ASSESSING THE PRACTICE OF BREAST-SELF EXAMINATION AMONG WOMEN ON HORMONAL CONTRACEPTIVES IN LUSAKA, ZAMBIA.

BY

SHILENGWE CHARITY

RN/BSc. NURSING

A dissertation submitted to the University of Zambia in partial fulfilment of the requirements for the award of the Master of Science in Public Health Nursing.

THE UNIVERSITY OF ZAMBIA

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I, **Charity Shilengwe**, hereby declare that the work on which this dissertation is based on, is my original work. I declare that neither the whole work nor any part of it has been, is being, or is to be submitted for another degree in this or another university.

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I, **Dr. Dorothy O. Chanda,** having supervised and read this dissertation is satisfied that this is the original work of the author under whose name it is being presented. I confirm that the work has been completed satisfactorily and approve it for final submission.

Signature ..... Date 27/10/2021

Head of Department

Signature ..... Date 27/10/2021

Department of Public Health Nursing, School of Nursing Sciences,
University of Zambia.

CERTIFICATE OF APPROVAL

This dissertation by **Charity Shilengwe** on assessing the Practice of Breast-Self Examination Among Women on Hormonal Contraceptives in Lusaka, Zambia has been approved in partial fulfillment of the requirements for the award of degree of Master of Science in Public Health Nursing.

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ABSTRACT

Breast self examination (BSE) is a technique that is used as a means of screening and a measure for the secondary prevention of breast cancer (BC). The diagnosis of breast cancer at an early stage allows for more treatment options and a high chance of long term survival.

The objective of the study was to investigate the practice of BSE among women on hormonal contraceptives in Lusaka, Zambia. The study applied mixed methods quantitative and qualitative dimensions. For quantitative study a Descriptive cross sectional study design was applied using a questionnaire on a study population of 384 respondents aged 20-40 years. The sample was selected using systematic sampling technique from four selected Lusaka District Health facilities. A Focus Group Discussion interview guide was used to collect qualitative data. Statistical analysis was carried out on quantitative data using SPSS version 22. Chi-square test was used to test associations between the Practice of BSE and other independent variables. Binary logistic regression and multiple logistic regressions were done to confirm these associations. The significant level was set at 0.05 with confidence interval of 95%. Thematic analysis was used to analyse qualitative data.

This study revealed that majority (72.2%, n= 279) of the women had low knowledge level, only a few (15%, n= 57)) practice BSE regularly and less than half (46%, n=177) were competent in the performance of BSE. Knowledge of BC, Knowledge on BSE, Self efficacy and Perceived benefits significantly influenced the practice of BSE (P=0.017; P=0.001; P=0.001; P=0.007 respectively).

This study concluded that majority of study participants had low level knowledge, low self efficacy and did not practice BSE. There is need for the ministry of Health to develop effective health education programmes to empower women with knowledge and skill on BSE.

Key Words: Breast self-examination and Breast Cancer.

DEDICATION

I dedicate this dissertation to my Late Father Mr. Charles David Shilengwe, my husband Dr Webster Hamweete and Son Luyando Hamweete for the love and support. My Mother Mrs. Lydia Longoloshi Shilengwe thank you for your prayers and encouragement.

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ABBREVIATIONS

ACS	American Cancer Society
AOR	Adjusted Odds Ratio
BC	Breast Cancer
BSE	Breast Self-Examination
CBE	Clinical breast examination
CDH	Cancer Diseases Hospital
CSO	Central Statistics Office
DHMT	District Health Management Team
FGD	Focused Group Discussion
FP	Family Planning
HPM	Health Promotion Model
IARC	International Agency for Research on Cancer
IEC	Information Education and Communication
MOH	Ministry of Health
MRI	Magnetic Resonance Imaging
SPSS	Statistical Package for Social Sciences
UNZA	University of Zambia
UNZABREC	University of Zambia Biomedical Research Ethics Committee
UTH	University Teaching Hospital
WHO	World Health Organization
ZDHS	Zambia Demographic Health Survey

CHAPTER ONE

1.0. **Introduction.**

This study focuses on the importance of breast self-examination for early detection of breast cancer (BC) among women. BC is the second most common female malignancy that is commonly associated with high levels of morbidity and mortality, not only in Zambia but in most parts of the world (WHO, 2014). Breast self-examination (BSE) is a screening method and a measure for secondary prevention of BC. Women who regularly perform BSE present with smaller neoplasm and rare involvement of axillary lymph nodes (International Agency for Research on Cancer,2016). Women are reporting late to the health facilities for diagnosis and treatment of BC thus reducing the chances of successful treatment. Consequently, this leads to an increase in the BC related morbidity and mortality rates. This practice also causes a strain on the national health resources as well as opportunity costs of treatment on the patient family and community as a whole.

This chapter gives an insight on the Background information on the topic, the statement of the problem, study objectives, research question, study hypothesis, justification, significance and the study variables

1.1.Background

According to the 2018 Global cancer report, Breast cancer is among the top three cancers in incidence and its ranked fifth in terms of deaths with 627,000 deaths (IARC,2018). The World Health Organization (WHO) cancer report, BC had an incidence rate of 43.3 per 100 000 (WHO 2013). It is estimated that worldwide over 508 000 women died in 2011 due to BC (WHO 2013). More than 60% of the world's cancer cases occur in Africa, Asia, and Central and South America, and these regions also account for about 70% of the total cancer deaths (WHO, 2014). Globally, increases in the incidence of, and mortality from BC have been observed in both developed and developing countries. It has also been observed that the proportions of cancer deaths in Africa and Asia are higher than the proportions of incident cases. This has been attributed to inaccessibility of timely diagnosis which consequently has an effect on the treatment outcome (IARC, 2018).

Breast self examination (BSE) helps to detect the onset of BC at an early stage. The American Cancer Society (ACS) guidelines for early detection of BC recommend yearly mammogram in women from forty years of age, clinical breast examination (CBE) every three years for women in their twenties and thirties, and it also recommends BSE for women in the early twenties (Giridhara et al.,2011;Kerlikowske, 2011).

The International Agency for Research on Cancer (IARC) (2016) indicate that exogenous hormones exert a higher risk for breast cancer (BC) and Oral contraceptive users are at higher risk than non-users. Therefore, women receiving hormonal family planning methods need to regularly practise BSE for them to be able to detect any breast abnormalities early.

Breast self examination (BSE) when regularly practised can be instrumental in the early detection and possible early treatment of Breast Cancer. Not only does BSE raise breast awareness among women but, it is also a cheap and easy method for early detection of breast abnormalities and it can promote early and successful treatment of BC (Ardahan et. al.,2015 and Fondjo et.al., 2018). It is important that women are encouraged to regularly perform BSE especially women on exogenous hormones. The researcher can, anecdotally, say at this juncture, that, the diagnosis of BC at an early stage accords women more treatment choices and a greater chance of long-term survival and a better quality of life.

The early detection and diagnosis of breast cancer can be done by women conducting breast self examination and a mammography, or alternatively Clinicians can conduct clinical breast examinations before sending the client for a scan or Magnetic Resonance Imaging (MRI) for confirmatory diagnosis where necessary (Shrivastava et al.,2013).

Mammography has proven to be effective in early detection of BC as it is able to detect BC in its early stages but, it is not easily accessible in most developing countries (Jemal et al., 2011: Berkiten et al. 2012; Ruddy et al, 2013). A Clinical Breast Examination (CBE), is also not readily available at the primary level of care in developing countries. For women receiving exogenous hormonal family planning (FP) methods, a CBE is only conducted during the initial physical examination that is done as part of the pre assessment before a FP method is chosen and no subsequent CBE is carried out for the entire period

the woman is on the hormonal FP method. Breast Self Examination remains one of the most feasible methods in developing countries (Parvani, 2011).

The above outlined methods require that the women visit the health facility. It has been suggested that BSE, particularly, in developing countries is the only realistic approach to early detection of breast cancer, as it is simple and cost effective (Shrestha, 2017). Breast self examination is a method that can readily be used by the women themselves in the comfort of their homes for the early detection of signs of BC (Giridhara et al, 2011).

In Zambia, according to the Zambian Reproductive Health Policy, BSE currently remain the main option for the early detection of BC as the organization and implementation of mass screening programmes are far beyond the nation's resources (MOH,2010). Women below the age of forty and on hormonal family planning methods are encouraged to regularly practice BSE because the exogenous oestrogen and progesterone they receive by taking the contraceptive pills put them at higher risk of developing BC than those women who are not on any hormonal preparations (ACS, 2014). The BSE should be followed by yearly mammography for those women above the age of 40 years.

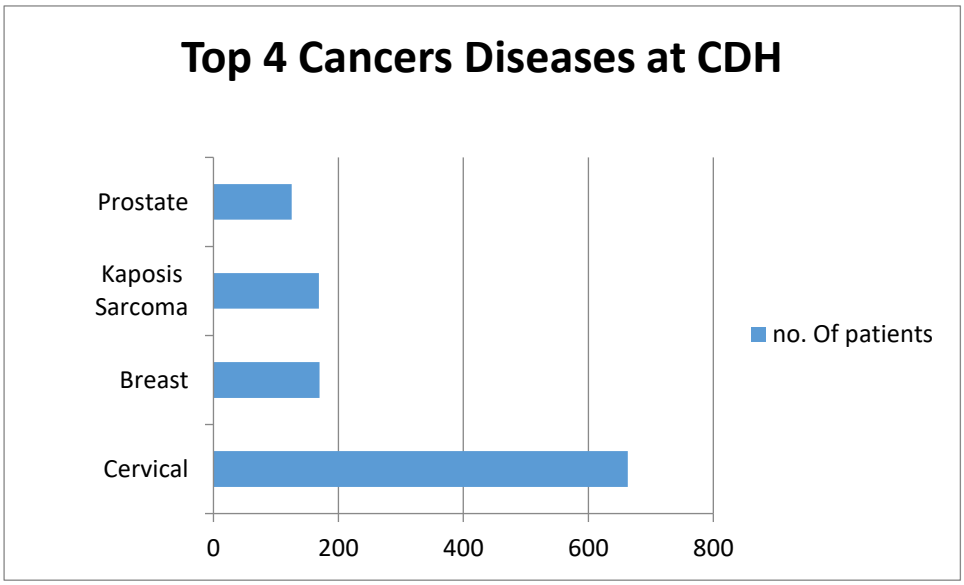
A typical BSE involves checking the breasts for changes such as: a new lump or lumpiness, especially if it is only in one breast; a change in the shape or size of the breast; any change to the nipple, such as crusting, ulceration, redness or recent inversion; any nipple discharge that occurs without squeezing and an unusual pain that does not go away (Segni et. al., 2016). Research has shown that most of the above breast problems are first discovered by women themselves, often by chance (Giridhara et al, 2011; Bride et. al, 2012).

Ideally a breast self exam should be done once every month 3-5 days after a woman's menstrual period. Most often the findings are normal, that is, no Lumps, no nipple discharge, no dimpling of the skin and of normal size and shape (Bates, 2007).The benefits of regular BSE performance include, creation of breast awareness, early detection of breast abnormality and promotes a sense of well being.

Despite the benefits associated with the practice, few women actually practice BSE. This study was conducted to assess BSE practise and associated factors among women on hormonal contraceptives in Lusaka District, Zambia.

1.2 Statement of the Problem

Figure 1 Top 4 cancer diseases at CDH



Source: Cancer Diseases Hospital, 2015.

According to Cancer Diseases Hospital (CDH) statistics, Breast cancer is the second most common cancer in women in Zambia with a 12% contribution to the top four cancer cases seen at the hospital as illustrated in the figure 1 above. Every woman is supposed to carry out BSE to familiarize themselves with the breast and more importantly be able to detect early any abnormal developments. This will enable them to seek medical care in good time which will consequently ensure good treatment outcome. On the reverse, over the years, the number of breast cancer cases has been gradually on the increase.

Table 1 Number of Breast Cancer case admissions at CDH

Year	Number of BC Admissions at CDH	Number of deaths	Percentage of mortalities
2018	294	42	14.2%
2019	308	43	13.9%
2020	319	67	21 %

Source: Cancer Diseases Hospital, 2021.

Table 1 above shows that the number of breast Cancer case admissions at CDH for the past three years have been on a relatively steady increase. Of the recorded 921 BC case admissions, more than 50% of the clients had presented in either the 3rd or 4th stage of the disease. Additionally, according to Globalcan, (2020) Cancer Report Breast cancer in Zambia was ranked second in the top five most common cancers in women with a total of 972 new breast cancer cases and 344 deaths.

The reason for late reporting for treatment and care could probably be attributed to a lack of knowledge on the identification of BC signs and symptom, a lack of knowledge and practice of BSE. It could also be a lack of information on where to go to access diagnostic screening services.

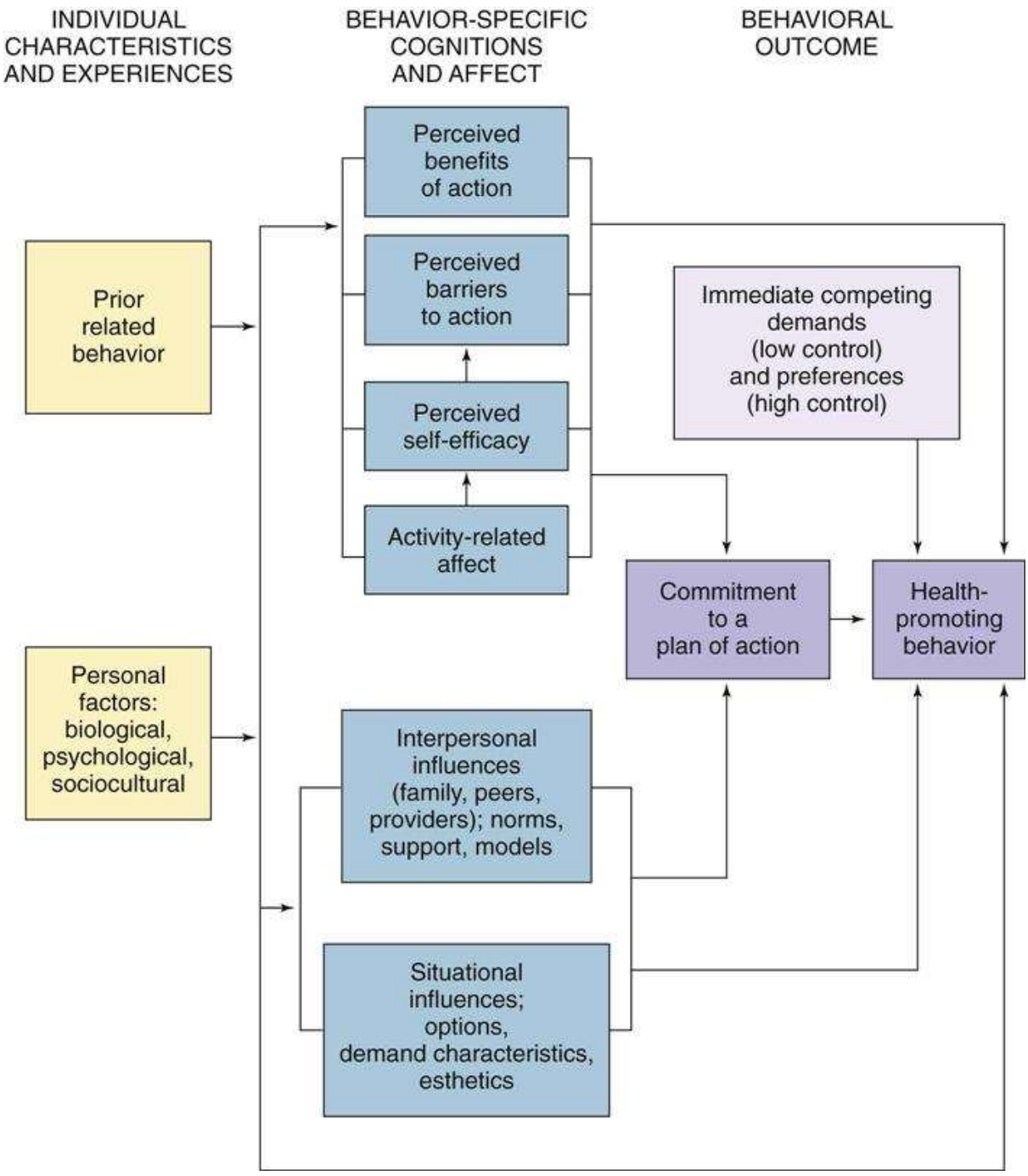
The trend of reporting late for treatment reduces the chances of successful treatment thus contributing to the increase in the cancer-related morbidity and mortality rates. Additionally, the diagnosis of BC in its late stage also causes anxieties on the individual and their families, which could lead to development of hypertension or even depression in some women. There are also a number of opportunity costs of treatment and admissions incurred by the family, and the community as a whole. At national level, late diagnosis and treatment of BC poses an increase in demand on the National health resources as most of the treatment options for late stage BC are expensive.

The Ministry of Health (MOH) has adopted the month of October as “the Breast Cancer Awareness Month”. Throughout this month, Cancer Disease Hospital (CDH) is open to the general public and free mammograms, sensitization of women on early detection of BC through CBE and BSE is done. Though the

women aged forty years and above get to have the mammograms are done for free during this period, most women do not get to access the results due to poor systems. For women below the age of forty years, BSE remains the most feasible means of secondary prevention of Breast Cancer. Despite there being measures that encourage the practice of BSE, survival rate among women treated for BC at CDH remains below 50% due to late stage at diagnosis (NCCSP, 2016). Little is known as to whether the women actually know the procedure of conducting BSE. This led to the need of conducting a study to assess BSE practices among women on hormonal contraceptives in Lusaka, Zambia.

