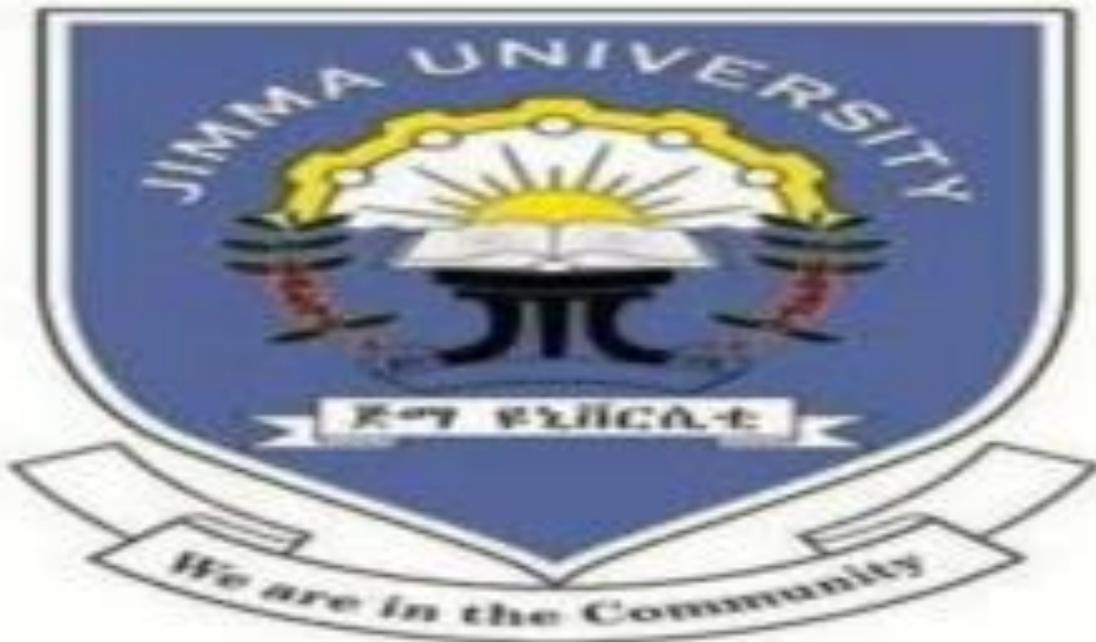**Breast Self-Examination Practice and Associated Factors among Secondary School Female Teachers in Gammo Gofa Zone, South Ethiopia**

By: Mesele Mekuria Farisa (BSC)

A Thesis to be submitted to Jimma University, Institute of Health, Faculty of Public Health and Department of Population and Family Health in Partial Fulfillment for the Requirement of Masters of Public Health in Reproductive Health (MPH/RH)

June, 2018

Jimma, Ethiopia

Breast Self-Examination Practice and Associated Factors among Secondary School Female Teachers in Gammo Gofa Zone, South Ethiopia

By Mesele Mekuria Farisa (BSC)

Advisors:

1. **Mr. Aderajew Nigusse (MPH/ʀн, PhD fellow)**

2. **Mr. Afework Tadele   (MPH/ʀн)**

June27, 2018
Jimma, Ethiopia

Abstract

Introduction: *Early detection of breast cancer is important to reduce morbidity and mortality related to the disease. Breast self-examination is one of the screening methods used for early detection of breast cancer that it should be promoted in resource scarce countries like Ethiopia.*

Objective: *To assess the practice of breast self-examination and associated factors among secondary school female teachers in Gammo Gofa Zone, South Ethiopia.*

Methods: *Institution based cross sectional study was conducted from March1-30/2018. Simple random sampling (lottery) method was applied to recruit districts and towns from the study area. Study participants from each selected district and town were selected by using similar method after obtaining their list from selected districts and town educational bureau. Self-administered questionnaire was used for data collection and Pre-test conducted on 5% of samples. Data was cleaned, coded and entered into Epi data manager ^{TM} and then exported to SPSS V 21. Results were presented using tables, graphs and percentage. Bi-variable and multi-variable logistic regression analyses were conducted. The OR with 95% CI was computed and the significance of the test was decided at p-value of 0.05.*

Results: *Eighty two (34.3%) respondents had ever performed BSE and from these, 32 (13.4%) practiced BSE monthly (regularly). The main sources of information for BSE were television (33.5%), radio (24.7%), and health professionals (21.8%). Being knowledgeable on BSE [AOR=2.84, 95%CI (1.41, 5.72)], Ever heard about BSE [AOR=2.26, 95%CI (1.07, 4.77)], being Married [AOR=4.09, 95%CI (1.64, 10.22)], having less perceived barrier to BSE [AOR=2.62, 95%CI (1.26, 5.46)],having high perceived confidence[AOR=3.63, 95%CI (1.79, 7.39)] and motivation to BSE[AOR=3.29, 95%CI (1.15, 9.45)] were significant predictors of BSE practice.*

Conclusion: *In this study, both ever practice and regular practice of breast self-examination were very low. The main reasons for not practicing Breast self-examination were, not knowing how to perform BSE and forgetfulness (for regular practice). An integrated work on behavioral change communication and interferences that focusing on improving the knowledge on BSE, Skills on how to perform BSE and the identified domains of health belief model such as (perceived barrier, perceived confidence and perceived motivation) may be the most effective strategies that should be considered by Gammo Gofa Zone Health and Educational office.*

Key Words: *Breast Self-examination, Breast cancer, Health Belief Model, Gammo Gofa Zone*

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List of Acronyms

ACS	American Cancer Society
AOR	Adjusted Odd Ratio
BC	Breast Cancer
BCC	Behavior change communication
BSE	Breast Self-Examination
CBE	Clinical Breast Examination
CI	Confidence Interval
COR	Crude Odd Ratio
CSA	Central Statistics Agency
CHBM	Champion Health Belief Model
GGZ	Gammo Gofa Zone
HEWs	Health Extension Workers
LRCs	Low Resource Countries
OR	Odds ratio
PBSE	Practice of breast self-examination
SPSS	Statistical Package for Social Science
SRS	Simple Random Sampling
SSA	Sub Saharan Africa
USA	United States of America
WHO	World Health Organization

Acknowledgement

Chapter one: Background

1.1. Introduction

Cancer is a group of diseases that cause the cells in the body to change and grow out of control. Most types of cancer cells eventually form a lump or mass called a tumor, and are named after the part of the body where the tumor originates(1,2).

