ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCE

SCHOOL OF PUBLIC HEALTH

Knowledge, Attitude and Practice towards Breast cancer and Breast cancer screening among female Health Professionals in Addis Ababa

A thesis submitted to the School of Graduate Studies of Addis Ababa University in partial fulfillment of the requirements for the Degree Masters of Public Health

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List of Abbreviations

BC - Breast Cancer

BCS - Breast Cancer Screening

BSE - Breast Self-Examination

CBE - Clinical Breast Examination

FHP - Female Health Professionals

KAP - Knowledge, Attitude and Practice

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ABSTRACT

Introduction

Breast cancer is the most common cancer in most part of Africa and in Ethiopia as well. Provider's recommendation about breast cancer screening is basic for initiating clients to screen for breast cancer. Previous studies conducted among health professionals working in governmental hospitals showed that health care providers' knowledge about breast cancer and breast cancer screening was satisfactory. To provide a more representative sample of primary healthcare providers, who are the first in contact with clients making them essential to early diagnose breast cancer.

Objective

The aim of this study is to assess the knowledge attitude and practice of breast cancer and breast cancer screening among female health professionals working in primary health care centers of Addis Ababa Ethiopia.

Methodology

This study is conducted among female health professionals working in twenty one health centres of Addis Ababa using institution based cross sectional study design from March-April 2016. Data was collected using interview based questionnaire to evaluate socio-demographic status, knowledge of risk factors, signs and symptoms, and screening methods, attitude towards breast cancer screening and practices of breast cancer screening methods. Which was analyzed using SPSS**.** Epi-data version 3.1 was applied for data entry and SPSS version 20 was used for analysis of the quantitative data as well descriptive statistics, numerical summary measures, frequencies, proportions, distributions was used to check for normality and also diagrams for describing the study population in relation to relevant variables. Then cross tabulation of each independent variable with the dependent variable with 95% confidence interval was used. Statistical significance was declared at p-value 0.05 and the predictors of outcome variable was identified accordingly. Those variables associated at bivariate logistic regression with significance level

(p=0.2) were entered into multiple logistic regression to identify important determinants by controlling possible confounding effect.

Result

All of the participants have heard about breast cancer. 127(30.3%) of them are knowledgeable, two hundred thirty four (55.8%) of the participants had positive attitude towards breast cancer and breast cancer screening. Among those who heard about breast cancer 298 (71.1%) mentioned that they self examine their breast at list once in their life time, 35 (8.4%) said they had undergone breast examination by clinicians and only eleven mentioned that they had mammographic screening. Age and Level of education were significantly associated with Knowledge of the FHP towards breast cancer and breast cancer screening. Level of education, marital status and knowledge were significantly associated with attitude after controlling possible confounding factors.

Conclusion and Recommendation

This study has revealed that the knowledge towards breast cancer and breast cancer screening was low among FHP working in primary health care centers of Addis Ababa. Regular practices of breast cancer screening as per the standard was also lower among FHP. In order to solve this issue standard screening guide line and trainings needs to be prepared and implemented to increase awareness of health professionals.

1. INTRODUCTION

1.1 Background

Breast cancer is a major life-threatening public health problem of great global concern. [1] Increase in the incidence of this disease is being observed in both industrialized and developing countries. Breast cancer is the most prevailing cause of cancer morbidity and mortality among women in most parts of the world. [2] It is the leading type of cancer in women and is the most common cancer among women in many parts of Africa. [3]

Breast cancer is a malignant tumor that starts in the cells of the breast. A malignant tumor is a group of cancer cells that can invade surrounding tissues or spread (metastasize) to distant areas of the body. The disease occurs almost entirely in women, but men can get it, too. [1]

Cancer starts when cells begin to grow out of control. Cells in nearly any part of the body can become cancer, and can spread to other areas of the body [1].The worldwide burden of cancer rose to an estimated 14 million new cases per year in 2012, a figure expected to rise to 22 million annually within the next two decades. Over the same period, cancer deaths are predicted to rise from an estimated 8.2 million to 13 million annually. Globally, in 2012 breast cancer was the most common cancer diagnosed (1.7 million, 11.9%). [4]

The causes of breast cancer are not fully known. However, researchers have identified a number of factors that increase one's chances of getting breast cancer. These are called risk factors. Risk factors do not cause breast cancer, but can increase the chances of getting breast cancer. Some women may have many risk factors, but never get breast cancer. And, some women have few or no risk factors, but do get the disease. [5]

Breast cancer Screening is the systematic application of a screening test in a presumably asymptomatic population. It aims to identify individuals with an abnormality suggestive of cancer. Breast cancer screening includes breast self-examination (BSE), clinical breast examination

(CBE), and mammography. CBE and mammography require hospital visit and specialized equipment and expertise whereas BSE is an inexpensive tool that can be carried out by women themselves. [6] Although several studies undertaken to assess the value of screening by mammography demonstrated a substantial reduction in rates of death from breast cancer (about 25%-30%). [7]

Knowledge and attitude of healthcare providers about breast cancer and breast cancer screening play a significant role in awareness creation and information dissemination. Studies have shown that knowledgeable healthcare professionals who have positive attitude educate women and practice CBE more than those who have limited knowledge and negative attitude. [8]

1.2 Statement of the problem

Breast cancer is the most frequently diagnosed and the most common cause of cancer death among women worldwide. [9] Long term increases in the incidence of the disease are being observed both in the industrialized and developing world. [10]. Although Incidence rates remain highest in more developed regions, but mortality is relatively much higher in less developed countries due to a lack of early detection and access to treatment facilities. [4]

Risk reduction to breast cancer might be achieved with prevention but these strategy alone cannot eliminate the majority of breast cancers that develop in low and middle income countries. Therefore, the key strategy in reducing breast cancer related mortality, improving breast cancer outcome and survival is screening to early detect and manage breast cancer. This is very important because an excellent prognosis is directly associated with the stage at which the tumor is initially detected and how localized the lesion is. Early diagnosis usually results in successful treatment before metastasis and signifies a better outcome. [11]

Studies indicated that the Knowledge, Attitude and Practice (KAP) of women on breast cancer screening and the health care system presents a number of challenges for early detection of breast cancer, little emphasis is given to the control and prevention; diagnosis and treatment services. [12]

1.3. Rationale of the study

In Ethiopia, health centers are the first contact units of the health care system and are mainly staffed with Health officers, nurses, and midwives. They are responsible for providing preventive and curative services for the public. Provider's recommendation about breast cancer screening is basic for initiating clients to screen for breast cancer. In order to evaluate cases and recommend about screening providers must have the appropriate knowledge and positive attitude about breast cancer and the screening methods. [12]

A previous study conducted among female health professionals working in governmental hospitals showed that health care providers' knowledge about breast cancer and breast cancer screening was satisfactory. (13) In another study done among Nurses in university hospitals of Addis Ababa only 57.8% of them were knowledgeable about breast cancer and screening methods (14); however these studies were conducted in referral hospitals of Addis Ababa. To provide a more representative sample of primary healthcare providers, who are the first in contact with clients making them essential to early diagnose breast cancer, this study aimed at assessing primary health care providers' knowledge and attitude about breast cancer and breast cancer screening.

Therefore the results of the study helps to design appropriate intervention strategies, providing a convenient programmatic approach to address the late diagnosis of the disease and the consecutive complications. And also it's helpful in providing information as baseline for future studies.

2. LITERATURE REVIEW

2.1. The magnitude of breast cancer

In 2012, 1.7 million women were diagnosed with breast cancer. Since the 2008 estimates, the incidence has increased by more than 20%, while mortality has increased by 14%. Breast cancer is also the most common cause of cancer death among women (522 000 deaths in 2012) and the most frequently diagnosed cancer among women in 140 of 184 countries worldwide. It now represents one in four of all cancers in women. [4]

Incidence rates remain highest in more developed regions, but mortality is relatively much higher in less developed countries due to a lack of early detection and access to treatment facilities.
In Western Europe, breast cancer incidence has reached more than 90 new cases per 100 000 women annually, compared with 30 per 100 000 in eastern Africa. In contrast, breast cancer mortality rates in these two regions are almost identical, at about 15 per 100 000, which clearly points to a later diagnosis and much poorer survival in eastern Africa. [4]

Breast cancer incidence varies between countries; the highest rates occur in the United States and Canada and, the lowest rate is found in Asia. Breast cancer survival rates vary greatly worldwide, ranging from 80% or over in North America, Sweden and Japan to around 60% in middle-income countries and below 40% in low-income countries. [15]

Breast cancer was the most common malignancy ranging from 16.1% Oman to 35.4% in Bahrain. The age-standardized incidence rate per 100,000 was highest in Bahrain (46.4), followed by Kuwait (44.3), Qatar (35.5), United Arab Emirates (19.2), Oman (14.4) and Saudi Arabia (12.9). These rates are low compared with western countries. [16]

Data from South Africa's National Cancer Registry (NCR) show breast cancer as the leading cancer among women. South African women have a 1 in 29 lifetime risk of developing breast cancer. The age-standardized incidence rate of 30.6 per 100,000 populations. These rates vary by

race, with Black women having the lowest (16.3) and White women the highest (69.4) rates of breast cancer diagnosis. [16]

Breast cancer is the third commonest cancer in Ugandan after cervical cancer. Breast cancer incidence in Uganda is 22: 100,000. Five-year survival rate is 56%. In Nigeria, the incidence of breast cancer is 33.6/100,000. [14] In Egypt, breast cancer is the most frequently diagnosed cancer among women, and it comprises 25.5% of all cancers in that country. [17]

Breast cancer is the second most prevalent malignancy accounting for 27.8% of all cancer cases referred to the hospital. [18] It is the second most often occurring cancer next to cervical cancer among women in Ethiopia. Around 10,000 Ethiopian women and men have breast cancer with thousands of more cases unreported as women living in rural areas often seek treatment from traditional healers before seeking help from medical centers. [19]

2.2. Breast Cancer Screening Methods

Breast self-examination is a screening method used to detect early breast cancer which involving the woman herself looking at and feeling each breast for possible lumps or swelling. BSE is a simple, inexpensive procedure which helps a woman to detect changes in the breast; such as breast masses or lumps. Although BSE is a simple and cost-free procedure, many women either perform it incorrectly or not at all. [20]

Clinical breast examination by physicians is also widely practiced and advocated for women of all ages. Women in 20s up to 30s should have a CBE as part of a routine health exam by a health professional preferably every 3 years. Starting at age 40, women should have a CBE by a health professional every year. [21]

Screening mammography is the other kind of screening methods by taking x-ray picture of the breasts. It is promoted as the key to the continued reduction in breast cancer mortality through early detection. Organizations like the National Cancer Institute (NCI), the American Cancer

Society (ACS), and the American College of Radiology, recommend women aged 40 and older should have a mammographic examination every year and should continue to do so for life. [21]

2.3. Socio demographic factors

The research done in southern Turkey showed that the mean age in the group of women who claimed to have enough information was 35.8 years and 33.8 years in the other. There was also a statistical significance in the sufficiency of the knowledge of married teachers compared to singles and of the over 40 year old group when compared to <40 year old groups. The average age of those performing BSE was 36.4 years while it was 32.4 years in the none-performing group. The average age in those performing BCE was 38.3 years while it was 32.8 years in the other. Similarly, there was a significance in performing BSE and having CBE in the married vs. single and over 40 year old vs. < 40 year old groups. [22]