1.3 The Theoretical Framework

Figure 2 The Health Promotion Model



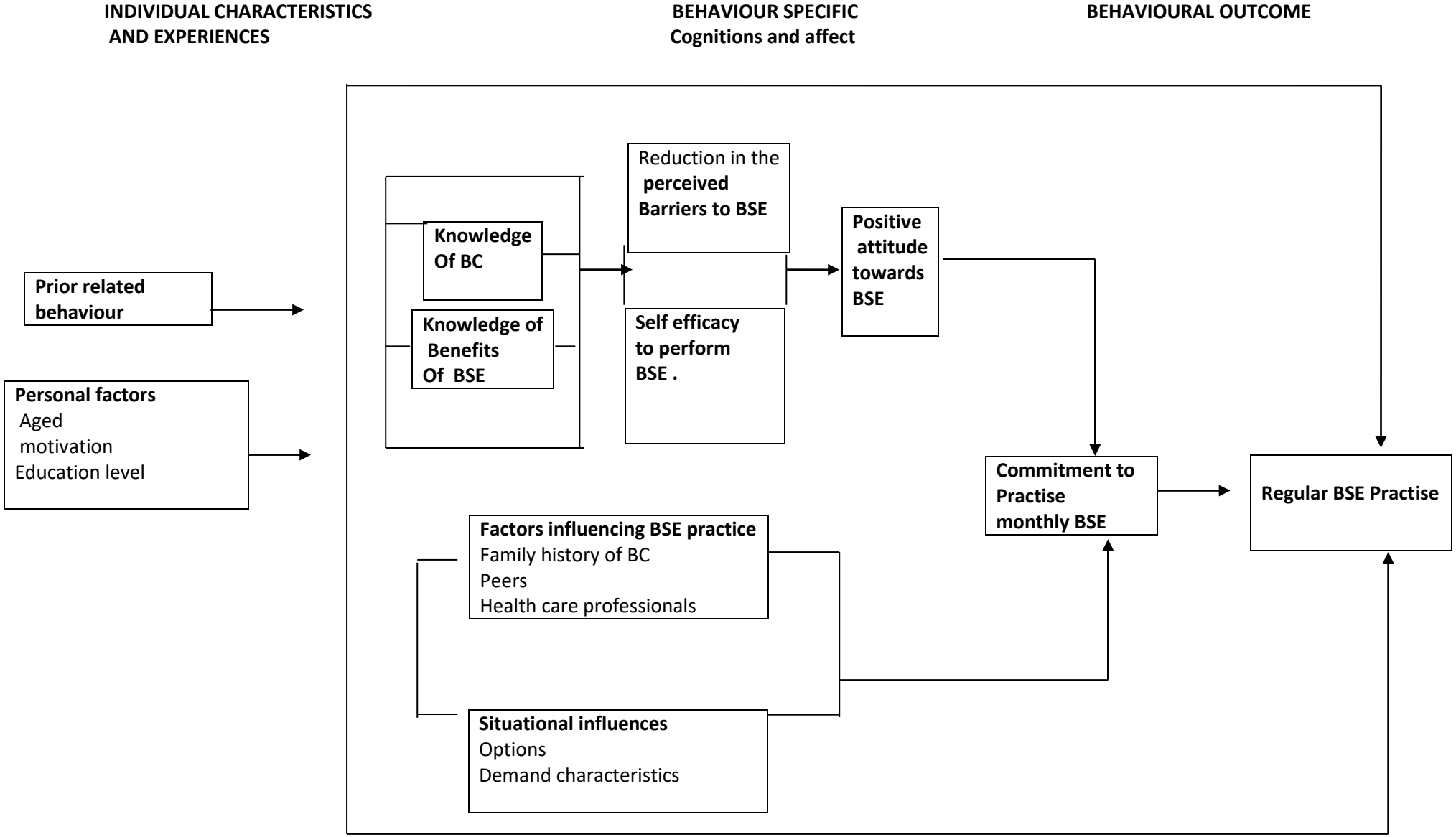
Source: Pender, Murdaugh and Parsons (2011)

The Health Promotion Model (HPM) was used to guide this study. This model is rooted in the insight that Human beings interact with their environment and shape it to meet their needs and goals. And that an individual engages in actions to achieve goals that are perceived as possible and that result in valued outcomes. The HPM, is proposed as a holistic predictive model of health-promoting behaviour for use in research and practice (Aqtam and Darawwad, 2018).

1.3.1 Application of HPM to this study

The HPM guided this study in identifying some of the variables and the factors under this study. According to the HPM, the Factors that will influence BSE practice include; perceived self-efficacy, perceived benefits and barriers, situational and interpersonal factors. The questions for the questionnaire were based on the study variables and the factors illustrated in the modified HPM below.

Figure 3 Modified HPM



Perceived self-efficacy

When women perceive that they can competently perform BSE, they will be able to practice because they will be confident that they are performing according to expectation.

Perceived benefits

The knowledge of the benefits of BSE practice will motivate the women to engage in regular performance of the new learned behaviour. Women will be practicing regular BSE when they know that it can help in detecting breast cancer early enough and improve on the treatment outcomes.

Perceived Barriers

According to the HPM, Individuals engage in actions to achieve goals that are perceived as possible and that result in valued outcomes. Hence the perceived benefit and perceived self-efficacy will result in a reduction of the perceived barriers. The barriers identified in this study include; lack of knowledge of BC and BSE, fear of finding sings of cancer, ignorance of the benefits of engaging in the BSE practise among others. When the women are competent in the practise of BSE and are aware of the benefit they will get from BSE, they will engage in BSE practise.

Interpersonal and situational Factors

The Health Promotion Model (HPM) indicates that each person is a biopsychosocial creature that is partially shaped by the environment. From the interactions with the Health professionals, the women will learn how to conduct BSE. The instrumental and emotional encouragement, modelling of BSE by the women's family, peers and health care providers can influence the women's commitment to the practice of BSE. Women are more likely to commit to and engage in BSE when significant others expect the behaviour to occur, and provide assistance and support to enable the behaviour. Additionally, the home environment, socioeconomic factors can also increase or decrease commitment to the practise of BSE.

In conclusion, according to the HPM, the women's Prior behaviour and inherited and acquired characteristics can be modified to influence their beliefs, feelings and enactment of regular practice of BSE. Figure 3 illustrates the modified HPM.

1.4. Justification of the Study

The aim of screening for early detection is to advance the time of diagnosis so that prognosis can be improved by timely intervention. Early diagnosis extends the time between diagnosis and death. Zambia being a third world country, most women cannot afford to have mammography done on a regular basis to ensure early detection. Moreover, Mammograms are not recommended for women below the age of 40 years because of the increased risk for development of radiation-induced breast tumours. The women in the age group below 40 years, therefore, are left with BSE as an alternative for in the secondary prevention of BC. Furthermore, there is a reduction in mortality from breast cancer in women who present early for treatment compared with those who present late.

Mukupo (2007) conducted a study titled "Breast self-examination practices among rural and urban women" which compared the knowledge and practices of BSE in the rural and urban settings. And like most studies the author only examined BSE frequency and did not evaluate how women perform the procedure.

This study was done to evaluate how the women who practise BSE perform the procedure through directly observing the women conduct BSE. The current study also sought to identify the specific gaps in the knowledge and practice of BSE among women on hormonal contraceptives. Additionally, the study also sought to identify the barriers of BSE practice among women on hormonal contraceptives. The interest was on women on hormonal contraceptives because these are women who are routinely advised to conduct BSE on a monthly basis.

1.5.0 Research Question

1. What are the practices of BSE among women on Hormonal Contraceptives in Lusaka?

1.6.0 Research Objectives

1.6.1 General Objectives

The objective of the study was to investigate the practice of BSE among women on hormonal contraceptives in Lusaka, Zambia.

1.6.2 Specific Objectives

1. To investigate the knowledge of BC among women on hormonal contraceptives

2. To investigate the knowledge of BSE among women on hormonal contraceptives.

3. To identify the factors influencing the practice of BSE among women on hormonal contraceptives.

1.7. Conceptual Definitions

1.7.1 Breast Self-Examination

Breast self-exam is an examination which involves, a woman using her hands and eyes to systematically examine her breasts for unusual lumps, shape or skin changes (Corbex, 2012).

1.7.2 Clinical breast examination

A clinical breast examination is a physical examination of the breast done by a health professional to check for lumps or other breast changes (Powell,1990).

1.7.3 Mammography

Mammography is the radiological study of the breast used to screen for or evaluate tumors and other abnormalities (Brooker, 2008).

1.7.4 Screening

Screening is the examination of a group of usually asymptomatic people to detect those with a high probability of having a given disease, typically by means of an inexpensive diagnostic test (Brooker, 2008).

1.7.5 Knowledge of BSE

Knowledge of BSE, refers to information, understanding and skills that an individual gain on BSE through education or experience (Hornby, 2006).

1.7.6 Knowledge of BC

Knowledge of BC, refers to information, understanding and skills that an individual gain on BC through education or experience (Hornby, 2006).

1.7.7 Practice of BSE

Practice of BSE is the process of inspecting and palpating one's breasts for unusual lumps, shape or skin changes on the fifth day of the menstrual cycle every month (Corbex,2012).

1.7.8 **Self Efficacy**

This is a personal judgment of how well or poorly a person is able to cope with a given situation based on the skills they have and the circumstances they face (Bandura,1998).

1.8. Operational Definitions

1.8.1 Breast self-examination

As used in this study, Breast self-examination refers to regular and systematic examination of both breasts and underarm areas by women visually and by palpation using her own hand on her breasts for the purpose of detecting any breast abnormality.

1.8.2 Practice of BSE

As used in this study, practised of BSE refers to women regularly examining their breasts on the fifth or seventh day of their monthly menstrual period, noting the breasts size, shape, colour, contour and feeling for any lamp in both breasts.

1.8.3 Knowledge of BSE

As used in this study, Knowledge of BSE refers to the respondent's ability to state what BSE is and when it is to be done.

1.8.3 Self efficacy

As used in the study, self efficacy is the skill, proficiency and confidence one has in the performance of Breast Self Examination.

1.9. STUDY VARIABLES

1.9.1 Dependent variable:

Practice of Breast self-examination.

1.9.2. Independent variables:

Knowledge on BC

Knowledge on BSE

Attitude towards BSE

Socio-economic factors influencing BSE practice-

- Age
- Level of education
- Occupation
- In-come

Perceived benefits of BSE

Self-efficacy

1.9.3. VARIABLES AND INDICATORS.

Table 2 Variables and cut off points

Variables	Indicators	Cut off points	Question numbers
Dependent variable			
Practice of Breast self-examination	Good	Respondents who indicate that they practice BSE at least once every month and score 8 or more correct responses on Practice questions.	Question number 23 to 26 (Maximum score = 16)
	Poor	Respondents who indicate that they rarely or do not practice BSE and score 7 or less correct responses on Practice questions.	
Independent variables			
Knowledge on BSE	High	Respondents who could define BSE, indicate when and how often, indicated the different breast changes to look out for and scored 6 or more correct responses on BSE knowledge questions.	Question number 14 to 20(Maximum score= 12)
	Low	Respondents who could not define BSE, did not know when and how often it should be done and did not know the breast changes to look out for and scored 5 or less correct responses on BSE knowledge questions.	
Knowledge on breast cancer.	Adequate	Respondents who were able to mention the risk factors, the common signs and symptoms of breast cancer, and scored 7 or more correct responses on BC knowledge questions.	Question number 7 to13(Maximum score= 13)
	inadequate	Respondents who were not able to define breast cancer, list the risk factors, and list the signs and symptoms of breast cancer and	

		scored 6 or less correct responses on BC knowledge questions.	
Attitude towards BSE	Positive	Respondents who indicated that BSE is important and need to be practiced and scored 15 or more correct responses on Attitude questions.	Question number 27 to 31(Maximum score = 25)
	Negative	Respondents who indicated that BSE was not important and need not be practiced and scored 14 or less correct responses on Attitude questions.	
Self-efficacy	High	Respondents who were able to demonstrate correctly all the steps of BSE and scored 6 or more correct responses on self-efficacy question.	Question number 22 (Maximum score =11)
	Low	Respondents who were not able to demonstrate correctly the steps of BSE and scored 5 or less correct responses on self-efficacy question.	
Perceived Benefits of BSE	Good perception of the BSE benefits	Respondents who were able to state correctly the benefits of BSE and scored 10 or more correct responses on Perceived Benefits.	Question number 21(Maximum score = 15)
	Poor perception of the BSE benefits	Respondents who were unable to state correctly the benefits of BSE and scored 9 or less correct responses on Perceived Benefits.	

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of existing literature on the overview of BSE and the study variables of practice of BSE, knowledge on BC, and knowledge on BSE, attitude and factors influencing BSE practice, Age and education level and self efficacy on a global, regional and national level. The literature review will focus on published information; books, peer reviewed articles, journals, and computer data bases such as PubMed, HINARI, and Google Scholar.

2.1 Overview of Breast Cancer

The increase in the incidence of BC worldwide makes it an important public health concern. BC is among the top malignant causes of morbidity and mortality among women. The WHO (2010), indicates that comprehensive cancer control should involve prevention, early detection, diagnosis, treatment, rehabilitation and palliative care. The WHO has also identified early detection and prompt treatment to be the corner stone of breast cancer prevention (WHO, 2013). Early detection and early presentation for management of BC has shown to reduce cancer- related mortality rates (Oche et al, 2012).

Breast cancer is a malignant tumour that starts in the cells of the breast. A malignant tumour is a group of cancer cells that can grow into nearby tissues or spread to distant parts of the body (American Cancer Society,2014). The risk factors associated with the development of BC can be categorized as modifiable factors and non-modifiable factors. Among the non-modifiable factors is, sex, age, family history, early menarche, and late menopause. Factors such as postmenopausal obesity, use of combined oestrogen and progestin menopausal hormones, cigarette smoking, and alcohol consumption are modifiable factors. According to the American Cancer Society (2014), recent use of oral contraceptives may increase the risk of breast cancer by about 10% to 30.

2.2 Overview of BSE

Globally, Clinical Breast Examination (CBE), BSE and mammography are the recommended screening tests for early detection of breast cancer. Although the American Cancer Society and the WHO no longer recommend that women perform monthly BSE, BSE, still remains a primary modality for screening of BC among women in low resource settings where access to diagnostic facilities such as Mammography is a challenge (Shrivastava et.al.,2013).

The Cancer Society recommends that the monthly practice of BSE begins at the age of 20 in order for women to develop BSE as a monthly habit, and to encourage women to take responsibility for their own health (Bala and Gameti, 2011). Breast Self-Examination should be performed between the fifth to seventh days after menstruation counting the first day of the menses as day one. Reason being, during this time there is less fluid retention and the breasts are less nodular (Ahmed et. al., 2016). It is important that the woman is familiar with the normal breast appearance and texture for them to be able to identify abnormalities in the breast.

The BSE should be conducted while lying, standing upright in front of a mirror. The first step of BSE is performed with the woman lying down on her back with a pillow under the right shoulder and the right arm under the head. The breast should be divided into four quadrants and a sub-areola (beneath the nipple and areola) region to ensure a complete, systematic approach to Examination. All the five regions of the breast must be palpated using small, circular motions and pressing firmly. The nipple should be squeezed gently to assess if there is any discharge, especially in non-lactating women. Then using the finger pads of the left hand, the woman then palpates all the regions of the right breast in circular motion feeling for any breast lamp using light, medium, and then firm pressure without lifting the fingers from the breast (Allen et. al., 2010). The woman should also palpate the axillary tail and the axilla itself to make the breast examination complete. The same procedure is then followed for the left breast with the left hand under the head and the right-hand palpating.

The woman then repeats the examination for both breasts while standing. The upright position makes it easy to check the upper part of the breast where about half of breast cancers are found (Allen et. al., 2010).

After palpating the breasts in lying and upright positions, the woman should then conduct an inspection of the breast by standing in front of the mirror. The woman then looks in the mirror with arms raised then lowered and hands on the hips whilst checking for contour, colour changes, swelling, dimpling of the skin, and changes in the nipple. The variations make changes in breast appearance more easily noticeable (Ahmed et. al.,2016).

Breast self-examination, although not having been shown to be effective in reducing mortality is still recommended as a general approach to increasing breast health awareness and thus potentially allow for early detection of any breast anomalies (Giridhara et al., 2011).

2.3 Knowledge on BC

At the time when the tumour is small, Breast cancer produces no symptoms. Symptoms begin to manifest when the cancer has grown to a size that can be felt. The women's knowledge on signs and symptoms of BC includes a painless lump as the most common sign while the less common signs include breast pain or heaviness; persistent changes to the breast, such as swelling, thickening, or redness of the breast's skin; and nipple abnormalities such as spontaneous discharge, erosion, inversion, or tenderness. A study done in Tanzania concluded that the women had inadequate knowledge of breast cancer risk factors, symptoms, and treatment (Morse et. al 2014). It has generally been observed that the common presenting symptom in women with BC is a breast lump and that most patients (97.3%) detect it themselves (Ahmed et al.,2016). However, a breast lump can either be cancerous or non-cancerous thus further investigation such as Mammography will be required to confirm the diagnosis (Bride et.al, 2012). Women are expected to know and be familiar with their normal breast characteristics in terms of shape, size, colour and texture in order for them to be able to identify abnormalities and promptly report to the health care provider for further assessment.

2.4 Knowledge on BSE

A study done in Cameroon revealed that nearly three quarters of participants had previously heard about BSE and that more than half of the study population claimed to know how to perform BSE (Suh et al., 2012).The limitation of this study, like many others, is that it did not evaluate how the women were practising BSE. In another instance, Thomas et. al. (2013) used a survey approach with descriptive design for their study which was carried out to determine the knowledge on breast self-examination among the women of reproductive age group in selected rural areas in Mangalore. The study revealed that 1.66% of the women had very good knowledge on BSE while the majority had average to poor knowledge. Additionally, another study was conducted on Understanding Breast Cancer Screening Practices in Taiwan. This study among other results showed that, despite the fact that 95% of the respondents had heard of BSE, only 39% of the women knew the appropriate time interval to conduct monthly BSE. The lack of knowledge was worse in rural areas as revealed by a study done in a rural setting in south India, which was found that only a minority of the respondents were aware of BSE (Yerpude and Jogdand, 2013). In Zambia, a study conducted in 2007 revealed that about 58% of the women living in the urban district of Lusaka had no knowledge of self-breast examination (Mukupo, 2007). Health workers are expected to be at the helm of the sources of health information. Studies done in different parts of the world have revealed sources of knowledge on BSE as originating from Television, Radio and Newspapers with small proportion mentioned the physicians and Nurses as their source of knowledge (Al-Dubai et al. ,2012: Akhtari-Zavare et al., 2015). Faronbi and Abolade, (2012) and Nde et. al. (2015) in their respective studies found electronic media and friends as additional sources of information on BSE for their respondents.

2.5 Practice of Breast Self-Examination

The benefit of monthly BSE practice is that, it enables women to became familiar with their breasts and hence make it easier for them to notice any changes in the breast in between the BSEs (Karayurt et al., 2008). Furthermore, it also helps to detect breast lumps and empower women to take some control and responsibility over their health promotion (Allen et. al, 2010). Despite the benefits associated

with the health behaviour, few women in Korea and other countries regularly perform BSE and many do not even know how to perform it (Yoo, 2012: Nemenqani et al., 2014: Katende et al., 2016).