Globally, about 25 million people are living with cancer and the recent estimates showed that cancer incidence will almost triple by 2030, with 20–26 million new cancer diagnoses and 13–17 million deaths(3,4). It is the second leading cause of death in the world and More than 70% of all cancer deaths occurred in low and middle-income countries(5).

Breast cancer is one of the types of cancer which is characterized by uncontrolled growth of abnormal cells in the milk producing glands of the breast or in the passages (ducts) that deliver milk to the nipples. It is a global health concern and a leading cause of morbidity and mortality among women(6).Worldwide, over 1.15million cases of breast cancer are diagnosed every year, and 502,000 women die from the disease each year, making it second only to lung cancer as the cause of cancer related deaths among women(7). It has been identified as a major public health problem in both developed and developing nations (7,8) because of its high incidence-prevalence, over-burdened health system and added direct medical expenditure(9).

In developing countries the burden of breast cancer is increasing because of the aging and growth of the population as well as increased prevalence of risk factors associated with economic transition, including smoking, obesity, physical inactivity, and reproductive behaviors(10). In addition to this, a high proportion of cancers which is detected at the early stages in developed countries continue to be diagnosed at more advanced and often fatal stages in developing countries, thus increasing the associated burden of disease. Studies have shown that in contrast to the developed nations, most of the developing nations have recorded a poor outcome and high fatality rate owing to diagnosis of the breast cancer in advanced stages(11).

Morbidity and Mortality associated with Breast cancer can be reduced through early detection by means of screening programs, as it not only increases the chances for successful treatment and

cure of the disease, but also improves chances of survival and lessens the need of invasive treatment(12).

Based on the utilization of screening programs, the survival rate of the disease among the patients 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(LICs)(12,13).Therefore; ensuring availability of early diagnostic & screening services and taking immediate steps have been regarded as the two main strategies for warranting improvement in the prognostic outcome(12).

The most important and recommended Screening methods that believed to be appropriate and effective methods of ensuring early detection of breast cancer are breast self-examination (BSE), clinical breast examination (CBE),and mammography(14). Among these methods, mammography is the method of choice, however; imaging studies that are recommended for early detection of BC cannot be routinely applied in countries with restricted health service resources(15),Moreover, in the world, most of the women are not able to undergo regular CBE and mammography because of high expenses and limited availability, especially in developing countries. Under these circumstances BSE is an appropriate, convenient and cost effective method that can be done by every woman themselves with little training (15,16).

Breast self-examination (BSE) is the process whereby women examine their breasts regularly to detect any changes in order to seek early medical attention(6). It is one of the screening methods used to detect breast related problems like possible lumps, distortions or swelling early (3,2) and it is recommended for every woman above the age of 20 years to be done for 20 minutes once monthly(2), between the 7th and 10th days of menstrual cycle (2-3 days after the menses has gone), goes a long way in detecting breast cancer at the early stages of growth when there is low risk of spread and ensuring a better prognosis when treated(6).

Though the effectiveness of BSE as a breast cancer screening method is controversial, World Health Organization (WHO) and American cancer society encourages as an alternative cost effective screening method for women above age of 20 years. This is because mammography, though effective in screening breast cancer, is not available for many women in developing countries(3,17).

In general, breast cancer is the most common cancer among women; and if not discovered early, it can be fatal therefor; Prevention remains the cornerstone to fight against breast cancer worldwide and an indispensable tool for developing countries like Ethiopia to enhance survival and improve ending.

1.2.   Statement of the problem

Breast cancer has increasingly become an issue of public health importance in both developed and developing nations because of its high incidence-prevalence, the over-burdened health system and direct medical expenditure(2,17). Therefore, early detection and effective treatment of breast cancer is extremely important to reduce morbidity and mortality related to breast cancer(18,19). Worldwide, an estimated 1.7 million women were diagnosed with breast cancer and about 522,000 women died from breast cancer in 2012. This represents about 12% of all new cancer cases and 25% of all cancers in women.(6). However, the higher burden of cancer was observed in less developed regions of the world which accounts for 56% of new cancer cases and 63% of cancer deaths worldwide(2).

In Africa, the incidence of the disease varies across the continent which ranges from 19.3 per 100,000 per year in Eastern Africa to 38.1 per 100,000 in Southern Africa(20). In sub-Saharan Africa it is estimated that the prevalence of breast cancer in women aged 15 and over was 23.5 per 100,000 women in 2008. During the same period an estimated 35,427 women died from breast cancer with a crude mortality rate of 12.8 per 100.000 women(21).

In our country Ethiopia, it is the first leading cancer among females with 24.4% prevalence rate(6). In 2014, 12,956 women were diagnosed with breast cancer and 26,200 women died by breast cancer(6). This is because of that in our country Ethiopia regarding Cancer particularly breast cancer is found on the bottom of their priority list. That is why there is no much infrastructure and facilities to fight against breast cancer in this country. Again in our country literacy rate is not as such high especially for women in rural areas that one can easily assume knowledge and breast self-examination practice will be very poorer. Poverty, culture and religion play an important role for health seeking behavior. Furthermore there is lack of uniform information, education and communication about breast cancer disease and screening methods particularly the cost effective BSE method(22).

Breast self-examination is one of the intervention to prevent breast cancer associated mortality and morbidity because it has a great potential value for the early detection of breast cancer, especially in areas where regular examinations by physicians and mammography are not practicable(12). It is one of the screening methods for early detection of breast cancer which is simple exercise and can potentially save the life of a woman(2,16).