On a study done in Nigeria, the mean score of the knowledge of the participants was rather low (42.3% ± 12.3). Only 229 participants (22.9%) scored 50% and above. Performance was found to be significantly related to level of education and occupation. Among 739 participants it was found that majority of the participants with primary school education (163 [84.9%]) scored below 50.0%. Two hundred and eighty-one participants (76.6%) with secondary education had scores below 50%. Of those with Polytechnic education, 47.3% scored below 50.0% while 43.8% of those with University education had scores below 50.0%. Participants engaged in self-employed small businesses such as trading and hair dressing and secretarial jobs had significantly poorer scores compared with those employed in professional jobs such as sales, teaching, and nursing. [23]

According to a research done in Addis Ababa Ethiopia Marital status was the only variable statistically associated with study participants' practice of BSE. Age, marital status, educational level, type of profession and work experience had association with study participants' practice of CBE. Age, marital status, educational level, work experience and type of profession were statistically associated with study participants' practice of mammography. [13]

2.4. Knowledge and Attitude regarding Breast cancer and Breast cancer screening

Study done in Tanta University in Egypt showed that 35.2%, 14.7% and 35.9% of studied group had no information regarding cause and risk factors, early manifestation and methods of early detection of breast cancer. On the other hand, 80.9%, 65% and 60.3% of studied group neither had information regarding prescribing steps nor age of start or periodicity of breast self-examination. Nearly one half had no information regarding methods of treatment of breast cancer and 44.9% had no information regarding preventive measures of breast cancer. [24]

Research in Saudi Arabia identified the knowledge of BC risk factors 82.2% of the participants identified increasing age as a risk factors while 91.9% recognized family history of breast cancer as BC risk factor. Other risk factors are recognized by less than 60% of the participants. The least recognized risk factor was being non married 48.8%. More than 86% participants were aware of sign and symptoms that may be suggestive of BC. About 96%were aware of the importance of mammography as a screening method for breast cancer and 84.6% knew that the recommended age to start annual screening by mammography is 40. Ninety percent believe BSE is an effective tool for BC diagnosis. Around 71% believed that regular CBE should be started at the age of 40 and annually. [25]

According to research done in government hospitals of Addis Ababa shows that among female health professionals responding to questions on breast cancer risk factors 84.3% knew that a high-dose radiation to chest was a risk factor for the development of breast cancer followed by smoking 81.1%, sex 79.1% and positive family history 77.3%. Least recognized risk factors were early onset of menarche 39.0%, first child at late age 45.3% and late menopause 50.7%. Overall assessment of their knowledge revealed that 30.7% had excellent knowledge of risk factors, 26.5% possessed very good knowledge, and 27.8% had good knowledge while 15.0% had poor knowledge about the risk factors for breast cancer assessed. Only 12.0% of participants were able to identify all as risk factors. 77.6% respondents were aware of BSE as a screening method. Mammography was mentioned as a screening method by 81.4% and the least mentioned screening method by the participants was CBE which was known by 71.4% respondents. A total of 62.9%

participants were aware of all three methods of screening, 7.4% were aware of two screening methods, 27.1% were aware of one screening method while 2.6% were unaware of none of the breast cancer screening methods. [13]

On a study done in Riyadh, Saudi Arabia 91% have advised at least one families to undergo BC screening. About 85% believe that BC can be diagnosed by primary health care physician. About two third of the study cohort thought that their patients know about BC screening. Less than half (45.5%) were subscribed one international medical journal and only 59%were aware about Saudi guideline for BC management. [25]

In a study done in Tigray most of the study subjects, 424 (55.5%) believed that breast cancer is not curable disease, and 465 (63.8%) believed that long time survival (> 5 years) after breast cancer. Majority of the participants 606 (79.7%) replied that, they will consult a doctor if they developed breast lumps, while only 285 (37.50%) said that they will agree to do Mastectomy if deemed necessary. Majority of the participants, 612(80.5%), replied that they would allow a male doctor to examine their breast, while 148 (19.5%) said they will not allow a male doctor to examine their breast. Participants were asked about their perceived risk of breast cancer. Accordingly, 459 (60.4%) replied that they don't know their perceived risk. While another 77 (10.1%) said that they are not at risk of developing breast cancer at all. [6]

Many studies have examined the role of health professionals such as physicians and nurses in promoting breast cancer screening. And it is shown that one of the strongest incentives for women to obtain breast cancer screenings is the recommendation of their physicians. And it has also been shown that for health workers to be effective as educators they must possess the appropriate knowledge, attitude and beliefs towards breast cancer screening. [26]

2.5. Breast Cancer Related Practices

On a Research in Pakistan a total of 28.3% women knew about breast self-examination (BSE) and of these 97.4% practiced it. Out of the 600 females who did not practice BSE, main reason was lack of knowledge 46.1%. 22% of the females said that they do not perform BSE as they don't

have a breast complaint, 21.8% thought that there was no need for BSE. The rest 10% gave other reasons. Among all of the participants 12.7% had undergone breast examination by a doctor. Of these 56.1% had clinical breast examination when they had a breast complaint, 16.1% during pregnancy 3.8% for infertility work up and 20% for other reasons. The practice of regular breast examination was noted in 3.8% females. Breast screening investigations usage was reported by 4.6% females. Of these 36.8% had undergone mammography. [27]

On a study From Turkey, although 81.3 % of the group reported performing BSE, only 27.3 % reported doing so monthly or once per menstrual cycle. The rate of doing BSE regularly was higher in physicians compared with nurses/midwives. The most common reasons for not doing BSE was the belief that it was not necessary and neglect (45.8 %), an idea of not having cancer in themselves (15.7%) and fear (13.3%). The rate of having a mammography at least once was 10.1% and rate of having a CBE among the health professionals was 24.8 %. The rate of having a CBE above 30 years of age (27.4%), was the same as those under the age 30 (%19.6). Mammography rate among health personnel under the age of 40 (4.6%) was less than those above 40 years of age. The most common reasons for not going for clinical examination were lack of knowledge and the belief that it was not necessary (34.0 and 36%, respectively). [28]

Research done in Lagos among Nurses identified that self-breast examination was most frequently done (89%), with 39% conducting this procedure at monthly intervals. A total of 130 (64%) participants made use of at least one method while only 13 (6%) made use of all three methods of screening. However, participants who were knowledgeable (50/155) underwent clinical breast examination more frequently than those who are not (8/49, p=0.04). This was not the case for self-breast examination or mammography. Use of all three methods was found to be more common among those who had a greater knowledge about breast cancer. [8]

Research done in government hospitals of Addis Ababa revealed that majority of the respondents, 75.1% practiced BSE followed by CBE and mammography which was 32.5% and 16.0%. 35.5% of the study participants. In this study 35.5% said BSE should be performed once in a month, 24.2% once in a week, 7.8% once in three months, 4.8% once in 6 months, 4.5% once in a year,

16.7% did not know the frequency of practicing BSE and 6.6% mentioned different times of performing BSE. 57.4% of the FHPs started practicing BSE at an age less than 25 years,21.6% started from 25 to 30 years of age, 8.0% started from 31 to 35 years of age and 13.0% started from the age greater than 35 years. In relation to CBE 19.5% of the respondents said it should be practiced monthly, 25.9% once in a year, 25.9% every three months, 5.2% once in three years and 23.6% do not know how often CBE should be done until a woman should reach 40 years. Looking at the knowledge of participants on frequency of mammographic screening, 46.2% said once in a year, 21.9% every six months, 7.7% once in two years, 5.2% once in three years and 19.1% mentioned different times. 21.8% reported mammography should be started at the age of 35, 19.3% at the age of 30,13.4% at the age of 40, 5.0% at the age of 45 and 40.6% did not know when to start. Marital status was the only variable statistically associated with study participants' practice of BSE. Age, marital status, educational level, type of profession and work experience had association with study participants' practice of CBE. Age, marital status, educational level, work experience and type of profession were statistically associated with study participants' practice of mammography. [13]

3. OBJECTIVE

3.1 General Objective

- To assess the knowledge Attitude and practices of women health professionals 20 years and above towards breast cancer and breast cancer screening in primary health care centers of Addis Ababa, Ethiopia.

3.2. Specific objectives

- To assess the knowledge of women health professionals on breast cancer and breast cancer screening in primary health care centers of Addis Ababa, Ethiopia.
- To assess the Attitude of women health professionals on breast cancer and breast cancer screening in primary health care centers of Addis Ababa, Ethiopia.
- To assess the practices of women health professionals on breast cancer screening in primary health care centers of Addis Ababa, Ethiopia.
- To assess the factors associated with the knowledge, attitude and BSE practice of FHP in primary health care centers of Addis Ababa, Ethiopia.

4. METHODOLOGY

4.1. Study area

The study was conducted in Addis Ababa city administration in twenty one randomly selected health centers. Addis Ababa is the capital city of Ethiopia as well as the seat of the African Union. The city covers an estimated area of 174.4 square kilometers and has an estimated density of 5,535.8 people per square kilometer. Based on 2007 figures from the Central Statistical Agency of Ethiopia, the Addis Ababa Region has an estimated total population of 3.55 million as projected for the year 2014. The number of females in reproductive age group constitutes 35.5% of total population. [29]

The city has ten sub-cities and 116 weredas. There are 5 hospitals owned by Addis Ababa health bureau, 4 by Federal Ministry of Health and 1 by Addis Ababa University, 3 by non-governmental Organization, 3 by defense force and police and 34 by private owners. There are 96 public health centers and around 700 private clinics out of which 75 are higher clinics. [30]

Addis Ababa city is selected because it accommodates people with different cultural backgrounds, norms and values and it has a considerable diversity of socio-demographic status.

4.2. Study Period

The study was conducted on March-April, 2016.

4.3. Study design

A facility based cross-sectional study design was employed. Data was collected from female health professionals of diploma and degree level working in the health centers on March-April 2016.

4.4. Source population

The source population for this study is all female health professionals working in primary health care centers of Addis Ababa, Ethiopia.

4.5. Study population

The study population was the sample women who are above 20 years and who are working in the twenty one primary health care centers at the time of data collection.

4.6. Sample size determination

The sample size was determined using single population formula considering 95% confidence intervals, and 5% marginal error. On a research done to assess of knowledge of breast cancer and screening methods among nurses in university hospitals in Addis Ababa 58% of the participants were knowledgeable so taking P value to be 0.58 sample size was calculated using single population formula and was found to be 370. Also on a research done to assess knowledge about breast cancer risk factors, breast Screening method and practice of breast screening among female healthcare professionals working in governmental hospitals of Addis Ababa 75.1% practice BSE. Sample size was calculated taking P value to be 0.75 and was found to be 285. However, an estimates of FHPs having positive attitude was not available for Addis Ababa, it was assumed that 50% of the FHPs had positive attitude and sample size was calculated to be 384. on a research done to assess knowledge about breast cancer risk factors, breast Screening method and practice of breast screening among female healthcare professionals working in governmental hospitals of Addis Ababa marital status was significantly associated with BSE practice of FHP.40% of married women practice BSE, taking p value to be 0.4 sample size was calculated to be 323 using epi-info. Taking the larger sample size and including 10% to compensate for non-respondents a total of 423 FHPs were taken as a sample for this study.