A study done in Malaysia showed that close to half of the respondents practised BSE on monthly basis (Al-Naggar et al., 2012). In Nigeria, a study conducted showed that slightly more than half of the respondents had practised BSE (Osuala et al., 2016). Some of the reasons accounting for the high practice of BSE among women include having noticed some changes in the breasts such as, abnormal pains in the breast, a lump, discharge of pus from the nipple, abnormal size increase (Nde et. al., 2015). On the other hand, a study done in Taif, Saudi Arabia among female medical students showed that very few practised BSE regularly whilst others have never even attempted (Nemenqani et al., 2014).

An interventional study to evaluate the effect of an educational programme on BSE among women living in Bandar Abbas, Iran was conducted. This study concluded that increasing the women's knowledge on BSE can promote BSE (Aghamolaei et al., 2011). Similarly another study conducted in Ethiopia, also concluded that, knowledge about BSE was significant in explaining BSE performance (Birhane et al., 2015).

2.6 Factors Influencing the Practice Of BSE

Studies done in Yemen and Cameroon revealed that majority (69.2% and 88% respectively) of the respondents felt that BSE was important and useful in the early detection of breast cancer and slightly more than half of the respondents felt that they can actually detect breast cancer by themselves (Nde et al. ,2015). On the other hand, in Pakistan, a study conducted by Sarwar et.al, (2015) revealed that about a quarter of the total respondents felt that it was not necessary to perform BSE unless there was an alarming problem. This belief was also revealed in Iran (Aghamolaei T et al., 2011).

Poonawalla et.al., (2014) conducted a cross-sectional survey in the United States which showed that women who were confident in performing BSE and with a good perception of the benefits from practising BSE had a good attitude towards BSE. Other studies that sought to determine reasons for the non-practise of BSE also

found: a lack of confidence on how to do BSE, not being sure of their ability to detect breast changes, others found the process of BSE difficult to remember (Abolfotouh et al., 2015: Osuala et al. 2016). The above findings were also confirmed by a study conducted in Kuwait which showed that women who lacked confidence in their ability to perform BSE correctly or who had not been instructed on how to do BSE less frequently performed BSE (Al-Azmy et. al, 2012).

Another factor found to be affecting the practice of BSE was Procrastination. A study that was conducted in Korea, revealed that women kept postponing the performance of BSE because they felt that they did not have breast problems and saw no immediate need (Bit-Na Yoo et al., 2012). Additional barriers to BSE practice included socio-demographic factors and knowledge on BSE (Dunn & Tan, 2011; Rasu et al., 2011). Akhtari-Zavare et al., (2015) did a study in Klang Valley, Malaysia which was aimed at assessing the practice of breast self-examination (BSE) among undergraduate female students in Malaysia. This study showed age, marital status and personal history of breast disease as some of the factors that influenced the practice of BSE.

2.7 Socio-demographic factors of Educational Level and Age

Studies have shown that there is a significant relationship between level of education and practice of BSE (Subramanian, 2013; Osuala et al. 2016). In a study conducted in Turkey, it was found that higher education was associated with both regular and irregular performance BSE (Gürdal et.al, 2013). In another study conducted in rural south east Nigeria it was found that, respondents with no formal education practised BSE the least while respondents with tertiary education practised BSE the most (Nwaneri,2016).

A study done in Iraq demonstrated that a significant relationship between age and the knowledge of BSE among women (Alwan et.al, (2012). Meanwhile, a number of researches conducted in Iran, Nigeria and Jordan, indicate that no significant relationship exists between the age of the respondents and the knowledge and practice of BSE (Ghodis & Hojjatoleslami, 2012; Olowokere,; Amasha,2013). Other studies done in Malaya and Ghana also revealed that, as age increases, regular BSE practise also increases (Sani and Naab, 2014). On the other hand, a Rural Community South East of Nigeria, found that Women in the age group of 31-

40 adequately practised BSE compared to the other age groups. In the same study, it was established that a negative relationship between age and the practice of BSE existed as with increase in age, the practice of BSE reduced and vice versa (Nwaneri et al., 2016).

2.8 Self Efficacy

A study done in Malaysia found that, self-efficacy was a significant psychological factor that influenced practice of BSE from which a conclusion was made that health promotion interventions that help enhance self-efficacy increases the intentions of women to perform BSE (Ahmadian, et. al, 2016). Similarly, in a study conducted on a Muslim community also found that higher perceived self-efficacy of BSE and marital status were significantly associated with BSE performance (Ilknur,2008). Similarly, a study conducted in Malaysia showed that there is a significant association that exists between confidence in performing BSE and BSE practice by (Parsa et. al., 2011).

2.9 Conclusion

Breast self-examination is among the recommended screening tests for early detection of breast cancer. Though the ACS and WHO no longer recommend that women perform monthly BSE, it still remains a primary modality for screening of BC among women in low resource settings. It has generally been observed that a breast lump which is a common presenting symptom of BC is most of the times detected by women themselves.

Various studies have revealed that most women have heard about BSE but very few know exactly when and how it should be performed. Very few women practice BSE despite having the knowledge on BSE. A lack of confidence on how to perform BSE and a lack of time are some of the common reasons for not practising BSE. Few studies have evaluated how those practicing are performing BSE. In light of the above, a knowledge-application gap exists between the knowledge of BSE and the actual practice of BSE. Little information is available on the BSE studies done on a population of women on hormonal contraceptives considering the fact that oral contraceptive use poses a risk of BC. Additionally, the topic of BSE has not been adequately studied in the Southern African region. In view of the

above reasons the investigator conducted a study on Assessing the practice of BSE among women on hormonal contraceptives in Lusaka, Zambia.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This Chapter outlines the research design, study setting, study population, sample selection, sample size, validity, reliability, data collection tools, data collection techniques, pilot study and ethical considerations. The purpose of this study was to assess the practice of BSE among women on hormonal contraceptives aged between twenty and forty years in Lusaka Urban District. The study was conducted from four selected Urban Health Centres. The distribution of respondents was as follows; Kalingalinga Health Centre 111(28.9%), Mtendere Health Centre 101(26.3%), Bauleni Health Centre 97 (25.3%) and Kaunda Square Health Centre 75 (19.5%). Quantitative Data was collected from a total of 384 respondents which translated to a 100% response rate. Qualitative data was via focused group discussions from a total of 24 women. At the time of data saturation, three focus group discussions (FGDs) were held. Each FGD had a maximum of eight participants. The FGDs were conducted fromt Kaunda Square, Bauleni and kalingalinga Health Centres.

3.2 Research Design

A cross sectional descriptive design with quantitative approaches was applied to achieve the research objectives. The study used mixed methods to enable for triangulation. A qualitative Descriptive phenomenological method was used in this study to explore the perception and feelings of the women concerning BSE practice.

3.3 Research Setting

This study was conducted in natural settings of Lusaka district. Lusaka district covers an area of 360 square kilometres (the total municipal area). It has a population of more than 6.5million people. About 70% of Lusaka population lives in poor, unplanned settlement comprising 20% of the city's residential land (CSO, 2016).

The research was conducted at Kaunda Square, Bauleni, kalingalinga and Mtendere health facilities in Lusaka Urban district.

3.4 Study Population

The target population were all women accessing hormonal contraceptives from the selected health centres in Lusaka District. The study population comprised female clients aged between 20 years and 40 years and were on hormonal contraceptives resident in Lusaka district.

3.5 Sample Selection

Simple random sampling method was used to select the health centres which constituted study sites. The names of the health centres in Lusaka Urban District were written on pieces of paper and put in a box, then four papers were picked and the names of the health centres on the papers picked were used as study sites. Systematic Sampling method was conducted to select participants from a population list at fixed interval for the one on one interview. The attendance list of women attending family planning clinic was used as a sampling frame and the sampling interval was calculated. The first number was randomly picked using the lottery method, and thereafter, by skipping through k units, the K^{th} person was selected until the desired sample was reached. Purposive sampling was used to select participants for the FGD.

3.5.1 Inclusion Criteria

Women aged between 20 years and 40 years, on hormonal contraceptives, residents of Lusaka and had given consent to participate in the study.

3.5.2 Exclusion Criteria

Women aged between 20 years and 40 years, on hormonal contraceptives who were; breastfeeding, those with pre-existing breast condition and those who had not given consent.

3.6 Sample size

The sample size for quantitative data was calculated using the proportion precision formula according to Cochran (1963) outlined below.

$n = Z^2 \times (p\ q) / d^2$. Where;

n =Sample size

Z = 1.96 is the standard normal variate at 95% confidence level

P = Estimated proportion

d = Precision

The sample size was calculated at 95% confidence level (Z = 1.96) with Estimate of proportion of 50 (p = 0.5) and Precision of ±5% (d = ±5%).

Sample size calculation

$n = Z^2 \times (p\ q) / d^2$

$n = 1.96^2 \times (0.5 \times 0.5) / 0.05^2$

n = 384

Therefore, the sample size was three hundred and eighty-four (384).

Sample Size Determination for the focused group discussion

The researcher conducted three sessions of focus group discussions as data saturation was reached by the third session.

3.7.0 Data Collection Methods

Individual one on one Interviews were held with the respondents to collect quantitative data and focus group discussions (FGDs) were conducted to facilitate data collection for the qualitative data.

3.7.1 Data Collection Tools

A semi-structured questionnaire which had both open and closed ended questions was used to collect quantitative Data. The Questionnaire had five sections; Section

A comprised demographic data; section B assessed Knowledge on breast cancer; section C assessed knowledge on BSE; section D assessed practice of BSE and Section E assessed attitude towards BSE. In addition, the questionnaire also had a checklist based on the current literature on BSE which was used for direct observation of women while they carried out BSE on themselves. Since the researcher used a mixed method for this study, in addition, she used an FGD interview guide and the discussions were audio taped.

3.8 Validity

In this study, internal validity was ensured through content validity which is the extent to which the research instrument samples the factors or situation under study. An extensive literature review was conducted before designing the data collection tools. The questions were constructed in a simple, clear and precise manner and content in the semi structured questionnaire were derived from the objectives and variables of the study. The selection of the study participants was randomly done to avoid selection biases. To ensure external validity, the inclusion and exclusion criteria was clearly defined and adhered to. Additionally, the quantitative method was triangulated with a qualitative method.

3.9 Reliability

Reliability was guaranteed by ensuring that the data collection tools were pre tested in a pilot study in an environment which had similar characteristics as the environment in which the main study was conducted. Following the pilot study, the sections requiring modification were modified to ensure that the questions in the questionnaire and the interview guide were as clear as possible. Furthermore, only trained nurses were used as research assistants and they were oriented in the use of the data collection instruments.

3.10 Data Collection Technique

Face to face individual interviews coupled with direct observation technique which involves direct observation of the participants' skills in performing BSE, were utilized in the collection of data. Each respondent was interviewed in a private

room to maintain confidentiality for 10-20 minutes. The respondents were interviewed by the researcher with the help of research assistants using the semi structured questionnaire and were asked to respond. The interviewers wrote down the responses. Focus group discussions which comprised eight members at a time and lasted 30-40 minutes were held. The number of FGD was determined by data saturation and at the time no new information were coming from the members, the researcher had held three FGDs.

3.11 Pilot Study

A pilot study was conducted at Mtendere Health Centre to determine the reliability and validity of research instruments. The sample size of the pilot study was 38 which represented 10% of the actual study sample population. The respondents were selected using convenient sampling method. The semi structured questionnaire was administered and at least one focused group discussion was held to test the effectiveness of the data collection tools. The pilot study highlighted areas within the semi structured questionnaire and interview guide that needed modifications.

3.12 Data Analysis

The data collected from the semi structured questionnaire was categorized and coded as appropriate and entered onto SPSS software version 21. The quantitative data was analysed electronically using the SPSS software version 21. Frequency tables and pie charts generated were used to present data and cross tabulations were prepared to show the relationships among variables. Chi Square tests were conducted to show the relationship among categorical variables. The multivariable Binary logistic regression analysis was used to take care of the confounding variables.

The data obtained from the focus group discussions was analysed using thematic analysis propounded by Braun and Clarke (2006) where data is processed through six stages of analysis. The data was transcribed to produce written text of the responses. From each transcription, significant phrases and sentences were identified through studying and reviewing the transcriptions on multiple occasions

to identify patterns or themes within the qualitative data. The identified patterns were then coded and the main themes and subthemes were developed.

3.13 Ethical Considerations

Permission to conduct the study was sought from the University of Zambia Biomedical Research Ethics committee (UNZABREC). After UNZABRECs' approval, permission was sought from the Lusaka District Health management office followed by the health centre in-charges. Full information concerning nature of the study was given to the study participants by means of the information sheet. Informed written consent was obtained from the respondents who participated in the study. The respondents were informed about the purpose of the study and they were also informed that they had the right not to participate and to withdraw from the study if along the way they felt uncomfortable. The respondents were also assured of anonymity as only codes were written on the interview schedule and no names were recorded or quoted. Privacy was provided for all the clients that demonstrated Breast self examination as it was conducted in a private room. Confidentiality was observed as the interviews were conducted in a private room and the completed semi structured interview schedules and the tape recorder were kept under lock and key to avoid unauthorised access to the information contained therein. The respondents were not exposed to any physical nor emotional harm. All the respondents who participated in the study were not remunerated in any way.

CHAPTER FOUR

4.0 PRESENTATION OF FINDINGS AND DATA ANALYSIS

4.1 Introduction

This chapter outlines the presentation of information obtained from the study. Data were collected from a total of 408 women, that is, 384 respondents using a semi structured questionnaire and 24 women through focus group discussions. The respondents were drawn from Kalingalinga, Bauleni, Mtendere and Kaunda Square Health Centres. The sample included all women aged between 20 years and 40 years of age.

4.2 Section A: Demographic Characteristics of the Participants

The socio-demographic characteristics of the respondents are outlined in table 3.

Table 3: Demographic characteristics of Respondents (n=384)

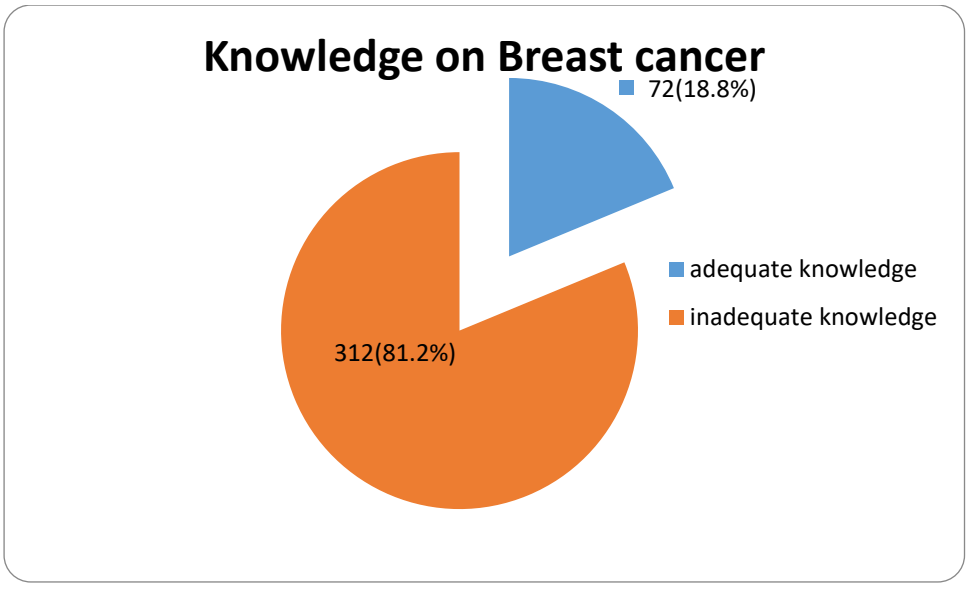
AGE(Years)	**FREQUENCY**	**PERCENTAGE (%)**
20 - 25 years	149	38.8
26 - 31 years	145	37.8
32 - 37 years	53	13.8
38 and above	37	9.6
Total	**384**	**100**
Religion		
Christian	381	99
Muslim	3	1
Total	**384**	**100**
Marital status		
Single	89	23
Married	269	70
Divorced	11	3
Widowed	8	2
Separated	7	2
Total	**384**	**100**
Number of children		
Nil	6	2
1-3	200	52
4-6	178	46
7 and above	0	0
Total	**384**	**100**
Educational attainment		

None	28	7
Primary	88	23
Secondary	205	53
College	48	13
University	15	4
Total	**384**	**100**
Occupation		
I work	95	25
I do nothing	169	44
I do business	91	24
I am in school	29	7
Total	**384**	**100**

As outlined in the table above, 249 (38.8%) of the study respondents were in the age group of 20 to 25 years old while 37.8% were between 26 to 31 years. Most of the participants were married 269 (70%). slightly above half 203(53%) of women had secondary education and a minority of 15 (4%) having reached university level. Those participants who had between 1-3 children accounted for 200 (52%) with 178 (46%) having between 4 to 6 children. A large proportion of the respondents 169 (44%) are not employed while 95(25%) are in gainful employment. Majority of respondents were Christians 381(99%) while a small fraction 3 (1%) were of Muslim faith.