In spite of the introduction of modern screening methods, more than 90% cases of breast cancers are detected by women themselves, stressing the importance of breast self-examination. According to different studies, despite the effectiveness of breast cancer screening behaviors in reducing mortality, the findings in different areas indicate that screening rates remain low(18). In studies conducted in 2011 among 425 Malaysia secondary school teachers, from the total participants, 230 (54%) had ever performed BSE and from these, only 19% of them had performed a regular monthly basis(18).

Another study conducted in 2013 among 200 Mosul city female teachers in Iraqi revealed that only 6.55% of the participants perform regular practice(23),7% on a regular monthly basis in Jordan women in 2002(24), 19% on monthly bases in Nigeria(25), only 12.1 % monthly in Kafa south west Ethiopia in 2015(10), only 14.4% of HEWs in West Gojam practiced BSE regularly (every month)(5), one third of the participants (33.7%) only practiced regularly(monthly) in 2017 by health professionals in Addis Ababa(2).

Different factors contributing for the low level of BSE practices as identified by different literatures were knowledge on BSE and breast cancer, income(18), level of education (26,27), ever heard about BSE(28), perception factors and others (10,18,27,28).Based on these factors different researchers recommended to increase awareness on the BSE practice among mothers of different category but still it remains low. So this study will identify the different approach that the awareness reaches mothers using the school female teachers and in the long ran, the students in the school can benefit from their teachers as they can act as a model in the community. The factors contributing to improve this way of awareness creation will also be identified in this study.

The access to comprehensive diagnostic services particularly in less developed countries is very low; even in some of the areas the service is completely not available hence the women often present to health facility for care at late stages of breast cancer, at which time the treatment is

most ineffective(5).Therefore, in resource scarce countries like Ethiopia, individual self- health empowerment by using those who can act as a model and can make a difference like female teachers in the community is very important. Female teachers can play an important and unique role in the community that through which we can easily improve BSE practices among themselves, students and other women in the community for early detection of breast cancer that will prevent the breast cancer contribution of maternal mortality and morbidity from the coming generation in the study area and the country as well.

To bring this effect, knowing the barriers about breast self-examination practice among study participants through study and addressing it is very crucial. Therefor; this study aimed to assess the level of practice of breast self-examination and its associated factors among the secondary school female teachers to plan future interventions in this field.

1.3. Significance of the study

The incidence of breast cancer is increasing in our country Ethiopia. The contribution of the disease to maternal morbidity and mortality could be reduced if the disease detected early, the cost effective screening methods and culture of seeking routine screening promoted as part of the women's health care practice.

School teachers have regular contact not only with their students in schools but with the community members who look at them as change agents and role models. Since school female teachers can play an effective role in communication and motivation with several groups in the community, identifying the gaps regarding the behavior of BSE practice and addressing them among school female teachers is very crucial in order to promote the healthy behavior in the community at large and to minimize the contribution of the disease to maternal morbidity and mortality from the coming generation.

Therefore; this study is essential in providing information towards better understanding of the practice of breast self-examination to female teachers, design and implementation of effective prevention programs in the study area as well as in the country as a whole and for health care providers to promote the practice and influence the community through health education and to develop habit of seeking screening practice.

Furthermore, since, no research was conducted in the study area and very little research was conducted in our country Ethiopia among teachers, it will help as an input for other researcher and policy makers to carry out a more extensive research on more factors in this particular area.

Chapter two: Literature review

2.1. General situations about Breast self – examination

The incidence, mortality and survival rates of breast cancer vary across the globe because of underlying differences in known risk factors, availability of organized screening programs and access to effective and affordable treatment modalities. However, fatality rates tend to be higher in low-resource countries(9).

Breast self-examination is one of the screening methods for the early detection of breast cancer which is not often done by women(7). However, early detection program on breast cancer prevention allow for a more favorable prognosis for patients, offer increased and less toxic treatment options, and enable the provision of services cost-effectively.

It is important to note that a high proportion of cancers detected at the early stages in developed countries continue to be diagnosed at more advanced and often fatal stages in developing countries, thus increasing the associated burden of disease(11). Studies have shown that in contrast to the developed nations most of the developing nations have recorded a poor outcome and high fatality rate owing to diagnosis of the breast cancer in advanced stages(9). A study done in India explained that, the five-year survival rate was short which is 56% among patients whom diagnosed with breast cancer at a later stage in comparison to 85% for cases diagnosed early (9).

Although there is controversy surrounding the efficacy of BSE in countries where CBE and mammography are readily available, elsewhere BSE remains a cost-effective method to detect breast cancer in resource-constrained countries(11,14,29,30)

2.2. Practice and Source of Information on Breast Self-Examination (BSE)

Across sectional study conducted among 425 female teachers in the state of Selangor Malaysia in 2011 indicated that, 90% of the participants had heard about BSE. Out of which 230 (54%) had ever performed BSE. Only 19% of the participants performed BSE on a regular (monthly) basis however; others were performing BSE every 2–3 months (11%) or occasionally (25%). Magazines and television programs were identified as the main sources of information on breast cancer and BSE by 95% and 83% of the participants, respectively. Printed materials (67%),

friends (52%) and health professionals (46%) were other sources of information on breast cancer. and BSE as well(18).

The same study in similar area on exploration of barriers to breast self-examination among urban women in 2012 revealed that 77.5 % of the respondents believed that BSE is important for early detection of breast cancer and from which 55 % of respondents have the experience of performing BSE; but ,only 28.5 % of them practice BSE once a month(31).

Across sectional study conducted among Saudi Arabian women in 2015 revealed that the majority of women heard about BSE (91.2 %) but, only 41.6 % reported ever practicing BSE and 21 % performed it regularly. According to this study, the main reported reasons for not doing BSE were: not knowing how to examine their breast by (54.9 %) or untrusting themselves able to do it (24.5 %)(14).