Table 1: Sample size determination for the study of knowledge attitude and practice of breast cancer and breast cancer screening, Addis Ababa, Ethiopia, 2015

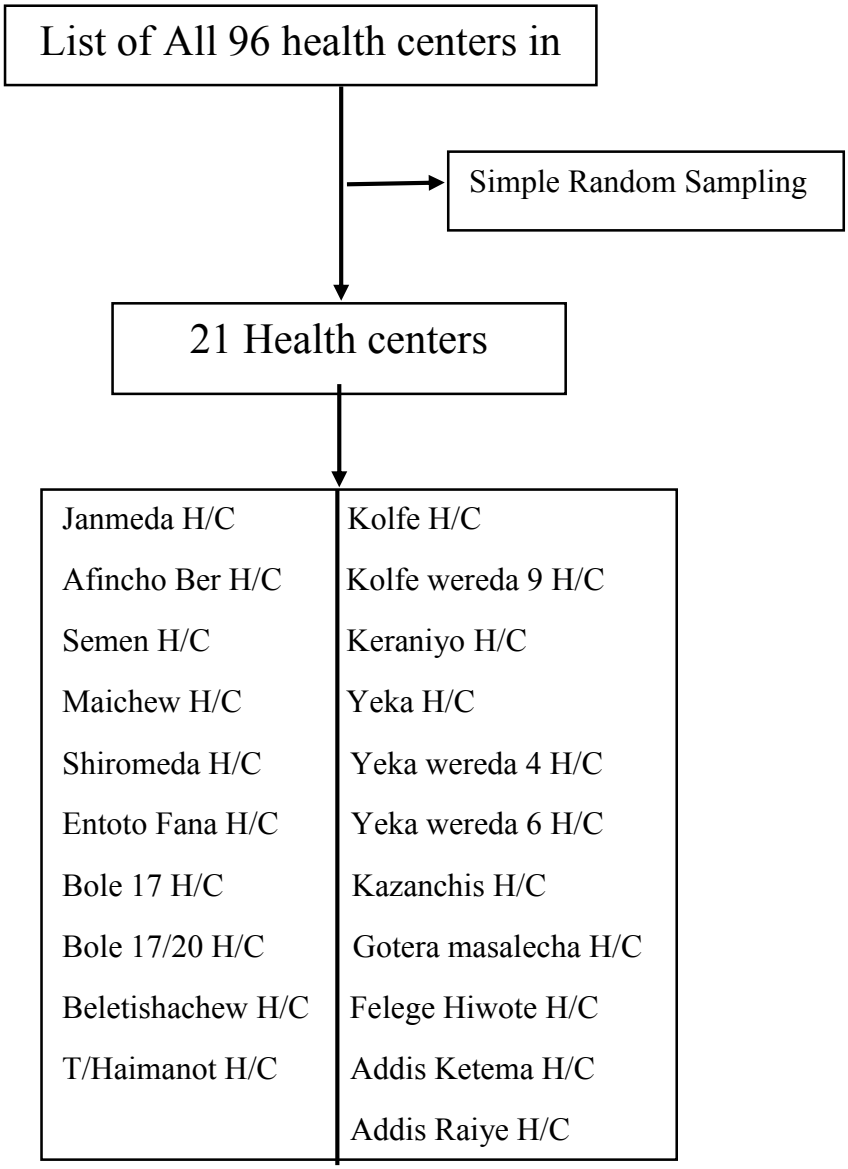
Variables	Proportion from the study	Sample size calculation	Sample size

Knowledge	58% Assuming 10% non respondent rate	$n= \frac{(z /2)^2 P(1-p)}{d^2}$, 95% CI, P=58%, 10% non response rate, 5% margin of error	407
Attitude	P=50%	$n= \frac{(z /2)^2 P(1-p)}{d^2}$, 95% CI, P=50%, 10% non response rate, 5% margin of error	422
Practice	p=75.1	$n= \frac{(z /2)^2 P(1-p)}{d^2}$, 95% CI, P=75.1%, 10% non response rate, 5% margin of error	313
Marital status	p=40%	(0R=2.0), 80% power to detect the difference, 95% confidence level,10% non response rate	355

4.7. Sampling procedures

Sampling will focus on governmental health centers. These are preferred because they are the first level of health care provision centers where clients get primarily health care services and are mainly engaged in preventive strategies. There are 96 health centers in Addis Ababa city 21 health centers are randomly selected from the list of total number of health centers considering that there will be at list 20 female health professionals in each health centers. All female health professionals in the sample health centers found at the time of data collection will be taken as study participants.

Figure 1. Schematic presentation of the sampling procedure used in the study Addis Ababa, Ethiopia, 2015/16



4.8. Variables

Independent variables

- ✓ Socio-demographic variables: age group, profession, level of education, marital status, work experience.
- ✓ Personal history of breast cancer
- ✓ Family history of breast cancer

Dependent variable

- ✓ Having good or poor knowledge on breast cancer and breast cancer screening
- ✓ Having positive or negative attitude towards breast cancer and breast cancer screening
- ✓ Practicing or not practicing of BSE

4.9. Operational definitions

Health Professionals: Health Officers, Nurses, Midwives**.**

Screening: is examination used to find a disease, such as cancer, in people who do not have any symptoms.

Breast Self-Exam (BSE): is examination done by a woman of her breast to check for lumps, or other changes.

Clinical Breast Examination (CBE): is examination of breast done by a health professional to check for lumps or other changes.

Mammography: The use of X-rays to create pictures of the breast.

Good knowledge: The knowledge of the breast and breast cancer screening were assessed using 35 point knowledge score. The respondents were asked a total of 12 multiple questions on knowledge that carried a total of 35 correct responses. Each correct response was given a score of 1 and wrong responses a score of 0. Total points to be scored were 35 and the minimum was

0. Points were risk factors for breast cancer, breast cancer sign and symptoms, treatment options, curable stage, types of screening, screening age, screening frequency, appropriate time to perform BSE and use of mammography.

The score for knowledge were categorized in two groups good and poor. Good knowledge categorized for the value greater than or equal to mean value and poor knowledge for the value less than mean value.

Positive attitude: Attitude was assessed by 9 questions put on Likert's scale. The questions on Likert's scale had positive and negative responses that ranged from strongly agree, agree, neutral, disagree and strongly disagree. The scoring system used with respects to respondents' responses was as follows: strongly agree scored 5, agree 4, neutral 3, disagree 2, strongly disagree 1. The responses were summed up and a total score was obtained for each respondent. The mean score was calculated and those scored above the mean and the mean score had positive attitude and scores below the mean meant negative attitude towards screening for breast cancer and breast cancer screening. The highest score was expected to be 45 and the lowest score to be 9.

Good Practice of BSE: The practice was assessed by looking on the respondent's action towards screening for breast cancer. Women answering practicing BSE at least monthly were regarded as having good practice of BSE and those who answered no as having poor practice of BSE.

4.10. Inclusion exclusion criteria

Inclusion criteria

-Those women health professionals 20 years above having diploma and degree and are working in the primary health care centers.

Exclusion criteria

-Those women who are unwilling to participate

4.11. Data collection tool and procedures

The data from participants was collected using interview based questionnaire which is developed in English language and then translated to Amharic. The later version was translated back to English, to ensure its consistency. Questionnaire was pre-tested in health centers other than the sample health centers. The questionnaire included questions on socio-demographic status, knowledge of risk factors, signs and symptoms, and screening methods, attitude and practices of breast cancer screening methods. Each questionnaire was systematically coded by three letter of each health centers name and two digit numbers. Two data collectors participated in the data collection process after being given intensive one day training on the data collection tools. The entire procedures was managed by the principal investigator.

4.12. Data Analysis Procedures

The data collection instruments was coded and data was checked and entered using Epi data version 3.1. It was cleaned and edited accordingly and exported to SPSS version 20 for analysis and was checked for missing values before analysis. Then measuring for the dependent variables, knowledge score of greater than or equal to the mean; those who answered greater than or equal to mean score of knowledge questions correctly are given good knowledge score; positive score for attitude is given to those with overall score greater than or equal to the mean and BSE practice score is given for those answering yes to practice of BSE. Descriptive statistics, numerical summary measures, frequencies, proportions, distributions was used to check for normality and also diagrams for describing the study population in relation to relevant variables. Then cross tabulation of each independent variable with the dependent variable with their 95% confidence interval was used to see if there is any association between them. Statistical significance was declared at p-value 0.05 and the predictors of outcome variable was identified accordingly. Those variables associated at bivariate logistic regression with significance level (p=0.2) were entered into multiple logistic regression to identify important determinants by controlling possible confounding effect.

4.13. Data quality management

To ensure the quality of the data first training of the Data collectors was carried out for one day by the principal investigator on the objectives, relevance of the study, methods of interviewing, confidentiality of information and informed consent. The data collection tool was prepared in Amharic. Pretest was done before the actual data collection work to see for the accuracy of responses and to estimate time needed and the questionnaire is adjusted accordingly. Two professionals who have diploma in nursing were used as data collectors.

4.14. Ethical consideration

Ethical clearance was requested from ethical clearance committee of Addis Ababa University and Addis Ababa health bureau. After the ethical approval written consent was submitted to the respective sub city and written consent was also requested to all the participants during data collection. Those who were unwilling to participate in the study were not included in the study. To insure confidentiality names and other identifying information were not included.

4.15. Dissemination of results

After completion of research, the report of the study will be presented during thesis defense and the final result will be submitted to Addis Ababa University School of Public Health. In addition to this the final result document will be presented to the sample sub city and Addis Ababa health bureau and other responsible bodies. And also, publication of the study and dissemination through different journals and scientific publication will be considered.

5. RESULT

5.1 Socio demographic characteristics of the study population

From the total of 422 FHPs included in the study, 419 FHPs' questionnaires were ready for final data analysis. The participants were between the age group of 20 - 60 years with a mean age of 27.3 years and standard deviation of 3.93 years. By age group, over two hundred sixteen of the study participants (51.6%) were aged between 26 to 30 years. Three hundred (71.6%) of the participants were Orthodox, ninety four (22.4%) were protestant and twenty five (6%) were Muslims. Most of the participants were single with 224 (53.5%) respondents and married with 195 (46.5%) respondents. Two hundred and twelve (50.6%) of the study participants were first degree holders. From the total study participants 230 (54.9%) of them were nurses, 89 (21.2%) were health officers and 100 (23.9%) midwives. The average work experience of the study participants were 4.22 years with standard deviation of 3.36 years. Three hundred thirty four (79.7%) of the participants had worked for less than five years, sixty three (15%) of the participants had worked for six to ten years and twenty two (5.3%) of the participants had worked for more than eleven years, respectively. Seven (1.7%) have reported that they have family history of breast cancer while twelve (2.6%) of them mentioned they have history of breast problem. (Table 2).

Table 2: Frequency distribution of socio-demographic characteristics of respondents at public health care centers of Addis Ababa, Ethiopia, April 2016.

Socio demographic variables	Frequency	Percent (%)
Age in years		
20–25	144	34.4
26–30	216	51.6
31–35	36	8.6
>=36	23	5.5
Profession		

Nurses	230	54.9
Health officers	89	21.2
Midwifes	100	23.9
Qualification		
Degree	212	50.6
Diploma	207	49.4
Marital status		
Single	224	53.5
Currently married	195	46.5
Religion		
Orthodox	300	71.6
Protestant	94	22.4
Muslim	25	6
Work experience		
<=5	334	79.7
6-10	63	15.0
>=11	22	5.3
Self-history of breast Problem		
Yes	12	2.9
No	407	97.1
Family history of breast Cancer		
Yes	7	1.7
No	412	98.3

5.2 Source of information about breast cancer

All of the respondents (419) have heard about breast cancer. Of these who had heard about breast cancer the most frequently source of information 387(92.4%) was educational institute followed by television and radio 258 (61.6%), 57(13.6%) mentioned internet, 27(6.4%) magazine and radio. (Table 3)

Table 3: Source of information on breast cancer at public health care centers of Addis Ababa, Ethiopia, April 2016.