4.3 Section B: KNOWLEDGE ON BREAST CANCER

Figure 4 Knowledge on Breast Cancer(n=384)



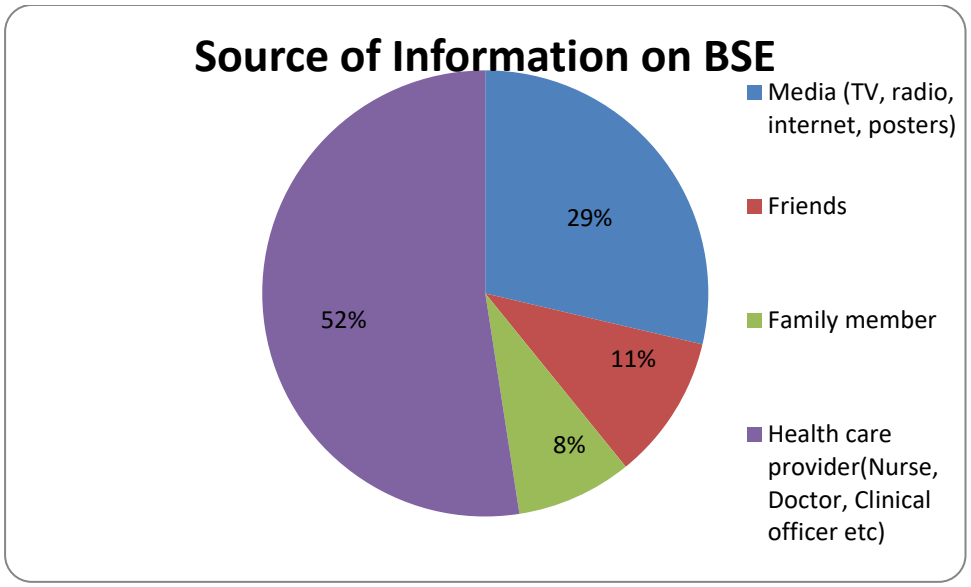
Six questions measured knowledge on breast cancer with a total weight of thirteen points. A score of seven or more points was categorised as adequate knowledge and a score of six or less points as inadequate knowledge. More than three quarters 81.8 %, (n= 312) of the respondents possessed inadequate knowledge on Breast Cancer. More than three quarters 88% (n= 336) of the respondents, indicated having heard about breast cancer with only 12%, (n = 48) indicating having never heard of breast cancer as shown in the figure 4 above. Of the 88% of the study respondents that had heard of Breast Cancer, 41%, (n= 138) identified smoking as a risk factor to Breast cancer, 15% (n = 52) identified obesity, and Majority 78% (n=248) did not associate taking oral contraceptives to the risk of having BC. Less than half, 35% (n= 119) of the respondents did not relate family history of Breast cancer as a predisposing factor to BC. More than half 62% (n= 209) identified a lump in the breast as one of the signs and symptoms of BC, with 39% (n= 131) identifying nipple discharge, 35% (n=118) pain, 32% (n= 106) sores on the breast, 38% (n = 129) swelling of the breast as the signs and symptoms of breast cancer. A minority 4% (n=15) stated that they do not know the signs and symptoms of breast cancer.

The methods of Breast cancer detection identified by the respondents included, BSE 70%, (n=272) scan 34% (n=132), CBE 14% (n=55), 8% (n=32 mammogram, 5% (n=19) Biopsy. While 24% (n= 93) stated that they do not know the methods of BC detection.

4.4 Section C: KNOWLEDGE ON BREAST SELF EXAMINATION

Six questions measured knowledge on breast self examination with a total weight of twelve points. A score of six or more points was categorised as high knowledge and a score of five or less points as low knowledge. The Knowledge levels on BSE was low for Majority 72.2% (n = 279) of the respondents and only 27.3% (n =105) had high knowledge on BSE. 60% (n =230) of the respondents indicated that they had heard of BSE while 40% (n =154) indicated not having heard of BSE.

Figure 5 Source of information on Breast Self-Examination (n = 384):



Of those who had knowledge of BSE, 52% (n =150) reported health care providers as their major source of information on BSE and 29% (n =82) said from the print and electronic Media, 10% (n =30) from friends and 8 % (n =24) from family members as outlined in Figure 5 above.

Table 4: Timing and Frequency of BSE(n=384)

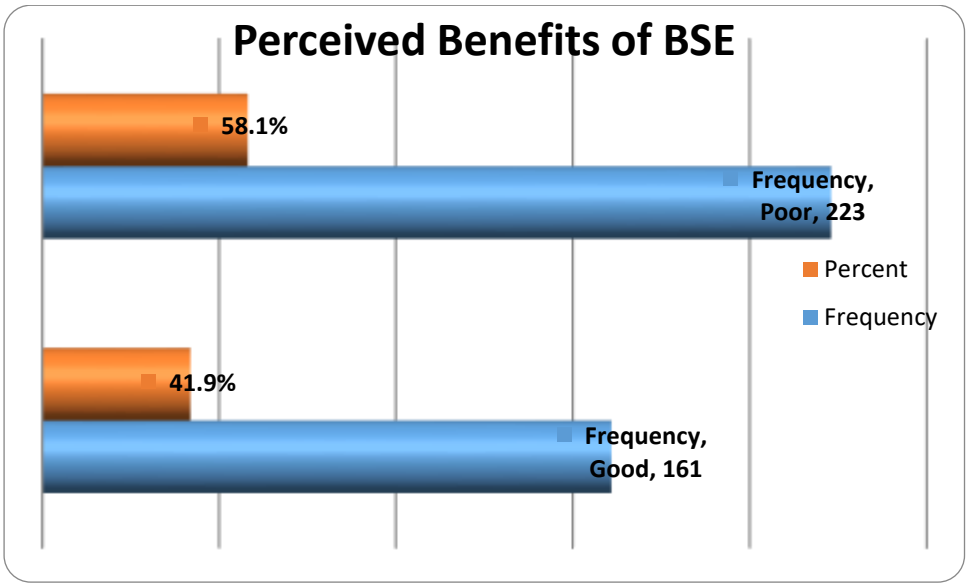
Question Item	Frequency	Percentage (%)
When Should BSE Be Performed?		
Day 2-4 of the menstrual cycle	96	25
Day 5 -7 of menstrual cycle	29	8
Day 10-15 of the menstrual cycle	68	18
Day 16- 32 of the menstrual cycle	91	24
I Do not know	100	26
How Frequent BSE Should Be Performed?		
Monthly	175	46
Weekly	50	13
Daily	39	10
Yearly	22	6
Don't Know	98	25

When asked about time of the month in relation to the menstrual cycle when BSE should be performed only 8%, (n =29) were able to correctly state the period between five to seven days of the menstrual circle. When asked about how frequent

BSE should be performed, less than half 46% (n =175) were able to correctly indicate monthly interval with 25% (n =98) stating they did not know. While 13% (n =50) respondents mentioned weekly, 10% (n =39) mentioned daily, and 6% (n =22) yearly as illustrated in Table 4.

4.5 Section C: PERCEIVED BENEFITS OF BREAST SELF EXAMINATION

Figure 6 Perceived Benefits of breast self-examination (n = 384):



One question with three parts measured perceived benefits of BSE with each part carrying a weight of five points giving an overall total weight of fifteen points. A score of ten or more points was categorised as good perception of the benefits of BSE and a score of nine or less points as poor perception of the benefits of BSE. Figure 6 shows that less than half 41.9% (n =161) of the respondents had good perception of the benefits of BSE while more than half of the respondents had poor perception of the benefits of BSE. Majority 64% (n =244) mentioned Early detection, 48% (n =187) early treatment, 15% (n =56) good treatment outcome, 5% (n =20) to be self-aware of own body image and 3% (n = 10) mentioned a peace of mind as the benefits of BSE practice.

4.6 PRACTICE OF BREAST SELF EXAMINATION

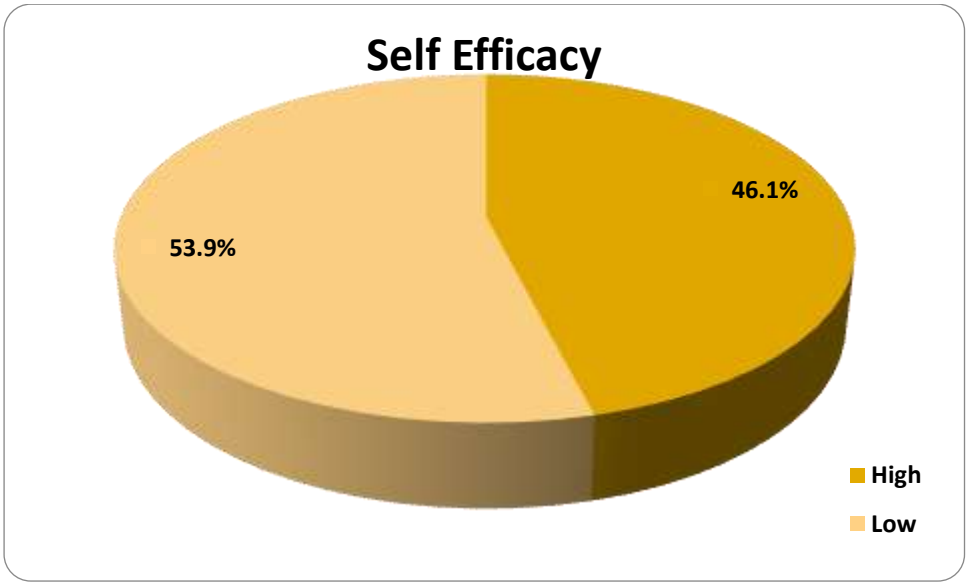
Table 5: Practise of BSE (n=384)

Item	Frequency	Percent
Classification of BSE Practice		
Good Practice	100	26%
Poor Practice	284	74%
How Often do you Practise BSE?		
Monthly	57	15%
Occasionally	214	56%
Do Not Practice	113	29%

Four questions with a total weight of sixteen points measured practice of breast self examination. A score of eight or more points was categorised as good BSE practice and a score of seven or less points as poor BSE practice. Majority 74%) (n = 284) had poor practice of BSE with only 26% (n = 100) recording good practice of BSE. Only 15% (n = 57) respondents reported practicing BSE on monthly basis, 56% (n = 214) practiced occasionally while 29% (n =113) indicated that they do not practice BSE.

4.7 SELF EFFICACY IN BREAST SELF EXAMINATION

Figure 7 Self efficacy in BSE (n=384)



One question comprising a checklist of the steps of self breast examination measured with a total weight of eleven points measured self efficacy. A score of six or more points was categorised as high self efficacy and a score of five or less points as low self efficacy. The figure 7 above shows that Majority 53.9% (n = 207) of the respondents had low self-efficacy in BSE while less than half 46.1% (n = 177) had a high self-efficacy in BSE.

Table 6. Demonstration of BSE (n = 206):

	Demonstration of BSE			
STEP NO.	**ACTION**		**Count**	**N %**
1	Client lies down on the back with a pillow under the right shoulder and right arm under the head.	Yes	175	**85%**
		No	31	**15%**
2	Using the finger pads of the left hand palpates the right breast using circular motions.	Yes	192	**93%**
		No	14	**7%**
3	Gently squeezes the right nipple to assess for discharge.	Yes	178	**86%**
		No	28	**14%**
4	Palpates the right axillary tail and the axilla for enlarged lymphnodes.	Yes	133	**65%**
		No	73	**35%**
5	Changes position to have the pillow under the left shoulder and left arm under the head.	Yes	170	**83%**
		No	36	**17%**
6	Using the finger pads of the right hand palpates the left breast using circular motions.	Yes	183	**89%**
		No	23	**11%**
7	Gently squeezes the left nipple to assess for discharge.	Yes	167	**81%**
		No	39	**19%**
8	Palpates the left axillary tail and the axilla for enlarged lymphnodes.	Yes	131	**64%**
		No	75	**36%**
9	Client changes position to standing in front of a mirror.	Yes	144	**70%**
		No	62	**30%**
10	Client raises hands whilst observing the movement of the breasts in the mirror.	Yes	127	**62%**
		No	79	**38%**
11	Client lowers hands on the hips whilst observing the movement of the breasts in the mirror.	Yes	116	**57%**
		No	90	**43%**

Table 6 displays the proportion of respondents who performed specific steps with regard to the recommended BSE steps. Women who stated that they know how to perform BSE and were willing demonstrated how they performed BSE procedure. Slightly more than half 53.9% (n = 206) of the respondents were able to demonstrate how they perform BSE while 46.1% (n = 178) were not able to demonstrate. Most of the women who agreed to demonstrate did palpate the breasts

with a few not being able to palpate both breasts. Only a few did not squeeze the nipple to assess for nipple discharge. Slightly over half of the women palpated the axillary tail and axilla for any enlarged lymphnodes. Majority of the participants did not perform inspection of the breast in front of a mirror.

4.8 ATTITUDE TOWARDS BREAST SELF EXAMINATION

Table 7: Likert scale on attitude towards BSE(n=384)

Item	Frequency	Percentage (%)
BSE is Important		
I strongly disagree	3	0.8
I disagree	1	0.3
Neutral	28	7
I agree	122	32
I Strongly agree	230	60
BSE should be done on regular basis		
I strongly disagree	4	1
I disagree	5	1
Neutral	68	18
I agree	170	44
I Strongly agree	137	36
BC can be treated if discovered at an early stage		
I strongly disagree	2	0.5
I disagree	4	1
Neutral	80	21
I agree	118	31
I Strongly agree	180	47
Conducting BSE is a waste of time		
I strongly Agree	12	3
I Agree	3	0.8
Neutral	18	5
I Disagree	119	31
I Strongly Disagree	232	60

More than half 50% (n =250) of the respondents had a positive attitude whereas 34.9% (n = 134) had poor attitude towards BSE. As outlined in Table above, Majority 59% (n = 230) of the respondents strongly agreed that BSE is important while 0.8% (n = 3) strongly disagreed. With regard to whether BSE should be conducted on a regular basis 37% (n =137) of the respondents strongly agreed with 1% (n =4) strongly disagreeing. When asked whether Breast cancer can be treated

if discovered early, 47% (n =180) were in strong agreement while 0.5% (n = 2) strongly disagreed. With regard to whether conducting BSE was a waste of time, 61% (n = 232) strongly disagreed, while 3% (n =12) strongly agreed. Five questions with a total weight of twenty five points measured attitude towards breast self examination. A score of fifteen or more points was categorised as positive attitude towards BSE and a score of seven or less points as negative attitude towards BSE practice. After categorising data according to the cut off point, More than half 250 (65.1%) of the respondents had a positive attitude whereas 134(34.9%).

4.9 ASSOCIATIONS BETWEEN THE PRACTICE OF BSE AND INDEPENDENT VARIABLES

4.9.1 Demographic characteristics and practice of BSE

Table 8: Association between the demographic characteristics and Practice of BSE (n=384)

Practice of BSE (n = 384): **Demographics**	**C.V**	**D.F**	**P Value**
Age	3.402	3	0.334
Marital status	4.700	4	0.320
Number of children	.158	2	0.924
Education	.121	3	0.989
Occupation	13.176	3	0.004
Religion	8.116	4	0.087

After performing Chi square test, out of all the demographic characteristics only Occupation was significantly associated with the Practice of BSE.

Table 9: Cross tabulations on the Practice of BSE and other study variables (n=384)

Variables	Practice of BSE		Total	P -Value
	Good practice	Poor Practice		
Knowledge on Breast cancer				
Adequate	33(	39	72	0.001
Inadequate	67	245	312	
Knowledge on BSE				
High	48(	57	105	0.001
Low	52	227	279	
Self-efficacy				
High	77	100	177	0.001
Low	23	184	207	
Perceived Benefits of BSE				
Good perception	61	100	161	.001
Poor Perception	39	184	223	
Attitude towards BSE				
Positive	71	179	250	0.150
Negative	29	105	134	

The table 9 shows that the majority of women with good BSE practice were those that had adequate knowledge on breast Cancer at 46% compared to those who had inadequate knowledge who stood at 21%. The Chi-square test yielded a p-value of .000 which showed that a very significant association existed between Knowledge on Breast Cancer and practice of BSE ($\chi 2=18.023$, N=384, $p < 0.05$). The practice of BSE was good in women with a high knowledge on BSE who recorded 46% than those with a low knowledge and recorded 19%. The Chi-square test yielded a p-value of .001 and showed that a very strong association existed between having knowledge on BSE and BSE practice. ($\chi 2= 29.039$, N=384, $p < 0.05$).

The Chi-square test under self-efficacy yielded a p-value of .001 and showed that there was a very strong association between having high efficacy on BSE and BSE practice. Of those with good BSE practice, those with high self-efficacy had good

practice of BSE recorded at 44% compared to 11% of those with low practice ($\chi 2$= 51.979, N=384, p < 0.05,2-tailed). It was also observed that a larger percent 38% of those with good practice were those with a good perception of the benefits of BSE minority 18% were those who had a poor perception of benefits of BSE. The Chi-square test yielded a p-value of .000 showing that good practice of BSE is strongly associated with a good perception of the benefits of BSE ($\chi 2$= 20.201, N=384, p < 0.000, 2-tailed). The Chi-square test yielded a p-value of 0.150 was obtained which showed that there was no statistical association between attitude towards BSE and BSE practice though majority of the respondents who had a positive attitude towards BSE had a good practice compared to those with a negative attitude ($\chi 2$= 2.069,N=384, p < 0.150, 2-tailed).

Binary Logistic Regression Determining the Factors Associated with Practice of BSE

Binary logistic regression analysis was used to determine the true predictors of practice of BSE as well as to control for confounding factors. All the variables that yielded a P value of <0.05 in Chi square tests were considered in the univariate binary logistic regression.

Table 10 Univariate Binary Logistic Regression results

	Practice of BSE			
	Good practice	**Poor Practice**		
Predictor Variable	**No (%)**	**No (%)**	**UOR (95% CI)**	**P-Value***
Knowledge on Breast cancer				
Adequate	18.8(33)	53.3(13.7)	3.094 (1.809 – 5.291)	0.001*
Inadequate	81.3(67)	230(86.3)	Ref (1.0)	
Knowledge on BSE				
High	27.3(48)	77.7(20.1)	3.676 (2.256 – 5.989)	0.001*
Low	72.7(52)	206(79.9)	Ref (1.0)	
Self-efficacy				
High	46.1(77)	130.9(35.2)	6.160 (3.642 - 10.419)	0.001****
Low	53.9(23)	153(64.8)	Ref (1.0)	
Perceived Benefits of BSE				
Good perception	41.9 (37.9)	119 (62.1)	2.878 (1.799 - 4.604)	0.001*
Poor Perception	39(17.5)	164.9(82.5)	Ref (1.0)	
Occupation				
I work	24(31.5)	68 (68.5)	.602(.221-1.642)	0.321
Do Nothing	44.8(18)	127.2 (82)	.592 (.217-1.617)	.307
Do Business	24(37)	68(63)	1.240 (.464-3.315)	.667
In School	7.3(21.4)	20.7(78.6)	Ref(1.0)	

*****Indicates significant *p*-value at $p < 0.05$.

The results of the univariate binary logistic regression revealed that except for Occupation, the rest of the variables were significantly associated with the practice of BSE as shown in table 10 above.

4.9.2 Multivariate binary logistic regression

Table 11 Multivariate Binary logistic Regression Results

	Practice of BSE			
	Good practice	**Poor Practice**		
Predictor Variable	**No (%)**	**No (%)**	**AOR (95% CI)**	**P-Value***
Knowledge on Breast cancer				
Adequate	18.8(33)	53.3(13.7)	2.055 (1.140 – 3.703)	**0.017***
Inadequate	81.3(67)	230(86.3)	Ref (1.0)	
Knowledge on BSE				
High	27.3(48)	77.7(20.1)	2.432 (1.426 – 4.147)	**0.001***
Low	72.7(52)	206(79.9)	Ref (1.0)	
Self-efficacy				
High	46.1(77)	130.9(35.2)	4.052 (2.321 - 7.018)	**0.001***
Low	53.9(23)	153(64.8)	Ref (1.0)	
Perceived Benefits of BSE				
Good perception	41.9 (37.9)	119 (62.1)	2.041 (1.216 - 3.425)	**0.007***
Poor Perception	39(17.5)	164.9(82.5)	Ref (1.0)	

The multivariate binary logistic regression model was the final analysis to be performed to determine combined impact of independent variables on the Practice of BSE. All the significant factors from the univariate binary logistic regression were considered for entry into the multivariate logistic regression model.

