves the pads of her fingers around her left breast gently in circular motions covering the entire breast area and armpit.			
The woman should squeeze the nipple, check for discharge and lumps			
- the steps are to be repeated for the right breast			

d) Visit her doctor for any changes detected			

Part B: Level of practices for breast self-examination

19) Do you do breast self-examination?

a) Yes

b) No

20) If you answered "yes" to question 19, when do you do it?

a) Monthly 1-7 days after menstruation

b) When I remember but not regularly

c) I may remember and do it twice per year

21) If you answered "No" which method do you use to examine your breast for lumps?

a) mammogram

b) breast examination done by a health care practitioner

c) nothing

22) How often do you go for the stated method in question 21?

a) once yearly

b) did it once when I was
diagnosed breast cancer

c) after every 3 years

23) At what period of menstruation cycle do you perform breast self-examination?

a) Before menstruation

b) After menstruation

c) Any time

24) When did you start doing breast self-examination?

a) As soon as I started
menstruating

b) When I was diagnosed
with breast cancer

c) When my close relative
was diagnosed with breast
cancer

d) At a later stage after
menstruation started

25) What do you think influenced your practice for breast self-examination?

1) age

2) family history of breast cancer

3) previous diagnosis of breast cancer

4) mass media

26) If you do breast self-examination, who taught you?

a) mass media
b) friends
c) family
d) health care personnel

27) If you were diagnosed breast cancer, how has this changed your breast self - examination practices?

a) I now do it monthly regularly
b) I do not do it for the fear of detecting breast lumps in the other breast
c) I now go for clinical breast examination yearly

ANNEXURE F: LETTER FROM THE EDITIOR

Cell/Mobile: 073-782-3923   53 Glover Avenue

Doringkloof

0157 Centurion

7 October 2016

TO WHOM IT MAY CONCERN

I hereby certify that I have edited Sophia Muchirevesi's master's dissertation, **Knowledge and practice of breast self-examination among women admitted at a private clinic, Zimbabwe**, for language and content.

IM Cooper

Iauma M Cooper

192-290-4