Source of information	Frequency	Percent (%)
Heard about BC from family	8	1.9
Heard about BC from health care provider	21	5
Heard about BC from magazine/news paper	27	6.4
Heard about BC from television/radio	258	61.6
Heard about BC from internet	57	13.6
Heard about BC from friends	9	2.1
Heard about BC from relatives	21	5
Heard about BC from educational institute	387	92.4
Heard about BC from training	8	1.9
Heard about BC from other sources	5	1.2

5.3 Knowledge of respondents on breast cancer

Among all of the participants 127(30.3%) of them have good knowledge towards breast cancer and breast cancer screening. Two hundred sixty two (62.5%) of the respondents mentioned race or ethnicity as a risk factor for breast cancer, 147 (35.1%) mentioned smoking, 96(22.9%) increasing age and 51(12.2%) alcohol consumption. The most commonly mentioned sign and symptom of breast cancer was lump in the breast 364 (86.9%), discharge 184 (43.9%), pain in breast 95 (22.7%)

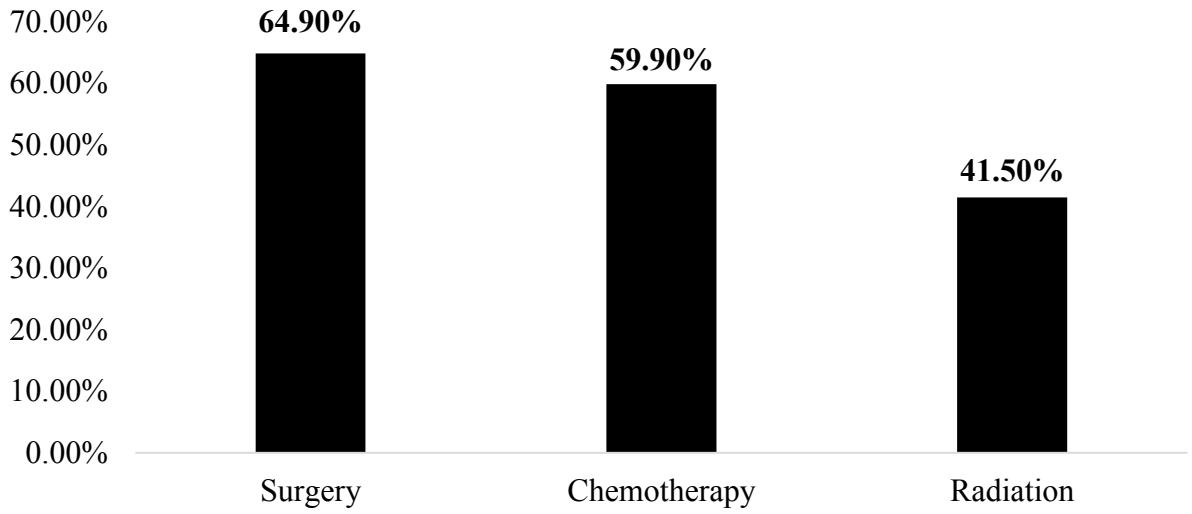
and change in the size of breast 48 (11.5%). Only 5(1.2%) knew the curable stage of breast cancer. (Table 4).

Table 4: Knowledge of respondents on breast cancer at public health care centers of Addis Ababa, Ethiopia, April 2016.

Variable	Frequency	Percent
Risk factors		
Increasing age	96	22.9
Positive family history of cancer	34	8.1
High fat diet	9	2.1
Smoking	147	35.1
Race/Ethnicity	262	62.5
Alcohol consumption	51	12.2
First child at late age	23	5.5
Early onset of menarche	1	0.2
Late menopause	3	0.7
Stress	3	0.7
Having large breast	5	1.2
Not breast feeding	9	2.1
Chemicals	14	3.3
Inorganic food	15	3.6
Radiation	16	3.8
Tight cloth	15	3.6
Unknown	5	1.2
Other	30	7.2
I don't know	54	12.9
Sign and Symptoms		
Lump in the breast	364	86.9

Discharge	184	43.9
Pain or in the breast	95	22.7
Change in size of the breast	48	11.5
Dimpling of the breast	9	2.1
Ulceration of the breast	39	9.3
Weight loss	23	5.5
Changes in shape of the breast	17	4.1
Pulling in of nipple	37	8.8
Swelling of the breast	13	3.1
Lump under armpit	22	5.3
Other	13	3.1
I don't know	12	2.9
Curable stages		
Stage of 0 and I	393	93.8
Stage 0, I and II	5	1.2
Not curable	15	3.6
I don't know	6	4

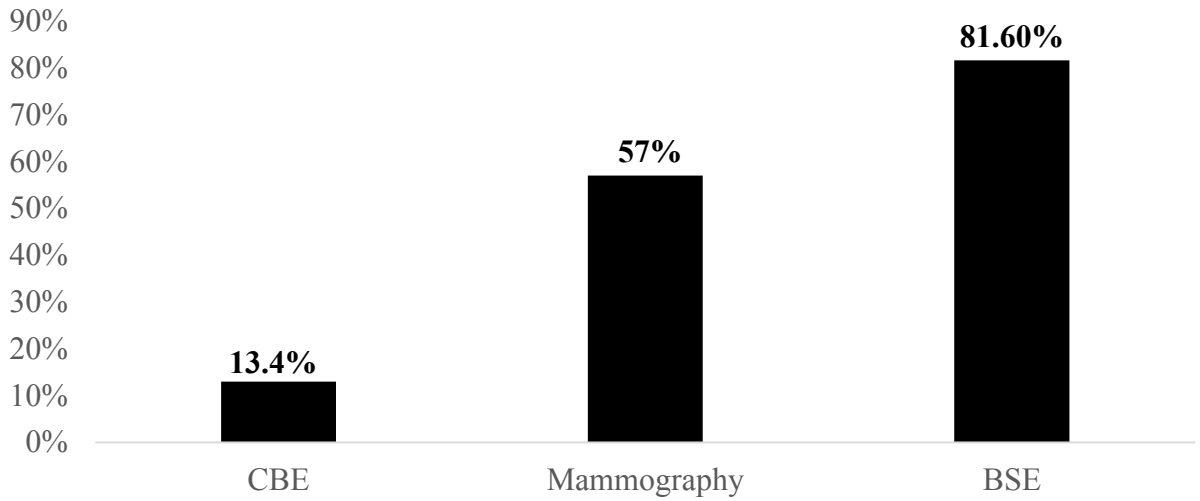
Figure 2: Knowledge on treatment optiones for breast cancer at public health care centers of Addis Ababa, Ethiopia, April 2016.



5.4 Knowledge on breast cancer screening

Among all of the respondents 342(81.6%) knew BSE as a screening method, 56(13.4%) knew CBE, 239(57%) Mammography, 34(8.1%) FNA, 37 (8.8%) Breast ultrasound and 19(4.5%) don't know breast cancer screening methods. (Figure 2)

Figure 3: knowledge on types of breast cancer screening methods at public health care centers of Addis Ababa, Ethiopia, April 2016.



From all the respondents 33(7.9%) mentioned BSE should be started at twenty years 16(3.8%) mentioned Mammography should be started at forty years. 232(55.4%) of the respondents knew that BSE should be done monthly, 253(60.4%) knew CBE should be done yearly for women older than forty, 247 (58.9%) mammography yearly. 268(64%) of the respondents answered that appropriate time to perform BSE is one to seven days after menses. Most of the respondents 252(60.1%) knew that mammography is used for both diagnostic and screening purpose. (Table 5)

Table 5: Knowledge of respondents on breast cancer screening at public health care centers of Addis Ababa, Ethiopia, April 2016.

Variables	Frequency	Percent (%)
Recommended age to start breast self-examination		
13 years	12	2.9
15 years	36	8.6
18 years	15	3.6
20 years	33	7.9

40 years	3	0.7
after menarche	266	63.5
after menopause	1	0.2
Other	48	11.5
I don't know	5	1.2
Frequency of BSE		
Daily	10	2.4
Weekly	126	30.1
Monthly	232	55.4
Every three months	183	4.3
Every six months	14	3.3
Yearly	5	1.2
Other	7	1.7
I don't know	7	1.7
Appropriate time to perform BSE		
During menses	2	0.5
1-7 days before menses	69	16.5
1-7 days after menses	268	64
at any time	74	17.7
Other	1	0.2
I don't know	5	1.2
Frequency of CBE for women older than forty		
Monthly	15	3.6
Every three months	86	20.5
Every six months	32	7.6
Yearly	253	60.4

Every three years	7	1.7
Other	12	2.9
I don't know	14	3.3
Age to start mammography		
14 years	11	2.6
15 years	39	9.3
16 years	36	8.6
18 years	57	13.6
20 years	31	7.4
25 years	25	6
30 years	87	20.8
35 years	46	11
40 years	16	3.8
45 years	6	1.4
Other	18	4.3
I don't know	47	11.2
Frequency of mammography		
Yearly	247	58.9
Every six months	71	16.9
Every two years	24	5.7
Every three years	20	4.8
Other	10	2.4
I don't know	47	11.2
Use of mammography		
For screening purpose	24	5.7
For diagnostic purpose	138	32.9

For both	252	60.1
I don't know	5	1.2

5.5 Attitude towards breast cancer and breast cancer screening

Two hundred thirty four (55.8%) of the participants had positive attitude towards breast cancer and breast cancer screening. Four hundred eighteen (99.8%) of the participants agree that early detection of breast cancer can helps in survival and all them believe health education can help in early detection of the disease. Among all of the respondents 115 (32.2%) believe they are at risk of breast cancer. 304(72.6%) of the participants agree professionals at primary health care level can diagnose breast cancer. (Table 6)

Table 6: Study participant's attitude towards breast cancer at public health care centers of Addis Ababa, Ethiopia, April 2016.

Variables	Frequency	Percent (%)
Breast cancer is a curable disease.		
Agree	317	75.6
Neutral	15	3.6
Disagree	87	20.8
Breast cancer cannot be successfully treated without mastectomy.		
Agree	71	16.9
Neutral	23	5.5
Disagree	325	77.6
I am at risk of developing breast cancer.		
Agree	115	32.2
Neutral	135	27.5
Disagree	169	40.3
Early detection of breast cancer can helps in survival.		

Agree	418	99.8
Neutral	1	0.2
Health education on breast cancer helps in early detection of the disease.		
Agree	419	100
Breast cancer can be diagnosed by health professional at primary health care level.		
Agree	304	72.6
Neutral	12	2.9
Disagree	103	24.6
Availability of screening methods are basic for early detection of breast cancer.		
Agree	418	99.8
Disagree	1	0.2
I would consult a doctor if I have breast lump.		
Agree	416	99.2
Disagree	3	0.8
I would allow male doctor to examine my breast.		
Agree	395	94.2
Neutral	12	2.9
Disagree	12	2.9

5.6 Practice of breast cancer screening

From all of the participants 205(49%) have overall good practice of BSE. 298 (71.1%) mentioned that they self examine their breast at least once in lifetime, 35 (8.4%) said they had undergone breast examination by clinicians and only eleven (2.6%) mentioned that they had mammographic screening.

Among those who practiced BSE at least once in life time, 65(15.5%) started practicing at the age of twenty and only 63(15%) practiced monthly. The commonly mentioned reason for not practicing BSE was forgetfulness. 66(15.4%). From those who practiced CBE only four participants practiced yearly. The commonly mentioned reason for not practicing CBE was not having symptom 347(82.8%). Among those who do not practice mammography not having symptom was mentioned by 386 (92.1%) of the participants. Most of the health professionals 328(78.3%) advised their clients about BSE. While 324(77.3%) performed CBE and 78(18.6%) ordered mammography to their clients with breast problem. The commonest reason for not ordering mammography to clients was not having history of breast cancer 172 (41.1%). (Table 7)

Table 7: Female health professionals practice of breast cancer screening at public health care centers of Addis Ababa, Ethiopia, April 2016.