The result of the analysis showed that all variables were statistically significantly associated with the practice of BSE as outlined in Table 11.

4.9.3 **Presentation of Qualitative Data**

Focus group discussions were held and at the time of saturation a total of three focus group discussions had been conducted. To maintain anonymity each focus group participant was assigned a unique identifier. Transcription of the focus group discussions and subsequent thematic analysis was done. The thematic analysis was conducted using an approach developed by Braun and Clarke (2006) in which data is processed through six stages of analysis. Thematic analysis involved the researcher reviewing the transcripts on multiple occasions in order to initiate the process of coding, followed by the creation of main themes and sub-themes**.**

4.9.4 Demographic characteristics

Table 12 Demographic characteristics for FGDs (n=24)

Demographic variables	**Frequency**	**Percentage**
Religion		
Christianity	24	100%
Education		
University	3	12%
Secondary	10	42%
college	11	46%
Family monthly income (Kwacha.)		
< 3000	5	20%
4000-6000	12	50%
> 6100	7	30%
Age (years)		
20-25	4	17%
26 -30	8	33%
31-35	7	29%
36 and Above	5	21%

Majority (33%, n=8) of the respondents were aged between 26 to 30 years with Minority (17%, n=4) being those between 20 to 25 years. Most (46%, n=11) of the respondents had gone up to college, (42%, n=10) had attained secondary education while minority (12%) had reached university. Half (50%, n=12) of the respondents, family income ranged between four thousand and six thousand Zambian Kwacha (K4000-K6000). Most (87.5, n=21) of the respondents were married while minority (12.5%, n=3) were single .Half (50%, n=12) had been on contraceptives

for one to three years, (33%, n=8) eight for four to six years while (17%, n=4) three for at least seven years. All (100%, n=24) of the respondents were Christians.

4.9.5 Presentation on the main theme, sub-themes and categories

Table 13 Themes and Sub-themes identified by Thematic Analysis.

Theme I: knowledge and Perception about BSE	Theme II: Motivating Factors to Practising BSE	Theme III: Factors Preventing Women from Practising BSE
Sub-theme 1 How BSE done	Subtheme 1 Health care providers	Sub-theme1 Behavioural factors
Sub-theme 2 When BSE done	Sub-theme 2. Personal factors.	Sub-theme 2 Lack of information
		Sub-theme 3 Health seeking behaviours

A thematic analysis of qualitative data revealed different perceptions of women regarding BSE and resulted in the identification of three major themes. First theme was based on participants' existing knowledge and perception regarding BSE. The second theme embraced different factors preventing women from practising BSE. Third theme revealed Motivating factors to practicing BSE. The main themes were further divided into sub-themes and relevant categories. The table below shows the main theme, sub-themes, and categories grounded in data from 3 FGDs conducted among women on Hormonal contraceptives in Lusaka, Zambia.

4.9.3. Theme I: knowledge and perception about BSE

The knowledge and perception about BSE varied from participant to participant, but generally, the focus group discussions demonstrated low levels of knowledge of BSE. Within the main theme of knowledge and perception of BSE, the following sub-themes were identified;

4.9.3.1 Sub-theme 1. How BSE done

Majority of women had heard about BSE and only a few women reported not having heard about BSE. Some of the participants described BSE and stated, "*it involves touching breast to check for lumps in the breast nothing much*." (FGD1, 2 and 3) "*Involves feeling the breast for a lamp*". The commonly reported technique used was palpation and none of the participants mentioned inspection as a

technique of BSE. This gives the impression that the women have little knowledge on performance of the BSE procedure.

4.9.3.2 Sub-theme 2. When BSE is done.

Majority did not know exactly the appropriate time in relation to the menstrual cycle when it is to be done and mostly general responses such as; "*after menses*" and "*before menses*" (FGD1,2 and 3) were given. While others were clearly ignorant and gave responses such as "*it can be done anytime within a month*" and "*I do it at any time*" and "*I don't know*" (FGD1,2 and 3). The participants reported different sources of information from which they come to know about the BSE. Among which, Nurses, television, social media, friends were mentioned. One common feature about the women who had information on BSE from all FGDs is that they a learned it from Nurses in the Family planning department. When probed about the purpose of BSE, few women expressed BSE beyond just finding a lump or cancer early; "*makes one feel in control over their health*" (FGD 1 and 3). The other commonly expressed purpose is becoming aware of what is normal breast tissue. Others expressed that practicing BSE helps them know their own "body" which gives them a peace of mind.

4.9.4 Theme II: Motivating Factors to BSE Practice

4.9.4.1 Sub-theme1. Health care providers.

Nurses recommendations and encouragement to perform BSE were identified as one of the motivating factors BSE practice. The women reported that when the Nurses reminded them of BSE once in a while as they go for family planning appointments they would comply. The women also expressed that sometimes they are confused by the inconsistencies in information obtained from different Nurses. Some women reported that "*other Nurses say you can do it if you want while others tell you do BSE every month*" (FGD 1and 2) hence there is uncertainty as to whether it really is important.

4.9.4.2 Sub-theme II Personal Factors.

Participants reported some personal factors that motivated them to practise BSE. Some participants reported a sense of peace knowing that there were no abnormalities: "*It's a relief that you are free, and have peace of mind to find out that everything is okay*" (FGD1 and 2) Another woman said, "*Just to get relief that you are okay*" (FGD1). A few participants forwarded personal health goals as a factor that motivated them in regular practise of BSE. When the participants found a nodule or changes in their breasts, they felt motivated to perform BSE.

4.9.5. Theme III: Factors Preventing Women from Practicing BSE

The focus group discussions exposed different factors that hindered participants from Practicing BSE. From the responses, it inferred was revealed that Behavioural and environmental factors composed the barriers that restricted women from practising BSE.

4.9.5.1 Sub-theme I: Behavioural Factors

The sub-theme behavioural factors cover participants' responses associated to behaviours, which prevented the women from practising BSE. The participants admitted fear and Laxity in prioritizing own health to being the common behaviours that hinder them from performing BSE.

Most of the women reported choosing not to perform BSE for fear of detecting abnormalities. The women expressed: "*we are generally scared what if something is detected, that's why we keep avoiding*," (FGD 2). "*we fear finding something wrong*" (FGD 1,2 and 3). "*if you find a lamp which would mean you have cancer you can die early"* "*Sometimes it's better you don't know that you have breast cancer or anything pointing to it* "(FGD1,2 and 3). In all the FGDs, women associated breast cancer with evident impending death and fear of knowing you are dying soon. Women expressed their fear with "*you are better off not knowing because when you hear that you have cancer there is a high risk of psychologically being defeated as you begin to see yourself dying faster*" "*when you just hear cancer the next thought is am dying soon* " (FGD1,2 and 3). They were of the view that not knowing you have signs of or breast cancer gives a level of hope that you

still have long to live. Most of the women repeatedly stated that "*what you don't know cannot kill you*" (FGD1, 2 and 3).

A majority of women discussed general tendencies in women ignoring their health amidst a number of responsibilities on their shoulders. Negligence of one's health was the common behaviour claimed all the participants that attribute to irregular practice or non-practice of BSE. Some women expressed "*We get carried away taking care others and end up neglecting ourselves*" (FGD1 and 2) to which all women affirmed that they do not get time for self-care. Almost all women emphasized on the fact that women concentrate on attending to the health needs of husbands, children, the rest of the family and in the process forget to give priority to their health. Furthermore, the women consistently acknowledged a great tendency to want to act when there is some sign of impending sickness. Some women also believed that when there was no need to examine ones breast when there is no visible presenting problem , as echoed by expressions of " *We only check the breasts when maybe there is some pain*" (FGD1,2 and 3), a belief which impede them from regular BSE practise.

4.9.5.2 Sub-theme II: Lack of Information

The inability to perform BSE was partly bordering on a lack of information on BSE and competence in carrying out the health preventive activity. Most of the responses from all the FGDs revealed that knowledge concerning BSE were incomplete and inadequate. Women admitted, "*yes we have heard Breast Self-Examination but we really do not know much about it" "We know very little about it*" (FGD1, 2 and 3). Women claimed they do not have adequate knowledge especially on the steps and how to correctly perform BSE so they opt not to perform BSE. They expressed ; "*No one demonstrated to me on how to do it*" (FGD1, 2 and 3) "*we don't know what exactly and how exactly to do it, we are just told you should be checking your breasts at home"* (FGD1and 3) *; "we don't do it because we don't know" and "I don't know how to do it"* (FGD1and 3). The other observation was that the benefits of BSE are not well understood by the women. The readily expressed benefit was early detection of breast cancer which was mentioned by almost all women. Other responses expressed ranged from "*Do not understand the importance"* to *"I don't know the need" (FGD1,2 and 3).* The

participants expressed a willingness to learn and consequently practice BSE. Several women emphasized on the need of teaching with demonstration on BSE; *"when you teach us, we will be able to do it" (FGD1, 2 and 3).*

4.9.5.3 Sub-theme III: **Health Seeking Behaviour**

Third theme has built based on participants' responses on general health-care behaviour. Most commonly expressed reason for non-practice was blamed on the poor health seeking behaviours by women. In all FGDs, it was found that majority of women usually do not engage in any health seeking behaviour unless there is something serious. Most of the women admitted; "*When we start feeling that something is going wrong then we'll do BSE or go to the clinic*" (FGD1and3) *"We keep on avoiding anything that may cause worry.*" (FGD1, 2 and 3). Some participants did not feel the need for BSE when they perceived themselves healthy. One woman said "*I just don't see the need when there is nothing wrong with me*" (FGD 2). it was observed that, when in the women's views and perceptions they had no risk factor such as family history of breast cancer and/or their having apparently normal breasts, they were deterred from sustaining the habit of performing regular breast self-examination. Only a few women said, "*I regularly perform BSE with or without any sign or symptom of disorder*" (FGD1) Consistent response obtained from most of the women expressed: "most *times we keep postponing the practice of BSE for later because after all there is nothing wrong.*" (FGD 1, 2 and 3).

CHAPTER FIVE

5.0 DISCUSSION OF FINDINGS

5.1 INTRODUCTION

The study drew a sample of women on hormonal contraceptives. The discussion is based on the results of the analysis of the data collected from a sample of three hundred and eighty-four (384) respondents who were randomly selected and 24 women who were purposively selected. The sample was derived from four sites in Lusaka District namely: Kalingalinga, Bauleni, Mtendere and Kaunda Square Clinics. The data was quantitatively and qualitatively analysed. The objective of the study was to investigate the practice of BSE among women on hormonal contraceptives in Lusaka, Zambia. The study variables included; practice of BSE, knowledge on BC, and knowledge on BSE, attitude and factors influencing BSE practice, Age and education level and self-efficacy.

5.2. Demographic characteristics

The demographic characteristics of the sample relevant to this study included Age, Level of education, occupation and income. In this study, the mean age was 27.95 years (SD ± 5.5). The Majority (38.8%, n=149) respondents were in the age group of 20 to 25 years old. According to Zambia Health Demographic Survey, 69% of the women accessing family planning services are within this specific age group (CSO, 2013). Twenty years is the recommended age to begin practising BSE, it is also important to note that this age group is not yet eligible for mammogram which is offered to women 40 years of age and above. This study did not show any relationship between age and the practice of BSE. This finding was supported by Taleghani et al., (2019), who also found that age had no significant relationship to BSE practise. On the contrary, Akhtari-Zavare et al. (2015) found a significant relationship between age and practice of BSE.

Most of the participants were married (70%, n= 269) this can be because mostly family planning services are accessed by women who are married a trend which is culturally acceptable in Zambia. Though this study did not show any statistically significant relationship between marriage and BSE practise, other studies done

elsewhere showed significant relationship existed between the two variables (Valderrama-Urreta et. al., 2018).

Slightly above half (53%, n= 203) of women had secondary education and a minority of (4%, n= 15) having reached university level this is because the larger population in Zambia is literate (ZDHS, 2013). This shows that the women are able to at least read and write, and also increases their chance of understanding the importance and benefits of BSE. Literacy status is directly related to the awareness and practice of BSE along with other health seeking behaviours. This study did not reveal any statistically significant relationship between education levels and BSE practice. This finding is not consistent to other studies where it was found that women with high level education were more likely to correctly and regularly practice BSE (Chowdhury et al.,2016).

More than half (52%, n= 200) of respondents had between 1-3 children and slightly below half (46%, n= 178) had between 4 to 6 children. Only 25% of the respondents were in gainful employment and close to half (44%, n= 169) of the respondents were not gainfully employed. This could partly be attributed to the fact most of the women only went up to secondary education and do not get the chance of furthering their education because of the high poverty levels in the country. Ninety nine percent (99%, n= 381) of respondents were Christians with a small fraction (1%, n= 3) being of Muslim faith, this can be credited to the fact that Zambia is a Christian Nation (CCZ, 2005). In this study there was no significant relationship between BSE and Demographic variables of age, marital status, level of education and occupation. Thomas et.al., (2013) in their study also found that there was no association between the practice of BSE and demographic variables. Inconsistent to the above, Haji-Mahmoodi (2018), in a study among health workers found that the practice of BSE was significantly associated with age, level of education and knowledge of how to examine the breasts. This could be attributed to the fact that the study was conducted in a population of health workers who had high knowledge of the significance of BSE. Additionally, Gupta et al., (2009) also found a significant association between the knowledge of BSE and variables like age and marital status.

5.3 Knowledge on Breast Cancer

The first specific objective of the study was to investigate the Knowledge of Breast Cancer among women on hormonal contraceptives. This study found that, more than three quarters (81.2%, n=312) of the study respondents were categorized as having poor knowledge on BC. More than a quarter (35%, n=119) of the study respondents identified family history of Breast cancer as a risk factor to BC. A further 41% n=138 identified smoking while a little more than a quarter (26 %, n=99) identified oral contraceptives as predisposing factors to BC. In addition, the current study showed more than half (62%, n= 209) identified a lump in the breast as one of the signs of BC, with (39%, n=131) identifying nipple discharge, and more than a quarter (35% , n=119) of the study respondent identified pain as a predisposing factor to developing BC. A breast lump is considered as one of the signs of BC significant in BSE (Dahiya et al., 2018). The ability to recognize a lump as an abnormality is desired for the successful use of BSE.

This study found that there was a significant relationship between knowledge on BC and practice of BSE. Those with good knowledge on BC were 2.055 times more likely to practice BSE as compared to women who had poor knowledge on BC [AOR = 2.055; 95% CI (1.140 - 3.703)]. Knowledge of the signs and symptoms of BC is important, as it will guide women on what to lookout for as they perform BSE and enhance its use in the secondary prevention of BC. Knowledge on breast cancer is considered a necessary precursor to the practice of BSE. It influences BSE practice and reduces on the barriers to its practice (Elsie et al, 2010; Okolie, 2012).

5.4 Knowledge on Breast Self-Examination

The second specific objective of this study was to investigate the Knowledge of Breast Self-Examination among women on hormonal contraceptives. After categorizing the levels of knowledge according to the cut off points, this study established that the knowledge levels on BSE were low. Despite more than half (60%, n= 230) of the respondents having heard about BSE, only a minority (27%, n=105) had high knowledge levels while the majority (72.2%, n=279) of the study respondents had low knowledge levels. The high percentage of women who heard about BSE can be attributed to the fact that most of them were exposed to

information about breast self-examination in the Family Planning Departments at their health facilities. One of the guidelines in the provision of care for women on hormonal contraceptives includes encouraging women to be performing regular BSE. Knowledge on BSE is cardinal as it is expected to improve breast self-examination behaviours in women (Nahidi et al., 2017). Low levels of knowledge may impede the women from practising BSE as Knowledge about BSE is positively correlated to BSE practice (Gupta,2010). On the other hand, it is not always that knowledge on BSE translates into good Practice. A wide gap between knowledge of BSE and practice of BSE has been observed in a number of instances (Gwarzo et al, 2009).

In this study, when asked about time of the month in relation to the menstrual cycle when BSE should be performed very few (8%, n= 29) were able to correctly state the period between day five and seven of the menstrual cycle. This gap in knowledge in relation to time of the cycle was also observed in the FGDs where none of the participants was able to state the correct time when BSE should be done, the most common responses being, " *I do it at any time of my menses*" and "*it can be done anytime within a month*" (FGD1,2 and 3). This could be due to inadequate information given to the women with regard to this specific detail. The findings of this study are lower in comparison to other studies which found 28.5% and 90.0% respondents knew the correct time interval in relation to the menstrual cycle when BSE should be done (Guleser et al.2009 and Erdem and Toktas 2016). On one hand, Akpinar et al. (2011) found that 55.6% of participants knew that BSE should be done in days 5–7 of the menstrual cycle. Timing of the performance of BSE in relation to the menstrual cycle is important for the accuracy of the method. Correct timing will help in preventing unnecessary anxieties and sometimes unwarranted excisions.

This study found that less than half respondents (46%, n=174) correctly mentioned monthly as the frequency of carrying out BSE while a minority (24%, n= 91) reported not knowing the frequency of carrying out BSE. This finding is similar to Hemalatha (2017) study that found a major proportion of participants (71.5%) having no idea about the time interval for consecutive BSEs while only 14% reported that BSE has to be performed once in a month.

This study found that a significant relationship exists between perception of the benefits of BSE and the practice of BSE. Those with good perception of the benefits of BSE were 2.041 times more likely to practice BSE as compared to women who had poor perception of the benefits of BSE [AOR = 2.041; 95% CI (1.216 - 3.425), P-value= .007]. Knowledge of what the women stand to gain from the practice was seen to be a motivating factor for women to engage in BSE practice.

In this study, the revealed sources of knowledge on BSE included; health care providers that stood at 52%, print stood at 29%, electronic Media stood at 10%, and friends and family members stood at 8%. The same picture was observed and supported from the FGDs as most of the participants reported the same "*Most of the times the Nurses tell us that we should be examining our breast from time to time at home "* (FGD1) It is commendable to note that the respondents got the information from the nurses as there is assurance that the women are exposed to correct and reliable data which will not promote the increase of misconceptions towards the health promotion behaviour. Having false information about breast cancer and breast self-examination is associated with negative attitudes towards seeking health promotion behaviours (Nelsonet al.,2009). In contrast, other studies found media to be the most common source of information about BSE among respondents (Nde et al., 2015). This may not be so surprising, as in present day, society is exposed to a lot of information through Internet, television, and other mass media which have proved to be a viable means of dissemination of information.