Another cross sectional study which was carried out among 200 female teachers in Mosul city Iraqi in 2013 on knowledge, attitude and practice revealed that more than half (two third of the study participants (122 teachers)) were heard of BSE and only one quarter of the study sample were practicing BSE. Among those who were practicing BSE, only 6.55% of the respondents practiced BSE regularly (monthly) base. The reasons stated according to this study for not doing BSE were, did not hear about BSE (39.0%), do not want (16.0%), not knowing how to perform BSE (9.5%), Afraid (5.5%), and not useful (4.0%). T.V. program was the main source of information to BSE (72.9%) which is followed by printed material (55.7%), health professional (34.4%), and a similar percent from peer groups(23).

Across sectional study conducted in 2012 among Kuwaiti female teachers revealed that about half (49.9%) of the teachers declared that they do not know how to practice BSE, 29.0% of them knew the procedure but never applied it, 14.0% applied it when they remembered, the remaining 7.1% of the participants applied the technique either on weekly, monthly or yearly basis. The reasons for non-practicing BSE were lack of knowledge about BSE and its value (43.5%), absence of breast complaints (33.0%), forgetfulness (26.1%) and fear of finding a lump (20.9%)(32).

A cross sectional study which was conducted among 1402 women in Iran on knowledge about screening program, 31%, 21%, and 9% heard about BSE, clinical examination, mammography respectively and 39% knew nothing about any of screening methods. Among those who have

information about screening, their major source of information was Television 34% followed by friends 20% and physicians 19%. regarding knowledge about frequency of BSE, 17% of participants respond monthly and 20% agrees occasional(33). The same study in Kerman Iran among Kerman women conducted in 2016 revealed that the most common reason for not doing breast self-examination was not knowing how to perform breast self-examination(34).

Across sectional study conducted in 2009 among turkey academician revealed that, the percentage of participants who performed BSE ever was 50.9%, while the percentage of female academicians who regularly performed BSE was 27.7 %(35). According to the same study conducted in the same area of rural western Turkey women's,23.4 % of them had no information about breast cancer, 27.9 % had no concept of BSE, 89.3 % had never had a mammography and 75.0 % had never had breast cancer examination(10).

Across sectional study conducted in 2009 among 705 Thailand women indicated that, Seventy-five percent of the women had performed BSE and forty-nine percent of them performed BSE monthly. Most of participants (90%) had heard of BSE, 71% had been taught to perform BSE(28).

Another cross sectional study conducted on 519 female students and employees at two public universities in Jordan women revealed that 67% of the participants had heard about BSE, 26% practiced BSE in the previous 12 months, and only 7% performed BSE on a regular monthly basis. Others perform BSE every 2–3 months (9%), once every 6 months (5%) and once a year (6%). According to this research Television and/or radio programs were identified as the main source of information on breast tumors and BSE by 62%and 42% of the participants, respectively. Printed materials were also a major source of information about breast tumors (47%) and about BSE (37%). Health professionals (doc tors/nurses) were mentioned as a source of information on breast tumors and BSE, 11% and 12%, respectively(27).

Across sectional study conducted in 2014 among 300 secondary school female teachers in Nigeria revealed that, 79.3% had ever practiced (BSE) and of which19% performed BSE monthly. Concerning the information about the BSE, all of the respondents (100.0%) had heard of breast self-examination, with main source as being the broadcast media (45.3%)(25). Similar study in the same area in 2016 among school female teachers revealed that the majority (93.2%) had heard of BC and the main sources of information were television (66.4%) and radio (42.0%);

76.2% claimed to have heard about SBE, 10.7% knew the appropriate age for commencing BSE. One hundred and eleven (36.2%) had ever practiced SBE and only 27.6% of these examined their breast monthly(36).

Other study in Egypt in 2013 among Egyptian women revealed that, the majority of the participants (85.3%) heard or read about breast cancer, while nearly two third (74.3%) heard or read about breast self- examination. According to this research the highest source of information was TV and radio (26.8%). Only 35.3% reported that they practiced BSE, However; Only 7% of them perform BSE on a regular monthly basis (once per month), while 21% stated that they perform it irregularly (every 6-12 months) and 17.3% of them mentioned they performed it once per year(19).

In Ethiopia, cross sectional study conducted in Kafa Zone in 2015 among 315 randomly selected female teachers revealed that, 52 (16.5 %) of women heard about BSE, but; 37 (11.7 %) of the them have never obtained information about either breast cancer or BSE and from those who heard about BSE 38 (12.1 %), of them practiced BSE regularly (10). Television or radio 227 (72.06 %) are the main source of information on breast cancer and BSE. According to this research, detail data regarding mammography and wither the availability of other screening methods in the community was not collected were stated as the limitations in this study(10).

The other similar study conducted among HEWs in 2013 on assessment of factors associated with BSE in Gojam revealed that 147 (37.3%) of study participants practiced BSE during their life time but, only 14.4% of them practiced BSE regularly (every month) (5).according to this study, no breast problem (53.2%), not knowing BSE technique (30.6%), and not knowing the importance of BSE (21.4%) were the main reasons for not to practice BSE(5) and some of the other commonest reason stated by different researchers for not doing BSE were, did not hear about BSE (39.0%), do not want (16.0%), had no knowledge of procedure (9.5%), Afraid (5.5%), not useful (4.0%), and time-consuming or that BSE was not needed if one was in good health(5,23).

Across sectional study conducted among 300 female health professionals in 2017 of west Ethiopia revealed that 77% of the participants ever practiced BSE; from those who practice, 33.7% practiced regularly (monthly bases). The finding of this study also showed that 44% of the study participants perform BSE two to three days after secession of menstruation. The reasons

mentioned for not performing BSE were: no breast problem (12.7%), do not feel comfortable performing BSE (2.7%), scared of being diagnosed with breast problem or cancer, do not believe it is beneficial (4%) and do not know how to do it (7.7%) (2,34).

2.3. Factors related to breast self-examination practice
Modifying and Perception factors

Health belief model has frequently been applied to breast cancer screening. The model specifies that health related behavior is influenced by a person's perception of the threat posed by a health problem and by the value associated with his or her action to reduce that threat(37).