Variables	Frequency	Percent (%)
Age started practicing breast self-examination		
<20	19	4.5
20	65	15.5
21-30	204	48.7
31-40	7	1.7
Other	3	0.7
Frequency of practicing breast self-examination		
Daily	2	0.5
Weekly	140	33.4

Monthly	63	15
Occasionally	93	22.2
Reason for not practicing BSE		
It is not important	1	0.2
Don't have any symptom	44	10.5
Forget to do it	66	15.8
Fear of detecting some abnormality	1	0.2
Don't know how to do it	9	2.1
How often do you practice CBE		
Only once	31	7.4
Yearly	4	1
Reason for practicing CBE		
I have family history of breast cancer	6	1.4
I have symptoms	29	6.9
Reason for not practicing CBE		
It is not important	1	0.2
Don't have any symptom	347	82.8
Forget to do it	32	7.6
Fear of detecting some abnormality	3	0.7
It's not available	1	0.2
Reason for practicing mammography		
I have symptoms	11	2.6
Reason for not practicing mammography		

I don't have any symptom	386	92.1
I forget to do it	10	2.4
fear of detecting some abnormality	2	0.5
It's not available	7	1.7
I can't afford it	2	0.5
Its contraindicated for my age	1	0.2
Advised a client about BSE		
Yes	328	78.3
No	91	21.7
Reason for not advising about BSE		
Clients didn't request	6	1.4
Clients didn't have history of BC	36	8.6
I forget to do it	30	7.2
I don't have training	15	3.6
Other	4	1
Performed CBE for a client		
Yes	324	77.3
No	95	22.7
Reason for not performing CBE for client		
Clients didn't request	3	0.7
Clients didn't have history of BC	52	12.4
I forget to do it	6	1.4
I don't have training	27	6.4
Service is not available	4	1
Other	3	0.7

Ordered mammography for a client		
Yes	78	18.6
No	341	81.4
Reason for not Ordering Mammography for a client		
Clients didn't request	4	1
Clients didn't have history of BC	172	41.1
I forget to do it	5	1.2
I don't have training	72	17.2
Service is not available	83	19.8
Patients are referred to hospital	4	1
Other	1	0.2

5.7 Factors associated with knowledge, attitude and practice of breast cancer and breast cancer screening

Cross tabulation and logistic regression analysis was carried out to determine the association between independent variables and the knowledge, attitude and practice of breast cancer and breast cancer screening among the study participants. Age, profession, level of education, marital status, work experience and self-history of breast problem were significantly associated with knowledge of study participants on binary logistic regression while age and level of education remained significant in multivariate logistic regression.

In a binary logistic regression analysis it was found that FHP who are between 26-30 years were three times more likely to know about breast cancer and its screening methods compared to those between 20-25, **[COR=2.80; 95%CI (1.65-4.74)]**. Professionals who are health offices were also three times more likely to know about breast cancer and its screening methods compared to those who are Nurses, **[COR=2.54; 95%CI (1.53-4.21)]**. Participants who are degree holders were four times more likely to know about breast cancer and its screening methods compared to those who

are diploma holders, **[COR=4.44; 95%CI (2.79-7.06)]**. Women who are married were twice more likely to know about breast cancer and its screening methods compared to those who are single, **[COR=1.80; 95%CI (1.18-2.74)]**. FHP who worked for >=11 years were three times more likely to know about breast cancer and its screening methods compared to those who worked for five years and less, **[COR=3.20; 95%CI (1.34-7.67)]**. It was also found that those who have self-history of breast problem were three times more likely to know about breast cancer screening compared to those who had no history,**[COR =3.35, 95%CI (1.04-10.76)].**

In a multivariate logistic regression analysis those who are aged 26-30 were twice more likely to know about breast cancer and its screening compared to those aged 20-25 years, **[AOR= 2.14; 95%CI (1.19-3.85)].** Also those participants who are degree holders were about three times more likely to know about breast cancer and its screening compared to those with diploma, **[AOR=2.73; 95%CI (1.51-4.92)].**

Table 8: Association between socio-demographic factors and Knowledge of breast cancer and breast cancer screening of female health professionals in Addis Ababa April 2016

Var**iables**	Mean knowledge Of breast cancer and breast cancer Screening		**COR(95%CI)**	**AOR(95%CI)**
	Poor Knowledge	Good knowledge		
Age in years				
20–25	121	23	1	1
26–30	141	75	**2.80(1.65-4.74)**	**2.14(1.19-3.85)**
31–35	18	18	**5.26(2.38-11.60)**	**3.50(1.06-11.49)**
>=36	12	11	**4.82(1.90-12.24)**	2.43(0.56-10.55)
Profession				
Nurses	164	66	1	1
Health officers	44	45	**2.54(1.53-4.21)**	1.37(0.76-2.44)

Midwifes	84	16	**0.47(0.26-0.87)**	0.61(0.32-1.17
Qualification				
Degree	117	95	**4.44(2.79-7.06)**	**2.73(1.51-4.92)**
Diploma	175	32	1	1
Marital status				
Single	169	55	1	1
Currently married	123	72	**1.80(1.18-2.74)**	1.04(0.63-1.74)
Work experience				
<=5	243	91	1	1
6-10	39	24	1.64(0.94-2.88)	0.56(0.24-1.33)
>=11	10	12	**3.20(1.34-7.67)**	1.00(0.23-4.34)
Self-history of breast Problem				
No	287	120	1	1
Yes	5	7	**3.35(1.04-10.76)**	2.41(0.70-8.34)

Factors like age, profession, level of education, marital status, work experience and knowledge are significantly associated with attitude towards breast cancer and breast cancer screening on binary logistic regression while level of education, marital status and knowledge remain significantly associated on multivariate logistic regression.

On binary logistic regression women aged 26-30 were twice more likely to have positive attitude towards breast cancer and breast cancer screening than those in the age group between 20 and 25, **[COR=2.38; 95%CI (1.54-3.66)]**. Also Health Officers were twice more likely to have positive attitude towards breast cancer and breast cancer screening than Nurses, **[COR=1.77; 95%CI (1.05-2.96)]**.Women that are degree holders are three times more likely to have positive attitude towards breast cancer and breast cancer screening than those who have diploma, **[COR=3.39; 95%CI (2.27-5.09)]** while those women who are married are twice more likely to have positive attitude than those who are single, **[COR=2.40; 95%CI (1.61-3.58)].**Those FHP who have work

experience of six to ten years are twice more likely to have positive attitude towards breast cancer and breast cancer screening than those who have less than five years work experience, **[COR=2.49; 95%CI (1.37-4.52)].** Women who have good knowledge are four times more likely to have positive attitude than those having poor knowledge, **[COR=3.66; 95%CI (2.29-5.85)]**

In multivariate logistic regression women who are degree holders are twice more likely to have positive attitude than those at a diploma level of education, [**AOR=2.44; 95%CI (1.38-4.29)].** Those women who are married are twice more likely to have positive attitude towards breast cancer and breast cancer screening than those who are single, [**AOR=1.69; 95%CI (1.05-2.71)].** Women having good knowledge are three times more likely to have positive attitude than those having poor knowledge, [**AOR=2.69; 95%CI (1.61-4.48)].**

Table 9: Association between socio-demographic factors and Attitude of breast cancer and breast cancer screening of female health professionals in Addis Ababa April 2016

Var**iables**	Mean Attitude Of breast cancer and breast cancer Screening		**COR(95%CI)**	**AOR(95%CI)**
	Negative Attitude	Positive Attitude		
Age in years				
20–25	86	58	1	1
26–30	83	133	**2.38(1.54-3.66)**	1.47(0.90-2.40)
31–35	5	31	**9.19(3.38-25.03)**	3.59(0.96-13.34)
>=36	11	12	1.62(0.67-3.91)	0.60(0.13-2.70)
Profession				
Nurses	103	127	1	1
Health officers	28	61	**1.77(1.05-2.96)**	0.73(0.38-1.39)
Midwifes	54	46	0.69(0.43-1.12)	0.91(0.54-1.55)
Qualification				

Degree	63	149	**3.39(2.27-5.09)**	**2.44(1.38-4.29)**
Diploma	122	85	1	1
Marital status				
Single	121	103	1	1
Currently married	64	131	**2.40(1.61-3.58)**	**1.69(1.05-2.71)**
Work experience				
<=5	160	174	1	1
6-10	17	46	**2.49(1.37-4.52)**	0.92(0.40-2.10)
>=11	8	14	1.61(0.66-3.94)	0.69(0.13-3.61)
Knowledge				
Poor	155	137	1	1
Good	30	97	**3.66(2.29-5.85)**	**2.69(1.61-4.48)**

There was no variable significantly associated with practice of breast cancer screening on binary and multivariate logistic regression.

6. Discussion

The study assessed knowledge, attitude and practices towards breast cancer and breast cancer screening among FHP working in primary health care centers in Addis Ababa. All of the respondents have heard about breast cancer. Among all the respondents 81.6% knew BSE as a screening method, 57% Mammography and only 13.4% knew CBE as a screening method for breast cancer. While Four hundred eighteen (99.8%) of the participants agree that early detection of breast cancer can helps in survival and all of them believe health education can help in early detection of the disease. 72.6% of the participants agree professionals at primary health care level can diagnose breast cancer. While among those who heard about breast cancer BSE, CBE, and mammographic examination were practiced by 71.1 %, 8.4% and 2.6 %of respondents at least once in life time. 78.3% of the FHP have advised their clients about BSE. While 77.3% performed CBE and 18.6% ordered mammography to their clients with breast problem.

Age and Level of education were significantly associated with Knowledge of the FHP towards breast cancer and breast cancer screening. Level of education, marital status and knowledge were significantly associated with attitude after controlling possible confounding factors in multivariate logistic regression.

This study has revealed that 30.3 % of the study participants are knowledgeable which is less than the study among Nurses in university hospitals of Addis Ababa where 57.8% of them were knowledgeable about breast cancer and breast cancer screening. The reason for this could be breast cancer cases mostly go to teaching referral hospitals to get medical care. For this reason health professionals working in this areas have higher exposure to breast cancer cases and have a better knowledge. [14]

The commonly mentioned risk factors were 62.5% race or ethnicity, 35.1% smoking, 22.9% increasing age and 12.2% alcohol consumption. When we compare this result with the research done in government hospitals of Addis Ababa; the mentioned risk factors were high-dose radiation to chest 84.3% was a risk factor for the development of breast cancer followed by smoking 81.1%, sex 79.1% and positive family history 77.3%. This difference could be attributed to the fact that

those working in government hospitals are more exposed to breast cancer cases than those working in health centers. [13]

In the current study the most commonly mentioned sign and symptom of breast cancer were lump in the breast (86.9%) and discharge (43.9%).This result is less than the research in Saudi Arabia where breast lump was mentioned by 86.2%, discharge from nipple 94.3%.This could be attributed to the study area and study population difference. The research in Saudi Arabia used general practitioners as study population this may result in increased knowledge about breast cancer sign and symptoms in the study in Saudi Arabia due to higher level of education. [25]

In this study among all the respondents 81.6% knew BSE as a screening method, 57% Mammography and only 13.4% knew CBE as a screening method for breast cancer. Research done in government hospitals of Addis Ababa shows that among female health professionals 77.6% respondents were aware of BSE as a screening method. Mammography was mentioned as a screening method by 81.4% and the least mentioned screening method by the participants was CBE which was known by 71.4% respondents. The difference in the result could be attributed to the fact that professionals working in hospitals have more exposure to breast cancer screening methods as cases are referred to hospitals for further diagnosis and treatment and also experts that have more experience and knowledge are available for consultation. [13]

In this study two hundred thirty four (55.8%) of the participants had positive attitude towards breast cancer and breast cancer screening. 304 (72.6%) believe that breast cancer can be diagnosed by health professionals at health center level. This is slightly less than the study in Riyadh, where about 85% believe that BC can be diagnosed by primary health care physician. This could be attributed to the fact that in Riyadh primary health care facilities could have more access and equipment to diagnose and treat breast cancer at primary health care level. [25]

From all of the participants 298 (71.1%) mentioned that they have experience of breast self examine at least once in their life time and only 63(15%) do it monthly, 35 (8.4%) said they had undergone breast examination by clinicians and only eleven (2.6%) mentioned that they had

mammographic screening. Among those who practiced BSE 65(15.5%) started practicing at the age of twenty. The commonly mentioned reason for not practicing BSE was forgetfulness. 66(15.4%). From those who practiced CBE only four participants practiced yearly. The commonly mentioned reason for not practicing CBE was not having symptom 347(82.8%). Among those who do not practice mammography not having symptom was mentioned by 386 (92.1%) of the participants. This is a bit less than the study in Turkey, where 81.3 % of the group reported performing BSE, but only 27.3 % reported doing so monthly or once per menstrual cycle. The most common reasons for not doing BSE was the belief that it was not necessary and neglect (45.8 %), an idea of not having cancer in themselves (15.7%) and fear (13.3%). The rate of having a mammography at least once was 10.1% and rate of having a CBE among the health professionals was 24.8 %.The difference could be attributed the study sample difference where the study in Turkey include physicians who could have more education and experience on the case. [28]

In the current study there was no significant association between good practice of BSE and any of the independent variables but in the study in, greater than half of the doctors started BSE earlier and practiced it on a monthly basis compared with the nurses. [31]

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusion

This study has revealed that the knowledge towards breast cancer and breast cancer screening was poor among FHP working in primary health care centers of Addis Ababa.