One of the highlights of this study was that it assessed the practical performance of BSE procedure by directly observing the respondents perform the Breast self-examination. It was found that more than half (53.9%, n= 207) of the respondents had low self-efficacy while less than half (46.1%, n=177) had a high self-efficacy in BSE. This could be because most of the times there is not adequate time allocated to individual clients as a result of shortage of man power in most of the health facilities. Consequently, follow up assessment is not done to determine how the women are practising BSE most of the time. There are also no models in the family planning units on which the steps of BSE can be adequately demonstrated to the women. The findings of this study are contradictory to Erdem and Toktas

(2016) who in their study found that (92.1%) knew the correct technique of BSE. This could be due to respondent bias as the data collected was based on what respondents reported. Hemalatha et al., (2017), found that a more than half (62.5%) of women had no idea about the steps of the BSE procedure. Knowledge and skill to perform BSE are important as are key in demonstrating the success of BSE in the secondary prevention of BC. Confidence in the ability to correctly perform the procedure is one of the important determinants of regular BSE. Affirmatively Guilford (2011) ascertained that perceived BSE self-efficacy was predictive of BSE behaviour among Iranian and American women.

This study found that a very significant relationship exists between practice of BSE and self-efficacy. Women with High self-efficacy were 4.052 times more likely to practice BSE as compared to women who had low self-efficacy [AOR = 4.052; 95% CI (2.321 - 7.018), P-value = .001]. Interventions to improve the practice of BSE can be tailored to equip the women with skill in BSE among others.

This study found a significant relationship between Knowledge of BSE and BSE practice. Those with good knowledge on BSE were 2.432 times more likely to practice as compared to women who had poor knowledge on BSE [AOR = 2.32; 95% CI (1.426 - 4.147), P-value=.001]. This is consistent with a study conducted in Ethiopia where it was also found that a relationship existed between knowledge on BSE and the practice (Getu 2018). However, the findings of this study are contradictory to Mukupo (2007), who found that there was no relationship among practice of BSE and knowledge on both BC and BSE. Furthermore, in contrast to the findings of this study, a study among health students in Ethiopia found that there was no association between knowledge score and practice of BSE (Segni 2016). The differences could be attributed to differences in exposure to information on BSE

5.5 Practice of Breast Self-Examination

The third specific objective was to determine the practice of BSE among women on hormonal contraceptives.

This study revealed that the practice levels of BSE were poor with almost three quarters (74%, n=284) of the study respondents were categorized with poor

practice while a little more than a quarter (26%, n=100) of the study respondents were categorized with good practice. The women reported a habit of postponing BSE "most *times we keep postponing the practice of BSE for later because after all there is nothing wrong.*" (FGD 1, 2 and 3). Correspondingly, Fidelis and Manalo, (2013) through their study done in Brazil also affirmed that the practice of BSE among women is generally low. In this study, minority (15%, n= 57) of the study respondents reported practising BSE on a regular basis. Regular BSE practice will enable women to be familiar with their breast thereby making it easier for them to readily detect any changes that may occur in the breast tissue. This could be due to the low self-efficacy as lack of adequate skills can lead to non-performance of breast self-examination (Sadler et al, 2012). Slightly similar result was obtained in a study done elsewhere where only 16% of the participants performed BSE at monthly intervals (Al-Hussami et al.,2014). Surprisingly, the findings of this study are higher than what was discovered in other studies. Recent studies conducted have indicated that very few women regularly practice BSE, with results showing only 5% and 8.1% of the respondents reporting regular practice (Hemalatha et al., 2017 and Fondjo et al.,2018). However, in contrast to the findings of this study, other studies found, at least, half of the participants practising BSE monthly (Agbonifoh 2016).

In this study the common reason for non- practice of BSE was lack of knowledge which was indicated by less than half (44%, n=170) of the study respondents. In addition, the study exposed behavioural and environmental factors that hindered women from Practicing BSE. The participants admitted fear of detecting an abnormality in the breast, *"we fear of finding something wrong"*(FDG 1,2 and 3), lack of information "*I do not know how to do it*" (FDG 1 and 3), "*no one has shown me how it is done*" (FDG 1,2 and 3) and not prioritizing self-health being the common behaviours inhibiting them performing BSE. Consistent to the findings of this study, other studies also found inadequate knowledge on breast cancer knowledge and BSE as factors that inhibit women from BSE practise (Al-Naggar et al.,2012 and Nahidi et al. 2017).). On the other hand, other studies have argued that attitude influences one's actions or omissions. In this study, the Majority (65.1%, n=250) of the respondents were classified as having good attitudes towards BSE, although this did not culminate into good practice. In this study attitude was not

significantly related to BSE practice [$\chi 2 = 2.069$, $p < 0.05$] though majority of the respondents who had a positive attitude towards BSE had a good practice compared to those with a negative attitude. Despite the fact that statistically there was no relationship between the two variables, clinically, the positive attitude towards BSE can be considered a good environment within which knowledge and skill of women in BSE can be improved through organized health education programs. Rosmawati (2010) on the other hand, in a study conducted in Iran found that those with positive attitude performed BSE more than those with a negative attitude

5.6 Conclusion

The study sought to assess the practice of BSE and determine the associated factors among women on hormonal contraceptives in Lusaka District, Zambia. Findings of this study revealed that only a small margin of the participants had good practice of BSE despite the majority having had a positive attitude towards BSE. In this study knowledge on BC and BSE, self-efficacy and perceived benefits of BSE were all significantly associated with the practice of BSE. Additionally, the study highlighted the low levels of compliance to the practice of breast self-examination as only 15% of the respondents practice regularly.

Furthermore, the study identified specific gaps in the knowledge on the subject matter being, inadequate knowledge levels on breast cancer, inadequate knowledge of the procedural steps of breast self-examination and little knowledge on the benefits of BSE practice.

5.7 Implications of The Study Findings to The Health Care System

5.7.1 Nursing Practice

Health care providers, educational institutions and mass-media are the important resources in dissemination of any public health related information to masses. This study showed inadequate knowledge levels for Breast cancer and Breast Self-Examination. More than three quarters 81.8 %, (n= 312) of the respondents possessed inadequate knowledge on Breast Cancer and Majority 72.2% (n = 279) had low Knowledge levels on BSE.

Therefore, there is need for Nurses to reinforce one on one health education to women especially on topics such as BSE. It therefore calls for Nurses to be knowledgeable on the subject matter in order to minimize the gaps in knowledge on breast cancer and BSE. The involvement of community, family especially parents and spouse should be facilitated to maximize the understanding of BSE and to foster family support system.

5.7.2 Nursing Administration

Nurse Managers should ensure that health education on breast cancer and the secondary prevention intervention of BSE is given to women accessing family planning services at the health facilities and Outreach Posts. The study exposed among other reasons that demonstrations on how to perform BSE are not done for them. The women expressed that "*No one demonstrated to me on how to do it*" (FGD1, 2 and 3). Hence, Nurse Administrators should make available teaching aids and ensure that IEC topics being planned include messages on BSE and breast awareness. Furthermore, Nurse Managers need to plan for community outreach and encourage school health services so that opportunities are created for the dissemination of information on BSE. Therefore, it is also imperative that nursing management improves nurses staffing levels so that sufficient time is allocated to IEC and also provide mannequins for the purpose of demonstrations on BSE.

5.7.3 Nursing Education

There is need to reinforce the secondary prevention of breast cancer and promote the skill acquisition in the nursing curriculum. This study revealed the major source of information on BC and BSE as health workers. Nurses in this case are instrumental in the dissemination of information. Nurses should be trained in Behaviour change communication in order for them to effectively influence the behaviour of women towards BSE. To this effect, it is imperative for educators to include a component on behavior change communication in the Nurse training curriculum. This will empower the nurses with knowledge and skill needed to bring about a change of mind set in the community towards Health promotion activities such as BSE.

5.7.4 Nursing Research

Further studies can explore what customized interventions could be implemented to improve the uptake and practice of BSE for early breast cancer detection. Results derived from these studies can be used by Ministry of Health and other stakeholders to model, accentuate and strengthen the existing strategies so that the greatest challenge of late presentation can be curbed.

5.8 Recommendations

Policy makers at healthcare institutions can use the findings to focus on decreasing the knowledge gaps and the barriers to perform BSE. Furthermore, public community institutions should be encouraged to establish continuing education programs on breast cancer and breast self-examination to improve the knowledge of the women and enhance the confidence toward BSE. Public media, social websites, and Smartphone applications are some of the affordable methods than can be used as medium of communication and enhance the compliance of BSE. Therefore, based on the findings of this study the following recommendations have been made:

1. The Ministry of Health to develop posters, customised pamphlets that show the step-by-step process of Breast Self-Examination and distribute in all health facilities to be serving as reminders for women.
2. MOH to liaise with mobile service providers to be sending monthly reminders of BSE as a strategy to promote regular BSE.
3. The Ministry of Health in conjunction with media houses to Develop Radio jingles and talks on Breast Self-Examination.
4. MOH and stakeholders to develop and organize health education and awareness campaigns on the causes, risk factors and prevention of breast cancer in order to bridge the wide knowledge application gap that exists in the community with regards to breast cancer and breast self-examination.

5.9 Strengths of the study

The conducted study had a sample size of 384 and 24 for for quantitative and qualitative respectively. Additionally, correlation analysis was applied through Statistical methods such as chi square and binary logistic regression to establish relationships between study variables. The study assessed the competences of women in BSE by directly observing them perform the procedure.

5.10. Limitation of the study

This investigation was a cross sectional study that can only determine associations between Variables, and it is not capable of examining cause and effect relationships between the variables. The results of this study can only be generalized only to similar samples and not beyond.

5.11 Dissemination of study findings

The research findings were presented at the University of Zambia Post Graduate seminar week on 28th October, 2019. Additionally, the findings of this study will also be disseminated as dissertations submitted to the University of Zambia, School of Medicine Library, School of Nursing Sciences, Lusaka District Health Office, and Ministry of Health. Furthermore, the findings of the study will be published with an internationally recognized journal.

REFERENCES

Abolfotouh M. A, BaniMustafa A.A, Mahfouz A.A, Al-Assiri M.H, Al-Juhani A.F., and Alaskar A.S, (2015) Using the health belief model to predict breast self-examination among Saudi women ***BMC Public Health***. 2015; 15: 1163.PMCID: PMC4657230.

Agbonifoh Julia Adesua (2016) Breast Self Examination Practice among Female Students of Tertiary Institutions ***Journal of Education and Practice*** www.iiste.org ISSN 2222-288X (Online)

Aghamolaei T, Hasani L, Tavafian SS, Zare S**.(2011)** Improving Breast Self-Examination: an Educational Intervention Based on Health Belief Model. Iran J Cancer Prev. 2011; Vol4, No2, P82-87.

Ahmed S.E, Elrhaman N.FA, and Dawria A,(2016) "Study To Evaluate The Knowledge And Practices Of Nurses About Breast Self-Examination (Bse) To Screen For Breast Cancer, In Elmak Nimer University Hospital" ***International Journal of Research*** – Granthaalayah, Vol. 4, No. 1 27-34.

Akhtari-Zavare M., Hanafiah Juni M., Irmi Zarina I, Salmiah S, and Latiff L.A. (2015) Barriers to breast self-examination practice among Malaysian female students: a cross sectional study ***Springerplusv***.4; 2015 PMC4642456.accessed on 03.03.16 , https://www.ncbi.nlm.nih.gov › pubmed.

Akpinar Y. Y., Baykan Z., Naçar M., Gün İ., Çetinkaya F. Knowledge, attitude about breast cancer and practice of breast cancer screening among female health care professionals: a study from Turkey. *Asian Pacific Journal of Cancer Prevention*. 2011;12(11):3063–3068.

Al-Azmy S.F, Alkhabbaz A , Almutawa H. A, Ismaiel A. E, Makboul G,. El-Shazly M. K (2012), Practicing breast self-examination among women attending primary health care in Kuwait. ***Alexandria Journal of Medicine*** 49,281,286, viewed 03.03.16, https://www.ajol.info › index.php › bafm .

Al-Dubai S.R, Ganasegeran K, Alabsi AM, (2012). Exploration of barriers to breast-self-examination among urban women in Shah alam, malaysia: a cross

sectional study. ***Asian Pac J Cancer*** Prev. ;13:1627–1632. doi: 10.7314/APJCP.2012.13.4.1627.

Al-Hussami M, Zeilani R, AlKhawaldeh OA, Abushaika L (2014). Jordanian women's personal practices regarding prevention and early detection of breast cancer. ***Int J Nurs Knowl,*** 25, 189-94.

Al-Naggar R.A, Bobryshev Y.V and Al-Jashamy K (2012) Practice of Breast Self-Examination Among Women in Malaysia ***Asian Pacific J Cancer*** Prev, 13, 3829-3833 available at DOI:http://dx.doi.org/10.7314/APJCP.2012.13.8.3829.

AL-Naggar RA, Al-Naggar DH, Bobryshev YV,(2011). Practice and barriers toward breast self-examination among young Malaysian women. ***Asian Pacific J Cancer*** Prev. 2011;12:1173–1178.

Alwan, N. A., Al-Diwan, J. K., Al-Attar, W. M., & Eliessa, R. A. (2012), Knowledge, attitude & practice towards breast cancer & breast self-examination in Kirkuk University, Iraq. ***Asian Pacific Journal of Reproduction***, 1(4), 2012, 308-311.

Amasha, H. A., (2013) Breast Self-Examination and risk factors: Awareness of Jordanian Nurses. ***Health Science Journal***, 7(3), 303-314.

American Cancer Society (2013) ***Breast Cancer Facts & Figures 2013-2014.*** Atlanta: American Cancer Society, Inc.viewed 17.04.16, https://www.cancer.org › cancer-org › research › cancer-facts-and-statistics

American Cancer Society,(2014). ***Detailed Guide: Breast Cancer. 2014***. Viewed 17.0416 at www.cancer.org/Cancer/BreastCancer/DetailedGuide/.

Ansah MB, Vember H (2018) Female Students Knowledge of Breast Self-examination in a University in the Western Cape. ***J Oncol Med & Pract*** 1: 115. doi:10.4172/2576-3857.1000115.

Aqtam, I. And Darawwad, M. (2018) Health Promotion Model: An Integrative Literature Review. Open Journal of Nursing, 8, 485-503. https://doi.org/10.4236/ojn.2018.87037

Ardahan M, Hulya D, Askin Y, Emrah A and Baver A (2015) Health Beliefs of Nursing Faculty Students about Breast Cancer and Self Breast Examination ***Asian Pac J Cancer*** DOI:http://dx.doi.org/10.7314/APJCP.2015.16.17.7731.

Aysun Babacan Gumus , Olcay Cam , Arzu Tuna Malak (2010)Socio-demographic Factors and the Practice of Breast Self Examination and Mammography by Turkish Women, ***Asian Pacific Journal of Cancer Prevention*, Vol 11, 2010**

Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), Encyclopedia of human behavior (Vol. 4, pp. 71-81). New York: Academic Press.

Basavanthappa, B. T. (2007). ***Nursing Research.*** Second Edition. Jaypee Brothers Medical Publishers (P)Ltd. New Delhi. ISBN 81-8448-074-1.

Bates B. (2007), ***A guide to Physical Examination and history taking.*** 6th Edition, Lippincott. Philadelphia.

Berkiten A, Sahin NH, Sahin FM, Yaban ZS, Acar Z, Bektas H. (2012) Meta-Analysis of studies about Breast Self-Examination between 2000-2009 in Turkey. ***Asian Pacific Journal of Cancer Prevention***. ;13:3389–97.

Bi Suh M.A , Atashili J, Asoh Fuh E and Ayamba Eta V (2012) ***Breast Self-Examination and breast cancer awareness in women in developing countries: a survey of women in Buea, Cameroon*** ; licensee BioMed Central Ltd. DOI: 10.1186/1756-0500-5-627 2012. viewed 03.03.16, https:// www.ncbi.nlm.nih.gov › pubmed.

Birhane N, Abebe M, Eshetu G and Shifera A, (2015) Predictors of breast self – examination among female teachers in Ethiopia using health belief model ***Archives of Public Health*** (2015) 73:39 DOI 10.1186/s13690-015-0087-7. Viewed 03.03.16, https://archpublichealth.biomedcentral.com › 10.1186 › s13690-015-0087-7.

Boyle, P. and Levin, B., Eds. (2008) World Cancer Report 2008. International Agency for Research on Cancer (IARC), Geneva, 1-6-2010. viewed on 04.04.16, https://www.scirp.org › reference › ReferencesPapers

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Bride, M.B , Pruthi S., and Bevers T., (2012) The Evolution of Breast Self-Examination to Breast Awareness. ***The Breast Journal***, Volume 18 Number 6, 2012 641–6432012 .Wiley Periodicals, Inc., 1075-122X/12.

Brooker C.,(2008). ***Medical dictionary***,16th edition, Elseviaer Ltd, ChurchHill Livingstone.

Brunner L.S.and Suddarth,D.S (1997). ***Textbook for medical surgical nursing***, JB. Lippincott Co Philadelphia.

Central Statistical Office (CSO) [Zambia], Ministry of Health (MOH) [Zambia], and ICF International. 2014. ***Zambia Demographic and Health Survey 2013-14***. Rockville, Maryland, USA: Central Statistical Office, Ministry of Health, and ICF International.

Chowdhury Rupak, Nganwa David, Asseged Bogale, Shami Nandy, T. Habtemariam, and Berhanu Tameru (2016),Assessing the Key Attributes of Low Utilization of Mammography Screening and Breast-self Exam among African-American Women ***J Cancer.*** 2016; 7(5): 532–537. Published online 2016 Feb 12. doi: 10.7150/jca.12963

Cochran, W. G. (1963) **Sampling Techniques**, 2nd Ed., New York: John Wiley and Sons, Inc.

Corbex M, Burton R, Sancho-Garnier H (2012) ***Breast cancer early detection methods for low and middle income countries, a review of the evidence***.Elsevier Ltd.doi: 10.1016/ j.breast.2012.01.002. viewed 16.04.16, https://www.ncbi.nlm.nih.gov › pubmed.

Dahiya, Neha & Basu, Saurav & Singh, M. & Garg, Suneela & Kumar, Rajesh & Kohli, Charu. (2018). Knowledge and Practices Related to Screening for Breast Cancer among Women in Delhi, India***. Asian Pacific journal of cancer prevention***: APJCP. 19. 155-159. 10.22034/APJCP.2018.19.1.155.