Across sectional study conducted among Saudi Arabian women in 2015 on predictors of BSE Practice using HBM revealed that women had low scores of; perceived susceptibility, seriousness, confidence and barriers (PMS: 44.8 %, 55.6 %, 56.5 % & 41.7 % respectively), and high scores of perceived benefits and motivation (PMS: 73 % & 73.2 % respectively) to perform BSE. According to this study, Significant predictors of breast self-examination performance after controlling the confounders were: levels of perceived barriers (p=0.046) and perceived confidence (p=0.001) to BSE, overall knowledge on BC (p<0.001), work status (p=0.032) and family history of BC (p=0.011)(14).

Another cross sectional, correlational study used with a sample size of 519 among Jordanian women in 2001 showed that a statistically significant finding in the BSE practice group's that the mean ranks of BSE-benefit and confidence which were higher than in the non-practice group (p = 0.003, p < 0.001). And also the mean rank of BSE- barrier in BSE-practice was lower than in the non-practice group and this was also found to be statistically significant (p < 0.001). The Socio-demographic status such as level of education, referral from a physician, knowledge, health insurance coverage and family history of breast cancer have also been associated with the practice of BSE (27).

Cross sectional study conducted among Malaysian female teacher identified that women with a greater knowledge about BC and screening methods (AOR: 1.08, with 95%CI (1.02, 1.13) and confidence in performing breast self-examination (AOR: 1.06, with 95% CI (1.00–1.12) were more likely to perform BSE. A family history of breast cancer (OR: 2.49, 95% CI: 0.92–6.71), ever heard about BSE (OR: 1.88, with 95% CI (0.21,16.78) and married (OR: 1.28, with 95 % CI (0.46–3.53) were somewhat more likely to perform BSE than who had not.

(18).

A cross-sectional study conducted on practice of breast self-examination and breast cancer screening using health belief model among of 500 in Iranian women aged 18–65 years in 2012 revealed that higher scores on the scales of perceived benefits, perceived confidence/self-efficacy, and health motivation showed significant positive association with performing BSE(AOR: 1.73 (1.11, 2.72), 4.01 (2.39, 6.73), and 2.01 (1.30, 3.08), respectively)(38).

Another cross-sectional study which was conducted among 705 women in the rural areas of Northeastern region of Thailand revealed that in the multivariate model, women who had heard about BSE were 2.8 times more likely to perform BSE monthly (adjusted AOR = 2.75; 95% CI: 1.10-6.86). Similarly, those women who had a higher knowledge of both breast cancer risks and BSE techniques (adjusted AOR = 2.42; 95% CI: 1.69-3.47) and who had greater self-confidence to perform BSE were more likely to practice breast self-examination regularly (28,35).

Across sectional study conducted among turkey female academicians explained that perceived barriers relating to BSE in participants were higher in those who did not have a practice of BSE (t=3.66, p=0.00). perceived confidence was significantly higher in those with regular practice of BSE (t=5.51, p=0.00)(35).

The study in Nigeria among women of ANCs follower stated that, Educational level was positively associated with knowledge about BSE (p = 0.025), Two hundred and fifty four (84.7%) knew the purpose of BSE, 248 (82.7%) knew that BSE should be started as early in life, 25 (8.3%) were sure BSE should be performed monthly. Overall knowledge of BSE was poor for 140 (46.6%), fair for 122 (40.7%) and good for 38 (12.7%) of respondents(26). In similar area, across sectional study conducted among 100 female teachers and the findings from this study revealed that only 46% of the participants and the majority of the teachers (54%) had good and poor knowledge of breast self-examination respectively(39).

Across sectional study conducted in Kafa zone, south west Ethiopia showed that as participant knowledge increases the odds of performing breast self-examination also increased by 1.1 times, through keeping all other factors constant [AOR 1.10 (95 %, CI 1.05, 1.10)]. The binary logistic regression result showed that all constructs of health belief model were significantly associated with BSE with 95 % CI at P-value 0.05. But after controlling for possible confounding factors, the result showed that per a unit increases in total score of perceived susceptibility and severity

towards breast cancer the odds of performing BSE increased by 1.95, [AOR 95 %,CI 1.95 (1.44–2.63)] and 1.24 [AOR, 95 %,CI 1.24 (1.11–1.46)] respectively(10).

The study conducted among health professionals in 2017 of west Ethiopia revealed that those knowledgeable on BSE were 4 times (AOR=4.2, 95%CI: 1.36, 5.65) more likely to examine their breast than those who were not knowledgeable(2).The other cross sectional study conducted in 2012 on Knowledge about Breast Cancer Risk-Factors, Breast Screening Method And Practice Of Breast Screening among health professionals in Addis Ababa revealed that three hundred and twenty six (77.6%) respondents from the total participants were aware of BSE as a screening method. According to this study, marital status were the predictor of practice of BSE(22,37).

Modifying factors

- Age

- Marital status

- Ethnicity

- Religion

- Level of education

- Monthly income

- Service years

- Knowledge on BSE and breast cancer

- Family history of Breast cancer

- Field of study

- Existing current/

Past hx of personal breast problem

-Ever heard of BSE

Individual perceptions

Perceived susceptibility

-One's opinion of chances of getting a condition

Perceived severity

-How serious a condition and its consequences

Perceived barrier

-psychological, physical obstacles of practice of BSE

Perceived benefit

-Any benefit expected from the practice of the BSE

Perceived Self-efficacy

-Confidence in ability to practice BSE

Action

Individual behavior

(Practice of Breast self-examination)

Cue to action/motivation

-Advice from families, friends

-exposure to different mass Medias

(Radio, TV, internet, printed materials)

Figure 1: Conceptual frame work of the study (Adapted from Karen Glanz health education 4th edition, 2008)

Chapter three: Objectives

3.1. General objective

- ➢ To assess breast self-examination practice and associated factors among secondary school female teachers in Gammo Gofa Zone, South Ethiopia.