Specifically, the knowledge on risk factors, signs and symptoms, curable stage of breast cancer was poor. Considerable proportions of FHP have low information about recommended age to start breast cancer screening and frequency of screening.

Among those who have information about breast cancer screening only small proportions are actually practicing regularly as per the standard.

Age and level of education were significantly associated with Knowledge of the FHP towards breast cancer and breast cancer screening while level of education, marital status and knowledge were significantly associated with their attitude.

7.2 Recommendation

Federal and regional health offices level:

A standard screening guide line needs to be prepared and needs to be implemented in all health facilities.

There should be regular training programs in order to keep the professionals updated about breast cancer and breast cancer screening method.

Health Professionals level:

Health providers should also read more and update themselves regularly.

Researchers: Researchers should conduct further studies at different levels.

Generally collaboration is needed between different sectors in order to make breast cancer screening culture so as to reduce morbidity and mortality related to breast cancer among women.

8. STRENGTH AND LIMITATIONS OF THE STUDY

8.1 Strength of the study

- Study was done in primary health care center professionals which are the back bone for preventive activities
- Study was done in 21 health centers in Addis Ababa which increases the representativeness of the finding.

8.2 Limitations of the study

- It was good if the study was complemented with qualitative part to obtain in-depth information.
- Limited discussion and comparison was done due to insufficient literatures from developing countries.

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ANNEXES

Annex I. ASSURANCE OF PRINCIPAL INVESTIGATOR

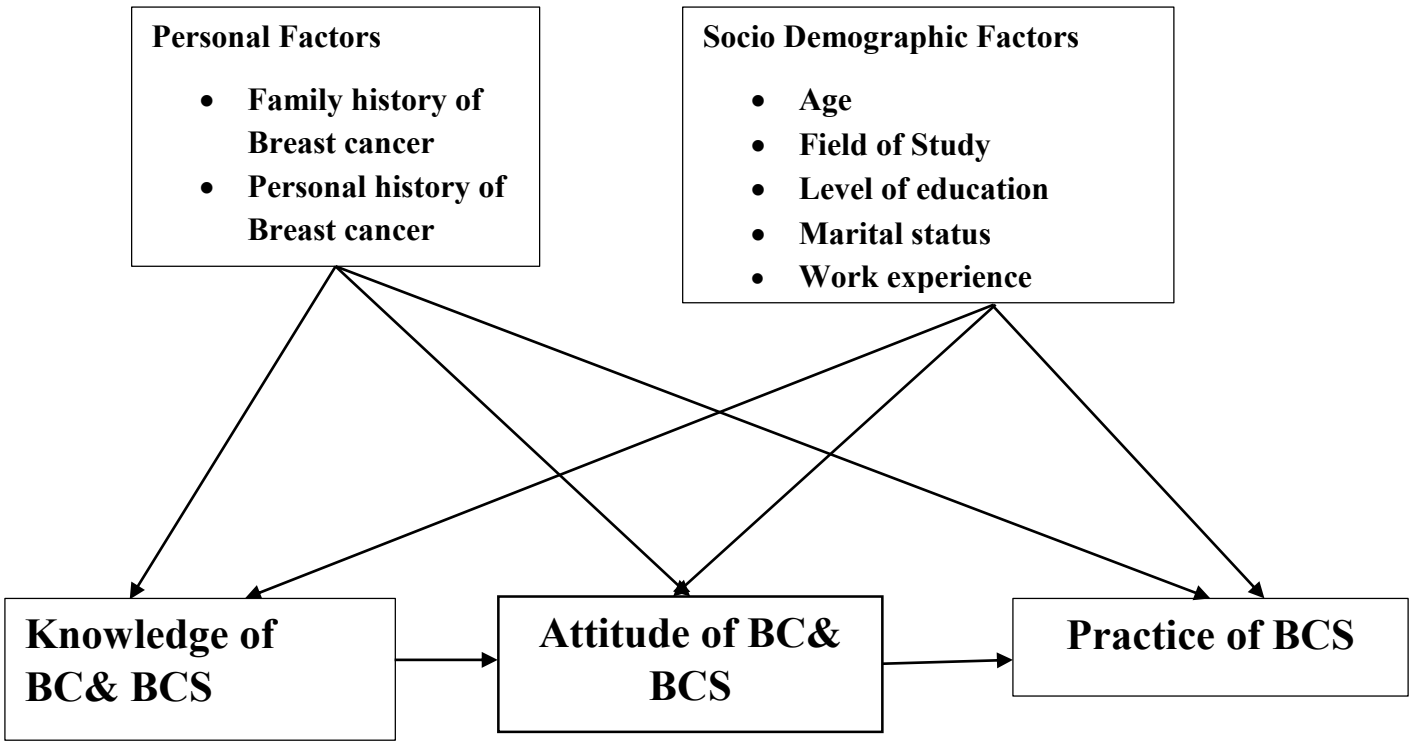
The undersigned agrees to accept responsibility for the scientific ethical and technical conduct of the research project and for provision of required progress reports as per terms and conditions of the Research Publications Office in effect at the time of grant is forwarded as the result of this application.

Student's Name	Signature:	Date
• Selamawit W/tsadik (BSC)	_____	_____

Approved by:

Advisors' Name	Signature	Date
1. Dr Adamu Addise (MD, MPH, MA, PHD)	_____	_____
2. Ato Sefonias Getachew (BSC, MPH)	_____	_____

Annex II. CONCEPTUAL FRAMEWORK



Annex III. QUESTIONNAIRE

Information sheet

Dear respondent, my name is_____ this interview to be done with you for study that is being conducted by MPH program of Addis Ababa University. The study is about Breast cancer and its screening. The purpose of the study is assessing KAP of health care workers towards Breast cancer and Breast cancer screening. It is being conducted in 10 health centers of Addis Ababa. We believe that the result of this study will assist policy makers, planners and health service providers for making consideration regarding Breast cancer. It will also help to contribute in the subsequent efforts to improve Breast cancer screening habits. You have been randomly selected to participate in this study. Your contribution has a great input for the study and would greatly appreciate your participation. There is no possible risk associated with participating in this study. Please be assured that all the information you give will be kept strictly confidential. Your participation is completely voluntary. Therefore, you will not be obligated to answer any question that you do not want to and you may end this interview at any time you want to. There are also no repercussions for not participating in the interview. The interview will take 10-15 minutes. If you have questions regarding this study or would like to be informed of the results after its completion, please do not hesitate to contact;

Address: Selamawit W/tsadik Cell phone +251 (0) 912 66 48 64
E-mail: selaminawbw32@gmail.com

Consent form

I have read the information sheet concerning this study and I understand what will be required of me and what will happen to me if I take part in the study. I also understand that I may withdraw from this study any time.

Yes Proceed ☐ No terminate ☐

Signature ----------Date----------

Data collector Name----------sign----------Date----------

Questioner on assessment of female health professionals Knowledge Attitude and Practice of Breast cancer and Breast cancer screening in Addis Ababa, Ethiopia, 2015/16

Identification

NO	Question	Response
1	Date of interview	
2	Code number	
3	Facility name	
4	Sub city	
5	Data collector code	

Part I- Socio demographic data

NO	**Question**	**Answer category**	**Skip**
101.	Age	○ ____Year ○ Unknown ○ No response	
102.	Profession	1. Health officer 2. Nurse 3. Midwife	
103.	Level of education	1. Degree 2. Diploma	
104.	Marital status	1. Single 2. Living together 3. Currently Married 4. Separated 5. Divorced 6. Widowed	

105.	Religion	1. Orthodox 2. Muslim 3. Protestant 4. Catholic 98. Other Specify	
106.	Work experience	_____in years	
107.	Do you have any history of breast problem	1. Yes 2. No	
108.	Do you have family with breast cancer	1. Yes 2. No	

Part II – Female health professionals Knowledge towards Breast cancer and Breast cancer screening

Part II A- Knowledge about Breast cancer

No	**Question**	**Coding Category**	**Skip**
201.	Have you heard of breast cancer?	1. Yes 2. No	If no you are done thank you
202.	If the answer to question 1 is Yes From where did you heard about breast cancer? **More than one answer is possible.**	1. Family 2. Health care provider 3. Magazines/News Paper 4. Television/ Radio 5. Internet 6. Friends 7. Relatives 8. Educational Institutes 9. Training	

		98. Other Specify 99. I don't know	
203.	What are the risk factors for breast cancer? **More than one answer is possible.**	1. Increasing age 2. Positive family history of cancer 3. High fat diet 4. Smoking 5. Race/Ethnicity 6. Alcohol consumption 7. First child at late age 8. Early onset of menarche 9. Late menopause 10. Stress 11. Spiritual curses 12. Having large breast 98. Other Specify 99. I don't know	
204.	What are the sign and symptoms of breast cancer? **More than one answer is possible.**	1. Lump in the breast 2. Discharge 3. Pain or in the breast 4. Change in size of the breast 5. Dimpling of the breast 6. Ulceration of the breast 7. Weight loss 8. Changes in shape of the breast 9. Pulling in of nipple 10. Swelling of the breast 11. Lump under armpit	

		98. Other Specify 99. I don't know	
205.	What is the stage of breast cancer which can be cured?	1. at stage of 0 and I 2. at stage 0, I and II 3. It is not curable at all. 98. Other Specify 99. I don't know	
206.	What are the treatment options for breast cancer? **More than one answer is possible.**	1. Surgery 2. Radiation therapy 3. Chemotherapy 98. Other Specify 99. I don't know	

Part II B- Knowledge about Breast cancer screening

207.	What are the types of breast cancer screening methods? **More than one answer is possible.**	1. BSE 2. CBE 3. Mammography 98. Other Specify 99. I don't know	
208.	When should breast self-examination start in Ethiopia?	1. at 20 years 2. at 40 years 3. after menarche 4. after menopause 98. Other Specify 99. I don't know	
209.	How often should BSE be done?	1. once in a month 2. once in a week 3. once in three months	