Daniels,R., Grendell,R.N & Wilkins,F.R.(2010),***Nursing Fundamentals, Caring & Clinical Decision Making***,2nd.Ed.New York : DELMAR CENGAGE Learning.

Demirkiran F., Balkaya N. AMemis., S., Turk G., Ozvurmaz S.,and Tuncyurek P., "How do nurses and teachers perform breast self-examination: are they reliable sources of information?"***BMC Public Health***, vol. 7, article 96, 8 pages, 2007.

Dundar PE, Ozmen D, Ozturk B, (2006). The knowledge and attitudes of breast self-examination and mammography in a group of women in a rural area in western Turkey. ***pubmed***, 6 viewed on 03.03.16, available online at https://www.ncbi.nlm.nih.gov .

Dunn, R.A. and Tan, A.K, (2011) "Utilization of breast cancer screening methods in a developing nation: results from a nationally representative sample of Malaysian households," ***Breast J***, 17 (4), 399-402 accessed on 03.03.16, available online at https: // www.ncbi.nlm.nih.gov › pubmed.

Erdem Ö and Toktaş İ (2016) Knowledge, Attitudes, and Behaviors about Breast Self-Examination and Mammography among Female Primary Healthcare Workers in Diyarbakır, Turkey Biomed Res Int. 2016; 2016: 6490156. doi: 10.1155/2016/6490156 PMCID: PMC4829675

Faronbi J .O and Abolade J (2012) Breast self examination practices among female secondary school teachers in a rural community in Oyo State, ***Nigeria Open Journal of Nursing***, 2012, 2, 111-115.viewed 16.04.16, https://www.researchgate.net › publication › 268268447.

Fondjo L A , Owusu-Afriyie O, Asamoah Sakyi S, Wiafe Akua A, Amankwaa B, Acheampong E , Ephraim R K , and. Owiredu W K. (2018) Comparative Assessment of Knowledge, Attitudes, and Practice of Breast Self-Examination among Female Secondary and Tertiary School Students in Ghana, ***International Journal of Breast Cancer*** Volume 2018, Article ID 7502047, 10 pages https://doi.org/10.1155/2018/7502047.

Getu M A , Kassaw M W, Tlaye K G, and Gebrekiristos A F **(**2018) Assessment of breast self-examination practice and its associated factors among female undergraduate students in Addis Ababa University, Addis Ababa, Ethiopia ***Breast Cancer (Dove Med Press).*** 2018; 11: 21–28.Published online 2018 Dec 28. doi: 10.2147/BCTT.S189023 PMCID: PMC6312690

Ghodis, Z. and Hojjatoleslami, S., (2012) ***A Survey about educational needs of Breast Cancer and BSE in Iranian Women***. Procedia-Social and Behavioural Sciences, 46, 2012, 2561-2565.

Giridhara R B, Goleen Samari, Cohen S P, Mahapatra T, Wahbe R M, Mermash S, Galal O .M (2011), Breast Cancer Screening Among Females in Iran and Recommendations for Improved Practice: A Review ***Asian Pacific Journal of Cancer Prevention***, Vol 12, 2011. Viewed on 16.04.16, https://www.ncbi.nlm.nih.gov › pubmed

Gonzalo A. (2011) ***Theoretical foundations of Nursing.*** viewed on 16.09.15, Available at http:/ www/nursingtheories.weebly.com/nola-pender.html.

Guilford K., (2011) ***Breast Cancer Knowledge, Beliefs and Screening Behaviours of College Women***. Ph.D Thesis University of Alabama, Department of Health Science.

Güleser, Gülsüm & Unalan, Demet & Akyldz, Hzr. (2009). The Knowledge and Practice of Breast Self-examination Among Healthcare Workers in Kayseri, Turkey. Cancer nursing. 32. E1-7. 10.1097/NCC.0b013e3181a2dbd2.

Gupta Sanjeev K, DK Pal2, R Garg1, R Tiwari2, AK Shrivastava2, M Bansal (20) Impact of a Health Education Intervention Program Regarding Breast Self Examination by Women in a Semi-Urban Area of Madhya Pradesh, India , *Asian Pacific Journal of Cancer Prevention, Vol 10, 2009*, 1113-1117

Gürdal S. Ö, Saraçoğlu G. V, Oran E. Ş, Yankol .Y, Soybir G. R (2013), The Effects of Educational Level on Breast Cancer Awareness: A Cross-Sectional Study in Turkey Asian ***Pacific J Cancer*** Prev, 12, 295-300.

Gwarzo U M, Sabitu K, Idris S H. (2009) Knowledge and practice of breast-self examination among female undergraduate students of Ahmadu Bello University Zaria, Northwestern Nigeria. ***Ann Afr Med*** 2009;8:55-8.

Hall J. (2008) Cross Sectional ***Survey Design, Encyclopedia of survey research methods*** on viewed on 01/10/16, http://srmo.sagepub.com/view/encyclopedia-of-survey-research-methodes/n120.xml

Hemalatha Kumarasamy, A. M. Veerakumar, S. Subhathra, Y. Suga, and R. Murugaraj (2017) Determinants of Awareness and Practice of Breast Self Examination Among Rural Women in Trichy, Tamil Nadu, ***J Midlife Health*** doi: 10.4103/jmh.JMH_79_16: 10.4103/jmh.JMH_79_16

Ilknur Aydin Avci (2008) ,Factors associated with breast self-examination practices and beliefs in female workers at a Muslim community ***European Journal of Oncology Nursing*** 12, 127–133viewed on 04.04.16, Available at www.sciencedirect.com

International Agency for Research on Cancer (2016) Working Group on the Evaluation of Cancer-Preventive Interventions, Lyon (FR).

Jemal A, Bray F, Center MM, (2011). Global cancer statistics. CA: ***A Cancer Journal for Clinicians***, 61, 69-90.

Karayurt O, Ozmen D Certikaya AC(2008) Awarness of Breast cancer risk factor and practice of breast-selfexamination among high school students in Turkey ***BMC Public health***-2008;8:359.viewed on 16.04.16, https://bmcpublichealth.biomedcentral.com › articles › 1471-2458-8-359

Katende G , Tukamuhebwa A and Nankumbi J, (2016), Breast Cancer Knowledge and Breast Self-Examination Practices Among Female University Students in Kampala, Uganda: A Descriptive Study. ***Oman Medical Journal*** [2016], Vol. 31, No. 2: 129–134.

Kerlikowske, K., Hubbard, R.A., Miglioretti, D.L. (2011), ***Comparative effectiveness of digital versus film- screen mammography in community practice in the United States: A cohort study***. Ann Intern Med, 155, 493-502. Viewedon 16.04.16 http://dx.doi.org/10.7326/0003-4819-155-8-201110180-00005 .

Morse E. P, Maegga B, Joseph G and Miesfeldt S (2014) Breast Cancer Knowledge, Beliefs, and Screening Practices among Women Seeking Care at District Hospitals in Dar es Salaam, Tanzania. ***Breast Cancer: Basic and Clinical Research*** 2014:8 73–79 doi: 10.4137/BCBCR.S13745.

Mukupo F.C. (2007), ***Breast Cancer Knowledge and Breast Self- Examination Practice among Rural and Urban Women in Zambia***, Solwezi School of Nursing and Department of Post Basic Nursing.

Nahidi Fatemeh,[1] Mahrokh Dolatian,[1] Nasibeh Roozbeh,[2] Zeynab Asadi,[3] and Nezhat Shakeri[4] **Effect of health-belief-model-based training on performance of women in breast self-examination** Electron Physician. 2017 Jun; 9(6): 4577–4583. Published online 2017 Jun 25. doi: 10.19082/4577
PMCID: PMC5557138

Nde F.P, Nguedia Assob J.C, Tebit E. K, Njunda A.L and Guidona Tainenbe T.R (2015) Knowledge, attitude and practice of breast self-examination among female undergraduate students in the University of Buea ***BioMed Central*** 8:43 DOI 10.1186/s13104-015-1004-4.viewed on 16.04.16, https://bmcresnotes.biomedcentral.com › articles › 10.118.

Nelson Heidi D., Kari Tyne, Arpana Naik, Christina Bougatsos, Benjamin K. Chan, and Linda Humphrey (2009) Screening for Breast Cancer: Systematic Evidence Review Update for the U. S. Preventive Services Task Force***, Ann Intern Med***. 2009 Nov 17; 151(10): 727–W242. doi: 10.1059/0003-4819-151-10-200911170-00009

Nemenqani D.M, Abdelmaqsoud S. H, Al-Malki A. A., Abrar A. ,Oraija A, Eiman M.and Al-Otaibi (2014), Knowledge, attitude and practice of breast self examination and breast cancer among female medical students in Taif, Saudi Arabia ***Open Journal of Preventive Medicine*** Vol.4, No.2, 69-77 .viewed on 03.03.16, https://file.scirp.org › Html.

OAbimbola O (2012) Primary health care nurses' knowledge practice and client teaching of early detection measures of breast cancer in Ibadan Oluwatosin ***BMC Nursing*** 2012, viewed on 03.03.16 available at http://www.biomedcentral.com/1472-6955/11/22.

Oche MO , Ayodele SO , Umar AS (2012), ***Breast Cancer and Mammography: Current Knowledge, Attitudes and Practices of Female Health Workers in a Tertiary Health Institution in Northern Nigeria***. Scientific and Academic Publishing. Scientific and Academic Publishing Company.

Okolie, Uchenna Virginia **(2012) Breast self examination among female undergraduates in Enugu, Southeast, Nigeria.** *International Journal of Nursing and Midwifery* **Vol. 4(1), pp. 1-7, January 2012 Available online at http://www.academicjournals.org/IJNM.**

Olowokere, A. E., Onibokun, A. C. & Oluwatosin, A. O.,(2012) Breast cancer knowledge and screening practices among women in selected rural communities of Nigeria. ***Journal of Public Health and Epi***, 4(9), 2012, 238-245. Viewed on 16.04.16, https://pdfs.semanticscholar.org .

Osuala, E.O., Nwaneri, A.C., Okoronkwo, I., Okpala, P.U. and Emesowum, A.C. (2016) Relationships between Demographic Variables and Breast Self-Examination among Women in a Rural Community South East of Nigeria. ***Health,*** 8, 98-104. Viewed 0n 03.08. 18, http://dx.doi.org/10.4236/health.2016.81012.

Parsa P., Kandiah 1 M and Parsa N. (2011)**Factors associated with breast self-examination among Malaysian women teachers** Eastern Mediterranean Health Journal Vol. 17 2011 ,6:975–984.

Parvani Z (2011). Breast self examination: Breast awareness and practices of systematic review. ***Professional Med J***, 18, 336-9.viewed on 17.06.16, www.theprofesional.com › index.php › tpmj › article .

Pender, N.J., Murdaugh, C. L., & Parsons, M.A. (2011). Health Promotion in Nursing Practice (6th Edition). Boston, MA: Pearson.luence health behavior.

Poonawalla I. B, Goyal S, Mehrotra .N, Allicock .M, Balasubramanian B. A (2014), ***Attitudes of South Asian Women to Breast Health and Breast Cancer Screening***: Findings from a Community Based Sample in the United States.viewed 17.06.16, https://www.ncbi.nlm.nih.gov › pubmed.

Powell R.W (1990), ***Clinical Methods: The History, Physical, and Laboratory Examinations***. 3rd edition. Butterworth Publishers.

Rasu, R.S., Rianon, N.J., Shahidullah, S.M., Faisel, A.J. and Selwyn, B.J, (2011)"Effect of educational level on knowledge and use of breast cancer screening practices in Bangladeshi women," ***Health Care Women Int***, 32 (3), 177-189,.viewed on 17.06.16, https://www.ncbi.nlm.nih.gov › pubmed.

Rosmawati NH. Knowledge, attitudes and practice of breast self-examination among women in a suburban area in Terengganu, Malaysia. ***Asian Pac J Cancer Prev.*** 2010;11(6):1503-1508.

Ruddy KJ, (2013) ***Breast cancer presentation and diagnostic delays in young women. American society of cancer***. ;120(1):20–5. Viewed 0n 16.03.16, https://www.ncbi.nlm.nih.gov › pubmed.

Sadler GR, Ryujin LT, Ko CM, Nguyen E (2012). Korean women: cancer knowledge, attitudes and behaviors ***BMC Public Health*** 1:7.

Sani A M, and Naab F (2014), Relationship between age and Breast Self-Examination among women in Nigeria **IOSR Journal of Nursing and Health Science** *(IOSR-JNHS) e-ISSN: 2320–1959.p- ISSN: 2320–1940 Volume 3, Issue 6 Ver. II, PP 34-39 www.iosrjournals.org*

Segni M T, Tadesse D M, Amdemichael R and DemissieH F (2016) Breast Self-examination: Knowledge, Attitude, and Practice among Female Health Science Students at Adama Science and Technology University, Ethiopia ***Gynecol Obstet*** (Sunnyvale) Volume 6 Issue 4 , 1000368 ISSN: 2161-0932

Shrestha S, Chhetri S, Napit J.(2017) Awareness on breast self examination among reproductive age women. ***JCMS Nepal***. 2017;13(4):425-9.

Shrivastava S.R, Shrivastava P.S, Ramasamy J (2013), Self Breast Examination: A Tool for Early Diagnosis of Breast Cancer ***American Journal of Public Health Research***, 2013, Vol. 1, No. 6, 135-139 .Viewed 03.03.16, http://pubs.sciepub.com/ajphr/1/6/2.

Subramanian, P., Oranye, N.O., Masri, A.M., Taib, N.A. and Ahmad, N. (2013) Breast Cancer Knowledge and Screening Behaviour among Women with a Positive History: A Cross Sectional Study. ***Asian Pacific Journal of Cancer Prevention***, 14, 6783-6790. http://www.ncbi.nilm.nih.gov/pubmed/24377606. Accessed on 03. 03.15

Szukis H A, Qin B, Xing C Y, Doose M, Xu B, Tsui J, Lin Y, Hirshfield KM, Ambrosone C B, Demissie K, Hong C, Bandera E V, and Llanos A (2019) Factors Associated with Initial Mode of Breast Cancer Detection among BlackWomen in theWomen's Circle of Health ***Hindawi Journal of Oncology*** Volume 2019, Article ID 3529651, 18 pages https://doi.org/10.1155/2019/3529651.

Taleghani F, Kianpour M, and Tabatabaiyan M (2019), Barriers to Breast Self-examination among Iranian Women, ***Iran J Nurs Midwifery Res***. 2019 Mar-Apr; 24(2): 108–112.doi: 10.4103/ijnmr.IJNMR_94_18

Valderrama-Urreta AL, Jiménez-Báez MV, Rodríguez JCE, Sandoval-Jurado L, Reyes-Gabino PT, et al. (2018) Social and Demographics Factors Associated with the Breast Self-Examination (BSE) in Women in Primary Care. J Fam Med Dis Prev 4:081. doi.org/10.23937/2469-5793/1510081

World Health Organization (2014),***Global cancer country profile***. Viewed on 01.04.15,Available at http://www.who.int/cancer/country-profiles/en/.

World Health Organization (2014), ***World Cancer report*** .available Viewed on 03.03.15, http://www.scribd.com/doc/249125578/ World-Cancer-Report-2014#scribd.

World Health Organization (2013), ***Breast cancer: prevention and control***,. Viewed 12.03.16, http://www.who.int/cancer/detection/breastcancer/en/print.html.

Worta M.C.S, (2013), ***Community Oncology and Prevention Trials Research Group, Division of Cancer*** **Prevention** National Cancer Institute, National Institutes of Health.viewed on 03.03.16, https://deainfo.nci.nih.gov › advisory › ctac › archive › Stevens.

Wu TY, Chung S, Yeh MC, Chang SC, Hsieh HF, Ha SJ(2012) Understanding breast cancer screening practices in Taiwan: a country with universal health care. ***Asian Pac J Cancer Prev***. 2012;13(9):4289-4294. doi:10.7314/apjcp.2012.13.9.4289

Yerpude P.N and Jogdand K.S (2013) Knowledge And Practice Of Breast Self-Examination (Bse) Among Females In A Rural Area of South India ***National Journal of Community Medicine*** Volume 4 Issue 2 Apr – June 2013 www.njcmindia.org eISSN 2229 6816 .

Yoo B, Choi K.S, Kyu-Won J, Jun J.K, (2012), Awareness and Practice of Breast Self-examination among Korean Women: Results from a Nationwide Survey ***Asian Pacific Journal of Cancer Prevention***, Vol 13, 2012.

Yucel Sebnem Cinar , Fatma Orgun, Yasemin Tokem, Elif Unsal Avdal, Muzeyyen Demir (2014) Determining the Factors that Affect Breast Cancer and Self Breast Examination Beliefs of Turkish Nurses in Academia ***Asian Pacific Journal of Cancer Prevention***, *Vol 15, 2014 DOI:http://dx.doi.org/10.7314/APJCP.2014.15.3.1275*

APPENDIX I: PARTICIPANT INFORMATION SHEET

Self-introduction

My name is Charity Shilengwe, a student of Master of Science in Community Health Nursing at the University of Zambia. I am holder of a Bachelor of science in Nursing Degree and I have a diploma in Nursing. I am kindly requesting for your participation in a research study.

Title of Study

The title of the study is "Assessing Practice of Breast-Self Examination Among Women On Hormonal Contraceptives In Lusaka, Zambia".

Purpose of the Study

The study will assess BSE practice among women on hormonal contraceptives in order to inform reproductive health policy and to strengthen strategies aimed at facilitating the early detection of breast cancer in Zambia.

Procedure

The study involves a face-to-face interview with the research assistant who will ask you a set of questions using a structured questionnaire and later observe you perform a breast self-examination. The interview and demonstration will take about 30-35 minutes.

Right of Choice

Participation in this study is on a voluntary basis. You have the right to choose to either participate in the study or not to participate. If you are willing to participate, you will be asked to sign a consent form to indicate that you have agreed to participate. If along the way you feel like not continuing, you are free to withdraw from the study and it will not affect your ability to receive health services at this health facility. Similarly, if you choose not to participate in the study, it will not affect your ability to access health services at this health facility.

Guarantee of Confidentiality

The research records and any information you will give will be confidential to the extent permitted by law. They will be kept under lock and key. You will only be identified by a number; your name and address will not appear anywhere on the questionnaire.

Risks and Discomforts

There is no risk involved in this research though part of your time will be utilized to answer some questions. You will need to expose your breasts as you perform the BSE but, all this will be done in a private room with a female researcher who is also a Nurse.