3.2. Specific objectives

- ➢ To determine the magnitude of breast self-examination practice among secondary school female teachers in Gammo Gofa Zone, South Ethiopia.

- ➢ To identify associated factors of Breast self-examination practice among secondary school female teachers in Gammo Gofa Zone, South Ethiopia.

Chapter four: Methods and materials

4.1. Study Area and period

This study was conducted in Gammo Gofa Zone which was 274 Kms and 502Kms far from Hawassa (capital of SNNPR) and Addis Ababa (Capital of Ethiopia) respectively from its capital city called Arba Minch town.

Administratively GGZ is divided in to fifteen districts and two administrative towns. Based on 2007 Census conducted by the Central Statistical Agency of Ethiopia (CSA), GGZ has a total population of 1,593,104, of whom793, 322 were men and 799,782 were women; with an area of 18,010.99 square kilometers.

GGZ is bordered at the south by Dirashe special woreda, at southwest by Debub (South) Omo and the Basketo special woreda, at northwest by Konta special woreda, at north by Dawro and Wolayita, at northeast by the Lake Abaya which separates it from the Oromia Region, and at southeast by the Amaro special woreda.

In this academic year, there were 13,071 teachers of which 8650 were males and 4421were female teachers) available from primary to high school levels at the time of preliminary assessment. Among females, a total of 539 teachers were available in Secondary schools in the zone.

Concerning the health infrastructure at the time of the study, there were seven Hospitals (three of which were functional at the time of preliminary assessment), 75 Health Centers and 471 Health posts. The Maternal health service coverage of family planning, antenatal care and institutional delivery were 70.89%, ANC1-115%, ANC4 - 97%, and 78.9% respectively.

The study was conducted in Gammo Gofa Zone (GGZ) from March 1- 30/2018 among 247 secondary school female teachers.
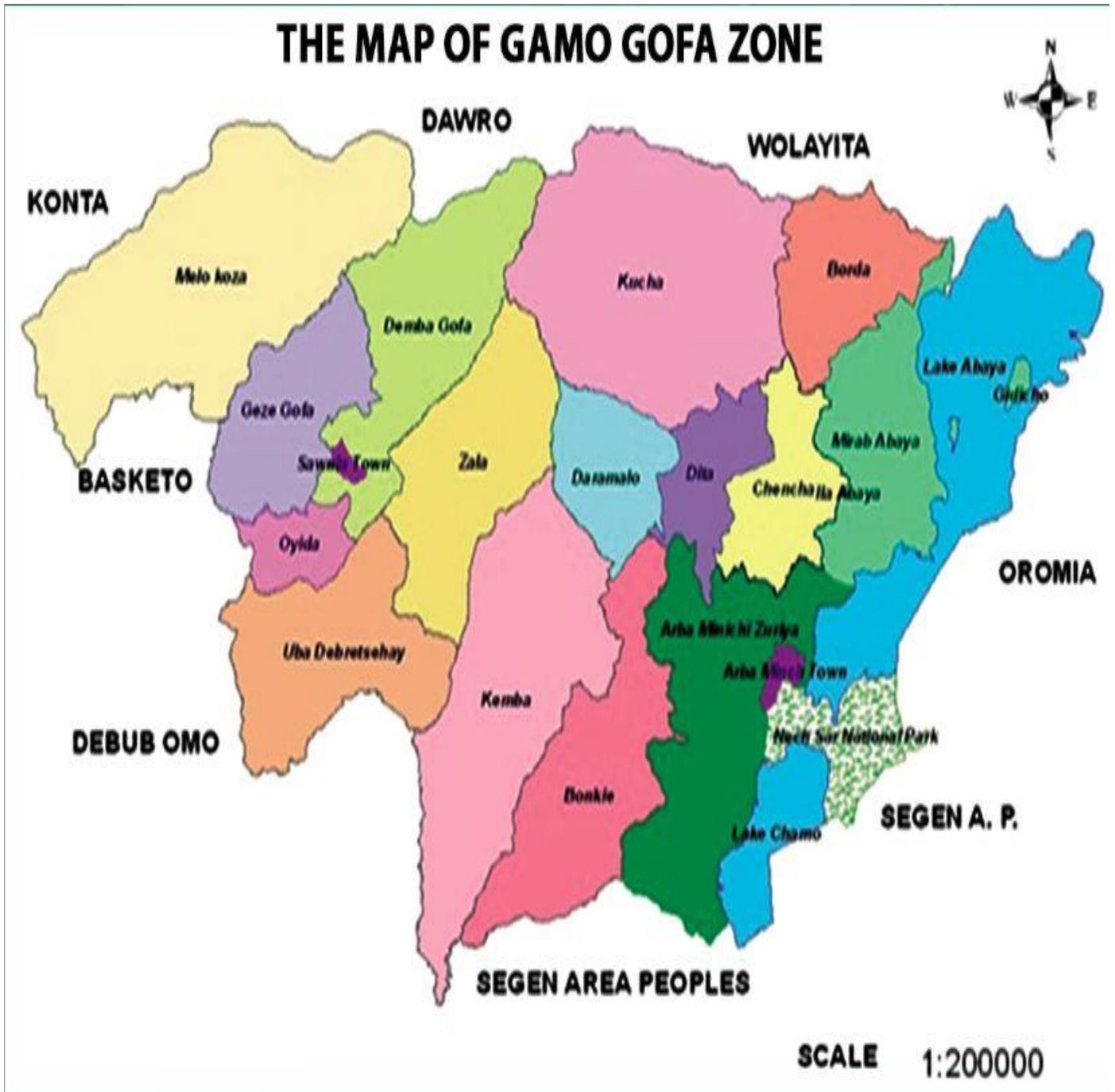
Figure 2: Map of Gammo Gofa Zone, South Ethiopia

4.2. **Study design** – Institution based Cross sectional study was conducted

4.3. **Population**

    4.3.1. **Source population -** All female teachers in public secondary schools in Gammo Gofa Zone

    4.3.2. **Study population** – All female teachers in secondary schools of selected districts and town

    4.3.3. **Sample population –** All randomly selected female teachers in selected districts and town

    4.3.4. **Inclusion criteria**

        ➢ All female teachers aged 20 years and above

    4.3.5. **Exclusion criteria**

        ➢ Those who were Seriously ill and do not come to the school

        ➢ Those who were out of the study area for several days due to different reasons (training for long time) during the study period were not included in the study.