		4. once in 6 months 5. once in a year 98. Other Specify 99. I don't know	
210.	What is the appropriate time for performing BSE?	1. During menses 2. 1-7 days before menses 3. 1-7 days after menses 4. at any time 98. Other Specify 99. I don't know	
211.	How often should CBE be done?	1. Monthly 2. Once in a year 3. Every three months 4. Once in three years 98. Other Specify 99. I don't know	
212.	What is the recommended age to start mammography examination in Ethiopia?	1. 30 years 2. 35 years 3. 40 years 4. 45 years 98. Other Specify 99. I don't know	
213.	How often should mammography be done?	1. once in a year 2. every six months 3. once in two years 4. once in three years 98. Other Specify 99. I don't know	
214.	What is the use of mammography?	1. For diagnostic purpose	

		2. For screening purpose 3. For both 98. Other Specify 99. I don't know	

Part III – Female health professionals Attitude towards Breast cancer and Breast cancer screening

Part III A- Attitude regarding Breast cancer

301.	Breast cancer is a curable disease.	1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
302.	Breast cancer cannot be successfully treated without mastectomy.	1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
303.	I am at risk of developing breast cancer.	1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
304.	Early detection of breast cancer can helps in survival.	1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	

305.	Health education on breast cancer helps in early detection of the disease.	1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	

Part III B- Attitude regarding Breast cancer screening

306.	Breast cancer can be diagnosed by health professional at primary health care level.	1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
307.	Availability of screening methods are basic for early detection of breast cancer.	1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
308.	I would consult a doctor if I have breast lump.	1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
309.	I would allow male doctor to examine my breast.	1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	

Part IV – Female health professionals Practice towards Breast cancer screening

Part IVA-Practice for self

401.	Do you practice BSE to screen for BC?	1. Yes 2. No	If No skip to 404
402.	When did you start practicing breast self-examination?	1. Less than 20 years 2. at 20 years 3. From 21-30 years 4. From 31-40 years 5. Greater than 40 years	
403.	How often do you practice breast self-examination?	1. Daily 2. Weekly 3. Monthly 4. Yearly 5. Occasionally	
404.	**If the answer to no 401 is No** what is your reason?	1. I don't think it is important 2. I know I can never have BC 3. I don't have any symptom 4. I forget to do it 5. I fear of detecting some abnormality 6. I have no privacy 7. I don't know how to do it 98. Other Specify	
405.	Have you ever practiced CBE for yourself to screen for BC?	1. Yes 2. No	If No skip to 407
406.	How often do you practice CBE?	1. Monthly 2. Every three months 3. Once in a year	

		4. Once in three year 98. Other Specify	
407.	Reason for practicing CBE	1. For medical check up 2. I have family history of breast cancer 3. I have self history of breast cancer 99. Other	
408.	**If the answer is No to question no 406** what is your reason?	1. I don't think it is important 2. I know I can never have BC 3. I don't have any symptom 4. I forget to do it 5. I fear of detecting some abnormality 6. It's not available 98. Other Specify	
409.	Have you ever undergone Mammography to screen for BC?	1. Yes 2. No	
410.	Reason for practicing Mammography	4. For medical check up 5. I have family history of breast cancer 6. I have self history of breast cancer 99. Other	
411.	**If the answer to question number 409 is No** what is your reason?	1. I don't think it is important 2. I know I can never have BC 3. I don't have any symptom 4. I forget to do it	

		5. I fear of detecting some abnormality 6. It's not available 7. I can't afford it 98. Other Specify	

Part IVA-Practice for client

412.	Have you ever advised a client about BSE screening method?	1. Yes 2. No	
413.	**If the answer to the above question is No** what is your reason?	1. I don't think it is important 2. Clients didn't request 3. Clients didn't have history of BC 4. I forget to do it 5. I don't have training 98. Other Specify	
414.	Have you ever Performed CBE to a client for BC screening?	1. Yes 2. No	
415.	**If the answer to the above question is No** what is your reason?	1. I don't think it is important 2. Clients didn't request 3. Clients didn't have history of BC 4. I forget to do it 5. I don't have training 6. Service is not available 98. Other Specify	

416.	Have you ever ordered Mammography for a client to screen for BC?	1. Yes 2. No	
417.	**If the answer to the above question is No** what is your reason?	1. I don't think it is important 2. Clients didn't request 3. Clients didn't have history of BC 4. I forget to do it 5. I don't have training 6. Service is not available 98. Other Specify	

የጥናቱ መግለጫ

የመጠይቅ መለያ ቁጥር----------ጤና ይስጥልኝ ስሜ----------ይባላል በጥናቱ ውስጥ በመረጃ ሰብሳቢነት ነው የምሠራው፡፡ ጥናቱ ስለ ጡት ካንሰር በሽታ እና ቅድም ምርምራ ሲሆን የጥናቱ አላማ ጤና ባለሙያዎች ስለ ጡት ካንሰር በሽታ እና ቅድም ምርምራ ያላቸውን እውቀት አመለካከትና ተግባር ማወቅ ሲሆን የጥናቱ ውጤት ፖሊሲ አውጪዎችና ጤና ባለሙያዎች ለጡት ካንሰር በሽታ ትኩረት እንዲሰጡ እና የጡት ካንሰር በሽታ ቅድም ምርምራ ልምድን ለማዳበር ይረዳል ብለን እናምናልን፡፡ ጥናቱ በ ሰላማዊት ወ/ጻዲቅ የሚከናወን ሲሆን በአ/አ ዩንቨርስቲ የህ/ሰብ ጤና ክፍል የድህረ ምረቃ ኘሮግራም ማሟያ የሚሆን ነው፡፡ በዚህ መጠይቅ ውስጥ የተለያዩ ንዑስ ክፍሎች ያሉት ጥያቄዎች ተካተዋል፡፡ ተሳትፎዎ በፈቃደኝነት ላይ የተመሠረት ነው፡፡ ጥያቄውን ለመሙላት ሃያ ደቂቃ ያህል ሊወስድ ይችላል፡፡ ጥናቱን አስመልክቶ እርስዎ የሚሰጡት ማንኛውም መረጃ በሚስጢር የሚጠበቅ በመሆኑ በማንኛውም መንገድ ለሶስተኛ አካል አሳልፎ አይሰጥም ወይም አይጋለጥም፡፡ ማንነትዎ እንዳይታወቅም ስምዎ በጥያቄው ወረቀት ላይ አይመዘገብም በጥናቱ ላይ በመሳተፍዎ የተለየ ጥቅም አይኖርም ነገር ግን በጥናቱ ላይ በመሳተፍዎና ለሚጠየቁት ጥያቄ በዕውቀት ላይ የተመሠረተና ተገቢ የሆነ መረጃ መስጠትዎ ለጥናቱ አላማ መሳካት ከፍተኛ አስተዋጽዎ ያደርጋል፡፡ ለሚሰጡት ለየትኛውም አይነት ምላሽ አመሰግናለሁ፡፡ ግልጽ ነው? ያልገባሽ ነገር አለ? መጠየቅ (ማነጋገር) የሚፈልጉት ነገር ካለ ፡-

ሰላማዊት ወ/ጻዲቅ (የጥናቱ ባለቤት)

ስልክ ቁጥር 0912664864

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ፈቃድ መጠየቂያ ቅጽ

እኔ ተሳታፊ የሆንኩ ከላይ የተገለጹትን በሙሉ ሰምቼአለሁ፤ አላማውንና ጥቅሙንም ተረድቼአለሁ፤ ሚስጥር እንደሚጠበቅና ለሶስተኛ አካል እንደማይተላለፍ ተገንዝቤአለሁ፤ ስለዚህ በጥናቱ ለመሳተፍ

ፈቃደኛ ነኝ አዎ እሳተፋለሁ ☐ **ፈቃደኛ አይደለሁም አልሳተፍም** ☐

ፊርማ.....ቀን.....

መረጃ ሰብሳቢ ስም .....ፊርማ .....ቀን.....

ተ.ቁ	ጥያቄ	መልስ
1	መጠይቁ የተሞላበት ቀን	
2	የኮድ ቁጥር	
3	የጤና ጣቢያው ስም	
4	ክፍለ ከተማ	
5	የመረጃ ሰብሳቢው ኮድ	

ክፍል 1፡-አጠቃላይ መረጃ

ተ.ቁ	ጥያቄ	አማራጭ	ይለፍ
101.	ዕድሜሽ ስንት ነው?	○ -------- ዓመት ○ አላውቀውም ○ መልስ የለም	
102.	ሙያ	1. ነርስ 2. ጤና መኮንን 3. ሚድዋይፍ	
103.	የትምህርት ደረጃ	1. ዲግሪ 2. ዲፕሎማ	
104.	የጋብቻ ሁኔታ	1. ያላገባች 2. ያለ ህጋዊ ጋብቻ የሚኖሩ 3. ያገባች 4. የተለያየች 5. የተፋታች 6. የሞተባት	
105.	ሐይማኖት	1. ኦርቶዶክስ 2. ሙስሊም 3. ፕሮቴስታንት 4. ካቶሊክ 98. ሌላ ካለ ይግለጹ	
106.	የስራ ልምድ	-------- ዓመት	
107.	የጡት ካንሰር በሽታ አለቦት?	1. አዎ 2. አይ	
108.	የጡት ካንሰር በሽታ ያለበት ቤተሰብ አሎት?	1. አዎ 2. አይ	

ክፍል 2፡-የእውቀት ጥያቄዎች

ክፍል 2ሀ፡-የጡት ካንሰር እውቀት ጥያቄዎች

201.	ስለ ጡት ካንሰር በሽታ ሰምተው ያውቃሉ?	1. አዎ 2. አይ	
202.	ስለ ጡት ካንሰር በሽታ ከየት ሰሙ? **ከአንድ በላይ መልስ መስጠት ይቻላል**	1. ከቤተሰብ 2. ከጤና ባለሞያ 3. ከመጽሄት(ጋዜጣ) 4. ከቴሌቪዥን/ከሬዲዮ 5. ከኢንተርኔት 6. ከጓደኛ 7. ከዘመድ 8. ከትምህርት ተቋም 9. ከስልጠና 98. ሌላ ካለ ይግለጹ	
203.	ለጡት ካንሰር በሽታ የሚያጋልጡ ሁኔታዎች ምንድን ናቸው? **ከአንድ በላይ መልስ መስጠት ይቻላል**	1. የእድሜ መጨመር 2. በቤተሰብ ውስጥ የካንሰር በሽታ መኖር 3. ቅባት የበዛበት ምግቦችን መመገብ 4. ሲጋራ ማጨስ 5. የዘር ግንድ 6. የአልኮል መጠጥ መጠጣት 7. የመጀመሪያ ልጅን ዘግይቶ መውለድ 8. የወር አበባ በቶሎ መጀመር 9. ዘግይቶ ማረጥ 10. ጭንቀት 11. እርግማን 12. ትልቅ ጡት መኖር 98. ሌላ ካለ ይግለጹ	
204.	የጡት ካንሰር በሽታ ምልክቶች ምን ምን ናቸው? **ከአንድ በላይ መልስ መስጠት ይቻላል**	1. በጡት ውስጥ እባጭ መኖር 2. ከጡት የሚወጣ ፈሳሽ 3. የጡት ህመም 4. የጡት መጠን መቀየር 5. የጡት መሰርጎድ 6. የጡት መቁሰል 7. ክብደት መቀነስ 8. የጡት ቅርጽ መቀየር 9. የጡት ጫፍ መጎድጎድ 10. የጡት ማበጥ 11. በብብት ውስጥ እብጠት መኖር 98. ሌላ ካለ ይግለጹ	