Benefits

The benefit of participating in the study includes receiving of information and learning the steps of performing a BSE. In the event that any abnormality is detected you will be linked to University teaching Hospital for appropriate care.

Contact Details of Principal Investigator

Charity Shilengwe, C/O The University of Zambia, Department of Nursing sciences,

P.O. Box 50110, Lusaka. Cell: 0966721852, 0973045059. Email address: shilengwe.charity@gmail.com

Contact Details of Ethics Committee

The Chairperson, University of Zambia, Biomedical Research Ethics Committee, University of Zambia. P.O. Box 50110, Lusaka.

APPENDIX II: INFORMED CONSENT FORM

INFORMED CONSENT FORM

The purpose of this study has been explained to me and I fully understand the purpose, the benefits, risks and discomforts of the study. I also understand that taking part in this study is purely voluntary. I further understand that even after having agreed to take part in this study, I can at any time withdraw without having to give an explanation.

I.....agree to take part in this study.

Participant's Signature: ..... Date: .....

Researcher's Signature ..... Date: .....

APPENDIX III: QUESTIONAIRE

SN:

THE UNIVERSITY OF ZAMBIA

SCHOOL OF NURSING SCIENCES

TOPIC: ASSESSING PRACTICE OF BREAST-SELF EXAMINATION AMONG WOMEN ON HORMONAL CONTRACEPTIVES IN LUSAKA, ZAMBIA.

DATE OF INTERVIEW: ……

PLACE OF INTERVIEW: …….

NAME OF INTERVIEWER: …….

INSTRUCTIONS TO INTERVIEWER

1. Introduce yourself to the respondent.
2. Explain the purpose of the interview and reasons for undertaking the research
3. Get both verbal and written consent from the respondent and do not force them to be interviewed.
4. Indicate response by ticking in the appropriate space for closed ended questions and indicate responses by filling in the spaces provided for open ended questions.
5. Give the respondent an opportunity to ask questions at the end of the interview.
6. Do not write name of the respondent on the questionnaire.

SECTIONA: DEMOGRAPHIC DATA

Official use

1. How old were you on your last birthday? .....

2. What is your marital status?

Single

Married

Divorced

Widow

Separated

3. What is your religious denomination?

.....

4. What is your highest level of education?

a. No education

b. Primary

c. Secondary

d. College

e. University

5. What do you do for a living?

a. I work for an organization
b. I work for an individual
c. I am a full time house wife
d. I do business
e. I am in school
f. does nothing

6.How much is your monthly income? …….

7. How many children do you have? …….

SECTION B: KNOWLEDGE ON BREAST CANCER

8. Have you heard about breast cancer?
   a. Yes
   b. No
9. What are some of the risk factors of breast cancer?
   a. Being Obese
   b. Taking oral contraceptive pills
   c. Having a blood relative who has or had Breast Cancer
   d. Smoking
10. Do you have any relative who has Breast Cancer?
    a. No
    b. Yes
11. If yes, what is the relationship?

.....

12. What are the signs and symptoms of Breast Cancer?

    i .....

    ii .....

    iii .....

13. What are the methods used to detect Breast Cancer?

i…….

ii…….

iii……

SECTION C: KNOWLEDGE ON BREAST SELF EXAMINATION

14. Do you know what breast self-examination is?
    a. Yes
    b. No

15. What was your major source of information on Breast Self-Examination?

a. Through the Media (TV, radio, internet, posters).

b. Through Friends.

c. Through a Family member.

d. Through the healthcare provider (Nurse, Doctor, Clinical officer

16. At what time of the month (in relation to the menstrual cycle) should BSE be performed? .....

17. At what age should one begin to practice BSE?

a. 20 years

b. 30 years.

c. 40 years

d. I do not know.

18. How often should BSE be carried out?

a. Daily

b. Weekly

c. Monthly

d. Yearly

e. I don't know.

19. Are you able to demonstrate how you perform BSE?

a. Yes

b. No

20. If answer is "No" to question 19 above, state the reason why you are not able to demonstrate.

.....
.....
.....
.....

21. List three benefits of Performing breast self-examination?

……

……

……

……

22. If answer is"yes" to question 19 above, demonstrate how to perform a BSE.

No.	STEPS PERFORMED	YES	NO
1.	Client lies down on the back with a pillow under the right shoulder and right arm under the head.		
2.	Using the finger pads of the left hand palpates the right breast using circular motions.		
3.	Gently squeezes the right nipple to assess for discharge.		
4.	Palpates the right axillary tail and the axilla for enlarged lymphnodes.		
5.	Changes position to have the pillow under the left shoulder and left arm under the head.		
6.	Using the finger pads of the right hand palpates the left breast using circular motions.		
7.	Gently squeezes the left nipple to assess for discharge.		
8.	Palpates the left axillary tail and the axilla for enlarged lymphnodes.		
9.	Client changes position to standing in front of a mirror.		
10.	Client raises hands whilst observing the movement of the breasts in the mirror.		
11.	Client lowers hands on the hips whilst observing the movement of the breasts in the mirror.		

SECTION D: PRACTICE OF BSE

23. How often do you perform BSE in a year?

.....

.....

24. How many times have you performed BSE in the last 3 months?

……

……..

……

25. How many times have you performed BSE in the last 4 weeks?

……

……

……..

26. At what Age did you start performing BSE?

.....

.....

.....

SECTION E: ATTITUDE

Please answer each of the following statements as they apply to you. (Tick the box that best reflects your opinion for each statement; answer even if you have never performed BSE.)

Q. No.	**Question Statement**	**Responses**				
	Scale	I strongly agree	I agree	neutral	I Disagree	I strongly disagree
		5	**4**	**3**	**2**	**1**
27	BSE is important.					
28	BSE Should be done on a regular basis.					
29	Breast cancer can be treated if discovered at an early stage.					
30	It is important for Nurses to ask for a return demonstration from the client after education on BSE.					
31	Conducting BSE is a waste of time.	**1**	**2**	**3**	**4**	**5**

Thank you for your cooperation and participation in this interview.

APPENDIX IV: SCORING GUIDE FOR QUESTIONAIRE

SECTION A: **DEMOGRAPHIC DATA**

1. How old were you on your last birthday? .....
2. What is your marital status? .....
3. What is your religious denomination?
   .....
4. What is your highest level of education?
   .....
5. What do you do for a living?.....
6. How much is your monthly income? …….
7. How many children do you have? …….

Question 1 to Question 7 will not be graded

SECTION B: KNOWLEDGE ON BREAST CANCER

8. Have you heard about breast cancer?
   a. Yes ..... **1 point**
   b. No …….**0 points**
9. What are some of the risk factors of breast cancer?
   a. Being Obese ……**1** point
   b. Taking oral contraceptive pills……**1** point
   c. Having a blood relative who has or had Breast Cancer…**1** point
   d. Smoking ……**1** point

   Maximum points = 5
10. Do you have any relation with Breast Cancer?
    a. No …… **0** point
    b. Yes ……**0** point
11. If yes, what is the relationship? **0** point
12. What are the signs and symptoms of Breast Cancer **1 point** for a correct response?

Maximum points = 3

13. What are the methods used to detect Breast Cancer **1** point for a correct response?

Maximum points = 3

*TOTAL POINTS FOR Question 7 to Question 13 = **12***

SECTION C: KNOWLEDGE ON BREAST SELF EXAMINATION

14. Do you know what breast self-examination is?
    a. Yes …… **1** point
    b. No ……**0** point
15. What was your source of information on Breast Self-Examination?
    a. Through the Media (TV, radio, internet, posters). ..... **1** point
    b. Through Friends. ..... **1** point
    c. Through a Family member. ..... **1** point
    d. Through the healthcare provider (Nurse, Doctor, Clinical officer etc) .... **1** point

    Maximum points = 5

16. At what time of the month (in relation to the menstrual cycle) should BSE be performed? ..... **2** points
17. At what age should one begin to practice BSE?

a. 20 years ……. **2** points
b. 30 years. …… **0** point
c. 40 years ……. **0** point
d. I do not know. ……**0** point

18. How often should BSE be carried out?
    a. Daily ……**0** point
    b. Weekly …… **0** point
    c. Monthly ……. **2** points
    d. Yearly ……. **0** point
    e. I don't know… **0** point
19. Are you able to demonstrate how you perform BSE?
    a. Yes ..... **1** point
    b. No ..... **0** point
20. If answer is "No" to question 35 above, state the reason why you are not able to demonstrate. **No** point

TOTAL POINTS FOR Question 13 to Question 19 =13

21. List three benefits of Performing breast self-examination? ..... **5** points for each correct response. **Maximum points = 15**

TOTAL POINTS FOR Question 20 = 15

22. If answer is "yes" to question 35 above, demonstrate how to perform a BSE.

	STEPS PERFORMED		
	Client lies down on the back with a pillow under the right shoulder and right arm under the head.		
	Using the finger pads of the left hand palpates the right breast using circular motions .		
	Gently squeezes the right nipple to assess for discharge.		
	Palpates the right axillary tail and the axilla for enlarged lymphnodes.		
	Changes position to have the pillow under the left shoulder and left arm under the head.		
	Using the finger pads of the right hand palpates the left breast using circular motions.		
	Gently squeezes the left nipple to assess for discharge.		
	Palpates the left axillary tail and the axilla for enlarged lymphnodes.		
	Client changes position to standing in front of a mirror.		
	Client raises hands whilst observing the movement of the breasts in the mirror.		
	Client lowers hands on the hips whilst observing the movement of the breasts in the mirror.		

TOTAL POINTS for Question 22 = 11

SECTION D: PRACTICE OF BSE

23. How often do you perform BSE in a year? …….. **1** point per 1 frequency , **Maximum points = 12**
24. How many times have you performed BSE in the last 3 months … **1** point per correct frequency per month? **Maximum points = 3**
25. How many times have you performed BSE in the last 4 weeks ….. **1**point for a frequency of once. **Maximum points = 1**
26. At what Age did you start performing BSE? …. **1** point for a range of 20-25 years.

*TOTAL POINTS FOR QUESTION 22 TO QUESTION 25 = **17***

SECTION C: ATTITUDE

Please answer each of the following statements as they apply to you. (Tick the box that best reflects your opinion for each statement; answer even if you have never performed BSE.)

		Responses				
#	**Question Statement**	I strongly agree	I agree	neutral	I Disagree	I strongly disagree
		5	**4**	**3**	**2**	**1**
27	BSE is important.					
28	BSE Should be done on a regular basis.					
29	Breast cancer can be treated if discovered at an early stage.					
30	It is important for Nurses to ask for a return demonstration from the client after education on BSE.					
31	Conducting BSE is a waste of time.	**1**	**2**	**3**	**4**	**5**

*TOTAL POINTS FOR QUESTION 27 TO QUESTION 31 = **25***

APPENDIX V: INFORMATION SHEET FOR FOCUS GROUP DISCUSSION

INFORMATION SHEET FOR THE FOCUS GROUP DISCUSSION

PURPOSE OF THE STUDY

You have been asked to participate in a focus group discussion aimed at gaining an insight into your lived experience of ***breast self-examination practices among women on hormonal contraceptives***. This study is undertaken in partial fulfilment of my postgraduate studies at University of Zambia. The purpose of the focus group discussion is to try and understand why some women do or do not conduct Breast self-examination on themselves. The information learned in the focus groups will be used to modify the existing reproductive health policy as we focus on the early detection of Breast Cancer and improvement of the reproductive health service provision to women.

You are free to choose to either participate or decline from participating in the FGD. Even when you consent you can withdraw at any time during the process of the group discussion whenever you wish to do so without any explanations. There are no right or wrong answers during the FDG. We would want everyone to participate in the discussions and everyone's submission is respected and valued. So, I expect to hear and document everyone's viewpoints on the subject. The discussion will last between 30 – 45 minutes and be recorded on a cassette recorder. Although the FGD will be tape recorded, your responses will remain anonymous and no names will be mentioned in all that will be transcribed or reported. You are encouraged to give honest responses even when your responses may not be in agreement with the rest of the group.

Procedure

I will be leading the discussion in which you will be asked to share experiences and views about the topic with other members of the group.

Contact Details of Principal Investigator

Charity Shilengwe, C/O The University of Zambia, Department of Nursing sciences,

P.O. Box 50110, Lusaka. Cell: 0966721852, 0973045059. Email address: shilengwe.charity@gmail.com

Contact Details of Ethics Committee

The Chairperson, University of Zambia, Biomedical Research Ethics Committee, University of Zambia. P.O. Box 50110, Lusaka.

APPENDIX VI: CONSENT TO PARTICIPATE IN FOCUS GROUP DISCUSSION

The purpose of this focus group discussion has been explained to me and I fully understand the benefits and discomforts. I also understand that taking part in this focus group discussion is purely voluntary. I further understand that even after having agreed to take part in this discussion, I can at any time withdraw without having to give any explanation.

I ..... do agree to participate in the focus group discussion.

Participant's Signature: ..... Date: .....

Researcher's Signature ..... Date: .....

APPENDIX VII: DEMOGRAPHIC DATA COLLECTION FORM FOR FOCUS GROUP PARTICIPANTS

DEMORGRAPHIC DATA FOR FOCUS GROUP DISCUSSION		
DATE..... TIME ..... PLACE		
What is your Age? ○ 20 - 30 ○ 31 – 40 ○ 41 – 50 ○ 51 – 60.	What is your marital status? ○ Married ○ Single ○ Divorced ○ Widowed.	What do you do for a living? ○ A professional ○ Housewife ○ Business woman ○ Nothing.
What is your level of education? ○ Primary School. ○ Secondary School. ○ College. ○ University ○ Not been to School.	How long have you been on Hormonal contraceptives? ○ 1 - 3 years ○ 4 – 6 years ○ 7 – 9years ○ >10years.	What family planning method are you currently on? ○ Combined oral contraceptives. ○ Progesterone only contraceptives. ○ Hormonal Implant. ○ Injectable contraceptives.

APPENDIX VIII: FOCUS GROUP DISCUSSION INTERVIEW GUIDE

INTERVIEW GUIDE

Place: …… Number of informants……

Date……... Duration:……..

Language used during discussion……

WELCOME REMARKS AND INTRODUCTIONS

Thank you for agreeing to be part of the FGD. We appreciate your willingness to participate. The Moderator and assistant moderator introduce themselves to the group.

PURPOSE OF THE FOCUS GROUP DISCUSSION

You have been asked to participate in a focus group discussion aimed at collecting data on a research on ***Assessing breast self-examination practices among women on hormonal contraceptives***. The purpose of this focus group discussion is to try and understand why some women do or do not practice Breast self-examination.

GROUND RULES

In order to foster the discussion, these rules will be observed by the group.

i. Only one person should speak at a time in the group.
ii. Group members should respect each other's opinion.
iii. In respect for each other, let us keep the responses made by all participants confidential.

QUESTIONS

1. Do you understand why you should conduct BSE on yourself monthly on a regular basis?
2. Are there social, cultural and traditional beliefs and norms that stop (inhibit) you from practicing BSE?
3. How do you feel about yourself when you conduct BSE on yourself?
4. Share with us how you feel about yourself when you do not conduct BSE on yourself do? (PROBE)
5. Do you have any comments you would like to add on the subject?

Thank you very much for participating in this discussion. If you have any questions please do not hesitate to contact me using the address already given.

P. O. Box 50827
Lusaka
Tel: +260-211-235554
Fax: +260-211- 236429

In reply please quote

No.....

REPUBLIC OF ZAMBIA

MINISTRY OF HEALTH
LUSAKA DISTRICT HEALTH OFFICE

16th October 2017

Charity Shilengwe (Ms)
The University of Zambia
School of Medicine
P. O. Box 50110
LUSAKA

Dear Ms. Shilengwe,

RE: AUTHORITY TO CONDUCT RESEARCH IN LUSAKA DISTRICT

We are in receipt of your letter over the above subject.

Please be informed that Lusaka District Health Office has no objection for you to conduct research on **"Assessing practice of breast-self examination among women on hormonal contraceptives in Lusaka, Zambia".**

Kindly ensure that your findings are shared with the health facility and District Health Office and that the normal operations of the facility are not disrupted.

By copy of this letter, the Medical Officer/In-Charges for Bauleni, Mtendere, Kalingalinga and Kaunda Square Health facilities are kindly requested to facilitate accordingly.

Yours sincerely

Dr. Khozya Zyambo
Senior Clinical Care Officer
For/DISTRICT HEALTH DIRECTOR

C.C: The Medical Officer/In-Charge: Bauleni Health Centre
C.C: The Medical Officer/In-Charge: Mtendere Health Centre
C.C: The Medical Officer/In-Charge: Kalingalinga Health Centre
C.C: The Medical Officer/In-Charge: Kaunda Square Health Centre

THE UNIVERSITY OF ZAMBIA

BIOMEDICAL RESEARCH ETHICS COMMITTEE

Telephone: 260-1-256067
Telegrams: UNZA, LUSAKA
Telex: UNZALU ZA 44370
Fax: + 260-1-250753
E-mail: unzarec@unza.zm
Assurance No. FWA00000338
IRB00001131 of IORG0000774

Ridgeway Campus
P.O. Box 50110
Lusaka, Zambia

9th October, 2017.

Your Ref: 003-06-17.

Ms. Charity Shilengwe,
University of Zambia,
School of Nursing Sciences,
P.O Box 50110,
Lusaka.

Dear Ms. Shilengwe,

RE: RESUBMITTED RESEARCH PROPOSAL: "ASSESSING THE PRACTICE OF BREAST-SELF EXAMINATION AMONG WOMEN ON HORMONAL CONTRACEPTIVES IN LUSAKA, ZAMBIA" (REF. 003-06-17)

The above-mentioned research proposal was presented to the Biomedical Research Ethics Committee on 21st September, 2017. The proposal is approved.

CONDITIONS:

- This approval is based strictly on your submitted proposal. Should there be need for you to modify or change the study design or methodology, you will need to seek clearance from the Research Ethics Committee.
- If you have need for further clarification please consult this office. Please note that it is mandatory that you submit a detailed progress report of your study to this Committee every six months and a final copy of your report at the end of the study.
- Any serious adverse events must be reported at once to this Committee.
- Please note that when your approval expires you may need to request for renewal. The request should be accompanied by a Progress Report (Progress Report Forms can be obtained from the Secretariat).
- Apply in writing to National Health Research Authority for permission before you embark on the study.
- **Ensure that a final copy of the results is submitted to this Committee.**

Yours sincerely,

Prof. M.C Maimbolwa PhD
CHAIRPERSON

Date of approval: 9th October, 2017.

Date of expiry: 8th October, 2018.