4.4. Sample size determination

Epi-info version 7.1.1 was used for single population proportion with the assumptions of 95% confidence level, 5% margin of error and 10% of non-response rate added. To assure the sample adequacy, sample size has been calculated for both the out-come (in the first row) and some of the predictor variables (all the other rows). Finally, the maximum calculated sample size was used.

Table 1: Sample size calculation using Epi-info version 7.1.1 for checking sample adequacy for the study conducted among secondary school female teachers in GGZ

S. no.	Variables		Prevalence	References	Total sample size after 10% added
1	Practice of breast self-examination(BSEP)		12.1	(10)	125+13=**138**
2	Age category	19-24	14.1	(4)	138+14=**152**
		25-29	**47.7**	"	**224+23** =247
		30-34	19.5	"	167+17=**184**
3	Information on How to perform BSE		67.8	(6)	207+21=**228**
4	Information when to perform BSE		66.4	"	210+21=**231**
5	Perceived benefit to BSE		76.6	(4)	182+18=**200**

4.5. Sampling technique

There were fifteen districts and two administrative towns found in the Gammo Gofa Zone. 40% (six districts and one town) were selected from the total area using simple random sampling technique (lottery method) by considering no differences among secondary school female teachers in several characteristics.

The source population was highly dispersed and most of the schools in districts and towns had small numbers of female teachers. Therefore; to obtain the required sample, the percentage was increased.

The total number of female teachers from each of selected districts and town were obtained from Gammo Gofa Zone educational bureau and their numbers were rechecked from each of selected district and town educational bureau first. Then after proportional to size allocation was carried out to each of selected district and town based on the available numbers of female teachers.

Finally the required sample size from each of selected district and town was selected by using SRS (lottery method) after obtaining the list from selected districts and town educational bureaus. Female teachers who were randomly selected at district and town level were addressed by the data collectors (facilitators).
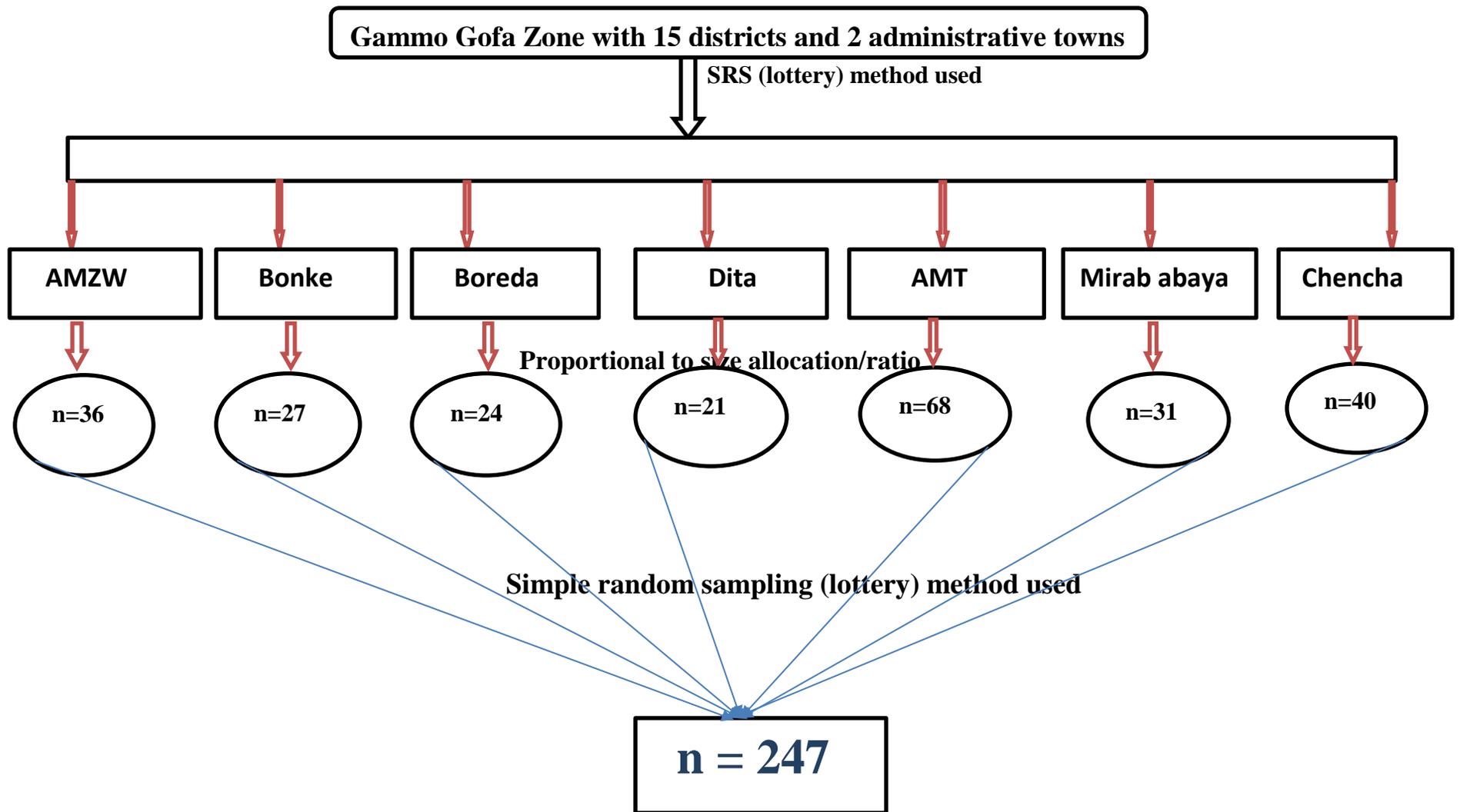
Figure 3: Sampling technique showing how female teachers were selected from districts and town in GGZ, South Ethiopia, in 2018G.C

4.6. Data collection procedure

Self-administered questionnaire which included the socio-demographic characteristics, knowledge towards BSE and breast cancer; and Perceptions of the female teachers towards breast self-examinations using health belief model constructs was used as data collection instrument.