205.	የጡት ካንሰር በሽታ መዳን የሚችለው በየትኞቹ ደረጃዎች ላይ ነው?	1. በደርጃ 0 እና 1 ላይ 2. በደርጃ 0፣ 1 እና 2 ላይ 3. መዳን አይችልም 98. ሌላ ካለ ይግለጹ	
206.	የጡት ካንሰር በሽታ ማከሚያ ዘዴዎች ምን ምን ናቸው?	1. ቀዶ ህክምና 2. የጨረር ህክምና 3. ኬሞቴራፒ 98. ሌላ ካለ ይግለጹ	

ክፍል 2ለ፡-የጡት ካንሰር ቅድመ ምርመራ እውቀት ጥያቄዎች

207.	የጡት ካንሰር በሽታ ቅድመ ምርመራ አይነቶች ምንድን ናቸው? **ከአንድ በላይ መልስ መስጠት ይቻላል**	1. ጡትን በራስ መመርመር 2. ጡትን በሃኪም ማስመርመር 3. ማሞግራፊ 98. ሌላ ካለ ይግለጹ	
208.	ጡትን በራስ መመርመር በኢትዮጵያ በስንት አመት መጀመር አለበት?	1. 20 አመት ላይ 2. 40 አመት ላይ 3. የወር አበባ መታየት ሲጀምር 4. ከማረጥ በኋላ 98. ሌላ ካለ ይግለጹ	
209.	ጡትን በራስ መመርመር በየስንት ግዜ መደረግ አለበት?	1. በየወሩ 2. በየሳምንቱ 3. በየሶስት ወሩ 4. በየስድስት ወሩ 5. በየአመቱ 98. ሌላ ካለ ይግለጹ	
210.	ጡትን በራስ ለመመርመር ትክክለኛው ወቅት መቼ ነው?	1. የወር አበባ እየታየ 2. የወር አበባ ከመታየቱ ከ 1-7 ቀን ቀድሞ 3. የወር አበባ ከታየ ከ 1-7 ቀን በኋላ 4. በማንኛውም ጊዜ መመርመር ይቻላል 98. ሌላ ካለ ይግለጹ	
211.	ጡትን በሃኪም ማስመርመር በየስንት ጊዜ መካሄድ አለበት?	1. በየወሩ 2. በየአመቱ 3. በየሶስት ወሩ 4. በየሶስት አመቱ	

		98. ሌላ ካለ ይግለጹ	
212.	የማሞግራፊ ቅድመ ምርመራ በኢትዮጵያ በስንት አመት መጀመር አለበት?	1. 30 አመት 2. 35 አመት 3. 40 አመት 4. 45 አመት 98. ሌላ ካለ ይግለጹ	
213.	የማሞግራፊ ቅድመ ምርመራ በየስንት ጊዜ መደረግ አለበት?	1. በየአመቱ 2. በየስድስት ወር 3. በየሁለት አመት 4. በየሶስት አመት 98. ሌላ ካለ ይግለጹ	
214.	ማሞግራፊን የምንጠቀመው መቼ ነው?	1. ለጡት ካንሰር በሽታ ቅድመ ምርመራ 2. የጡት ካንሰር በሽታ መኖሩን ለማረጋገጥ 3. ለሁለቱም 98. ሌላ ካለ ይግለጹ	

ክፍል 3፡-የአመለካከት ጥያቄዎች

ክፍል 3ሀ፡-የጡት ካንሰር በሽታ የአመለካከት ጥያቄዎች

301.	የጡት ካንሰር የሚድን በሽታ ነው፡፡	1. እስማማለሁ 2. በጣም እስማማለሁ 3. እርግጠኛ አይደለሁም 4. በጣም አልስማማም 5. አልስማማም	
302.	የጡት ካንሰር በሽታ የሚድነው በጡት መቁረጥ ህክምና ብቻ ነው፡፡	1. እስማማለሁ 2. በጣም እስማማለሁ 3. እርግጠኛ አይደለሁም 4. በጣም አልስማማም 5. አልስማማም	
303.	ለጡት ካንሰር በሽታ ተጋላጭ ነኝ፡፡	1. እስማማለሁ 2. በጣም እስማማለሁ 3. እርግጠኛ አይደለሁም	

		4. በጣም አልስማማም 5. አልስማማም	
304.	የጡት ካንሰር በሽታ መኖሩን በጊዜ ማወቅ መፍትሄ ለመፈለግ ይረዳል፡፡	1. እስማማለሁ 2. በጣም እስማማለሁ 3. እርግጠኛ አይደለሁም 4. በጣም አልስማማም 5. አልስማማም	
305.	የጤና ትምህርት መስጠት የጡት ካንሰር በሽታን በጊዜ ለማወቅ ይረዳል፡፡	1. እስማማለሁ 2. በጣም እስማማለሁ 3. እርግጠኛ አይደለሁም 4. በጣም አልስማማም 5. አልስማማም	

ክፍል 3ለ፡-የጡት ካንሰር ቅድመ ምርመራ የአመለካከት ጥያቄዎች

306.	አንድ ሴት የጡት ካንሰር በሽታ እንዳለባት ጤና ጣቢያ ላይ በሚሰሩ ባለሙያዎች መታወቅ ይችላል፡፡	1. እስማማለሁ 2. በጣም እስማማለሁ 3. እርግጠኛ አይደለሁም 4. በጣም አልስማማም 5. አልስማማም	
307.	የጡት ካንሰር ቅድመ ምርመራ መኖሩ የጡት ካንሰር በሽታን በጊዜ ለማወቅ ይረዳል፡፡	1. እስማማለሁ 2. በጣም እስማማለሁ 3. እርግጠኛ አይደለሁም 4. በጣም አልስማማም 5. አልስማማም	
308.	በጡቴ ውስጥ እባጭ ቢኖር ሀኪም አማክራለሁ፡፡	1. እስማማለሁ 2. በጣም እስማማለሁ 3. እርግጠኛ አይደለሁም 4. በጣም አልስማማም 5. አልስማማም	
309.	የወንድ ሃኪም ጡቴን ቢመረምረኝ አይከፋኝም፡፡	1. እስማማለሁ 2. በጣም እስማማለሁ 3. እርግጠኛ አይደለሁም 4. በጣም አልስማማም 5. አልስማማም	

ክፍል 4፡-የተግባር ጥያቄዎች

ክፍል 4ሀ፡-ለራስ የሚደረግ የጡት ካንሰር ቅድመ ምርመራ ተግባር ጥያቄዎች

401.	ለቅድመ ካንሰር ምርመራ ጡትዎን በራስዎ መርምረው ያውቃሉ?	1. አዎ 2. አይ	404
402.	ጡትዎ በራስዎ መመርመር መቼ ጀመሩ?	1. ከ20 አመት በታች 2. በ20 አመት 3. ከ21-30 አመት ባላው ጊዜ 4. ከ31-40 አመት ባላው ጊዜ 5. ከ40 አመት በላይ	
403.	በየስንት ጊዜ ጡትዎን በራስዎ ይመረምራሉ?	1. በየቀኑ 2. በየሳምንቱ 3. በየወሩ 4. በየአመቱ 5. አንዳንዴ	
404.	ለጥያቄ ቁጥር 401 መልስዎ አይ ከሆነ ምክንያትዎ ምንድነው?	1. ጠቃሚ መስሎ አይታየኝም 2. የጡት ካንሰር በሽታ መቼም እንደማይዘኝ ስለማውቅ 3. የጡት ካንሰር ምልክት የለኝም 4. እየረሳሁት 5. በሽታው ቢገኝብኝስ ብዬ ስለምፈራ 6. ለምርመራው የሚመች ቦታ አላገኘሁም 7. እንዴት እንደሚደረግ አላውቅም 98. ሌላ ካለ ይግለጹ	
405.	የጡት ካንሰር ቅድመ ምርመራ በሃኪም አድርገው ያውቃሉ?	1. አዎ 2. አይ	407
406.	ጡትን በየስንት ግዜ በሃኪም ያስመረምራሉ?	1. በየወሩ 2. በየሶስት ወሩ 3. በየአመቱ 4. በየሶስት አመቱ 98. ሌላ ካለ ይግለጹ	
407.	ለጥያቄ ቁጥር 405 መልስዎ አይ ከሆነ ምክንያቶ ምንድነው?	1. ጠቃሚ ነው ብዬ አላምንም 2. የጡት ካንሰር በሽታ እንደማይዘኝ አውቃለሁ 3. ምልክቶች የሉኝም 4. እየረሳሁት	

		5. በሽታው ቢገኝብኝስ ብዬ ስለምፈራ 6. አገልግሎቱ የለም 98. ሌላ ካለ ይግለጹ	
408.	የጡት ካንሰር ቅድመ ምርመራ በማሞግራፊ አድርገው ያውቃሉ?	1. አዎ 2. አይ	
409.	ለላይኛው ጥያቄ መልስዎ አይ ከሆነ ምክንያቶ ምንድነው?	1. ጠቃሚ ነው ብዬ አላምንም 2. የጡት ካንሰር በሽታ እንደማይዘኝ አውቃለሁ 3. ምልክቶች የሉኝም 4. እየረሳሁት 5. በሽታው ቢገኝብኝስ ብዬ ስለምፈራ 6. አገልግሎቱ የለም 7. የመክፈል አቅም የለኝም 98. ሌላ ካለ ይግለጹ	

ክፍል 4ለ፡-ለታካሚ የሚደረግ የጡት ካንሰር ቅድመ ምርመራ ተግባር ጥያቄዎች

410.	ለቅድመ ካንሰር ምርመራ ጡትን በራስ ስለመመርመር ለታካሚዎችዎ ምክር ሰተው ያውቃሉ?	1. አዎ 2. አይ	
411.	ለላይኛው ጥያቄ መልስዎ አይ ከሆነ ምክንያቶ ምንድነው?	1. ጠቃሚ ነው ብዬ አላምንም 2. ታካሚዎቼ ጠይቀውኝ አያውቁም 3. ታካሚዎቼ ምልክት አልነበራቸውም 4. እየረሳሁት 5. ስልጠና የለኝም 98. ሌላ ካለ ይግለጹ	
412.	የጡት ካንሰር ቅድመ ምርመራ ለታካሚዎችዎ አድርገው ያውቃሉ?	1. አዎ 2. አይ	
413.	ለላይኛው ጥያቄ መልስዎ አይ ከሆነ ምክንያቶ ምንድነው?	1. ጠቃሚ ነው ብዬ አላምንም 2. ታካሚዎቼ ጠይቀውኝ አያውቁም 3. ታካሚዎቼ ምልክት አልነበራቸውም 4. እየረሳሁት 5. ስልጠና የለኝም 6. አገልግሎቱ የለም 98. ሌላ ካለ ይግለጹ	

414.	በማሞግራፊ የጡት ካንሰር ቅድመ ምርመራ ለታካሚዎችዎ አዘው ያውቃሉ?	1. አዎ 2. አይ	
415.	ለላይኛው ጥያቄ መልስዎ አይ ከሆነ ምክንያቶ ምንድነው?	1. ጠቃሚ ነው ብዬ አላምንም 2. ታካሚዎቼ ጠይቀውኝ አያውቁም 3. ታካሚዎቼ ምልክት አልነበራቸውም 4. እየረሳሁት 5. ስልጠና የለኝም 6. አገልግሎቱ የለም 98. ሌላ ካለ ይግለጹ	

- ቅድመ ምርመራ፡- የበሽታው ምልክቶች ከመታየታቸው በፊት ወይንም በበሽታው ከመያዝ በፊት የሚደረግ ምርመራ

Declaration

I the under signed declared that this thesis is my original work, has not been presented for Degree in this or any other university and that all sources of material used for the thesis have been fully acknowledged.

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This thesis has been submitted for examination with my approval as university

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