A total of seven health extension workers and one supervisor for all selected districts and town were used as facilitators of data collection after two days of training was given.

The completeness of data was checked by all facilitators during data collection and also re-checked after data collection by the supervisor and principal investigator.

4.7. Variables

4.7.1. Dependent Variable
➢ Practice of Breast self-examination

4.7.2. Independent variables
Modifying factors and perception factors using HBM:

➢ Age

➢ Marital status

➢ Ethnicity

➢ Religion

➢ Educational level

➢ Service years

➢ Field of study

➢ Average Monthly income

➢ Family history of breast cancer

➢ Knowledge of BSE and breast cancer

➢ Ever heard of breast self-examination

➢ Previously or currently existing personal breast related problem

Perception factors using health belief model (HBM)

➢ Perceived susceptibility
➢ Perceived severity
➢ Perceived benefit
➢ Perceived barrier
➢ Perceived confidence
➢ Perceived motivation /cues to action

Measurements

A total of 34 Perception items were used to assess the perceptions of female teachers towards BSE practice. Five point Likert scale response with choices ranged from "strongly disagree (scores 1 point)" to "strongly agree (scores 5 points)" were used.

Susceptibility to breast cancer were consisted of four items and scored from 4 to20, seriousness of breast cancer items consisted of seven items and scored from 7 to 35, benefits to BSE consisted of six items and scored from 6 to 30, barriers to BSE consisted of seven items and scored from 7 to 35, self-efficacy/confidence to BSE consisted of six items and scored from 6 to 30, motivation to BSE consisted of 4 items and scored from 4 to 20.

For all construct/concept items of Health Belief Model, the higher scores (the half and above) were indicated as having high perception towards performing BSE except for barriers to BSE in which higher score indicate high barrier to perform BSE(28).

Participant's knowledge towards BSE and breast cancer was measured by the total number of answers to 14 and 8 items to BSE and breast cancer knowledge questions respectively. Those who answered less than half for both BSE and Breast cancer were considered as less knowledgeable and those who answered half and above to knowledge questions of BSE and breast cancer were considered as knowledgeable (2,28).

Participant's practices of BSE were determined from binary outcome variable (yes, no) by using the question "Have you ever examined your breast by your hands in the last one year" and those who responded yes, were further asked the appropriate time to perform BSE and the right way of performing BSE and how frequently they did BSE. Those who answered correctly for the above questions were leveled as practiced BSE but not necessarily regularly.

4.8. Operational definitions

Breast self-examination practice: Those who had ever practiced breast self-examination in the last one year with the right way (palpate with pads of three middle fingers), and at the right time (some days after discontinuation of menses) but not necessarily regular practice.

Knowledgeable: Those who answered the half and above to items of knowledge on BSE and breast cancer.

Not knowledgeable: Those who answered below the half to items of knowledge on BSE and breast cancer

Early Detection: the use of screening tests to detect breast cancers at early stages to provide better opportunities for patients to obtain more effective treatment with fewer side effects

High Perceived susceptibility to breast cancer: Participants who responded the half and above were labeled as having high perceived susceptibility otherwise low.

High Perceived severity to breast cancer: Participants who responded the half and above were labeled as having high perceived severity otherwise low to breast cancer.

High Perceived benefits to BSE: Participants who responded the half and above were labeled as having high perceived benefit to BSE otherwise low.

High Perceived barriers to BSE: Participants who responded the half and above were labeled as having high perceived barrier to BSE otherwise low.

High Perceived confidence to BSE: Participants who responded the half and above were labeled as having high perceived confidence to BSE otherwise low.

High Perceived motivation to BSE: Participants who responded the half and above were labeled as having high perceived motivation to BSE otherwise low.

4.9. Data Analysis procedures

Data were cleaned, coded and entered in to Epi-data version 4.1^{TM} then exported to SPSS version 21 for analysis. Frequency tables, graphs and descriptive summaries were used to describe the study variables.

Bi-variable logistic regression was carried out initially to identify the candidate variables. All Variables with the p value of < 0.25 were with candidates and entered into the multi-variable Logistic regression model for controlling the possible effects of confounders. Odds ratio with 95% confidence interval was calculated and the variable with P-value of <0.05 was declared as statistically significant.

During multi-variable logistic regression, Hosmer Lemshew goodness of fit test for model fitness was conducted and the results for model prediction and overall p-value were 81.2% and 0.978

respectively. In addition to this, Multicolinearity was tested and there was no Multicolinearity with VIF <2.

4.10. Data quality management

The questionnaire was initially prepared in English and translated into Amharic. Latter on it was re-translated back to English to check for any inconsistency. Prepared questionnaire was first pre-tested on 5 % (13) of female teachers at Konso town (one of the districts of Segen area of people zone). The reliability test for each of HBM subscale, knowledge questions to BSE and breast cancer were calculated using Cronbach's alpha. Based on the result obtained, the necessary modifications were made.

The results were **0.8** and **0.79** to knowledge questions of BSE and Breast cancer respectively. However; the Cronbach's alpha coefficients calculated for each of HBM constructs in this study were **0.832, 0.7, 0.812, 0.715, 0.7 and 0.696** which ranged from **0.7-0.83.** The overall alpha coefficient was **0.78** which indicating adequate reliability of the scale(35).

Two days training was given for facilitators and supervisor on the objective of the study, method of data collection and content of questionnaire to avoid any ambiguity at the time of data collection. The completeness of data was checked by facilitators during data collection time and after data collection by the supervisor and principal investigator.

4.11. Ethical considerations

Permission letter and ethical clearance was first obtained from institutional review board (IRB) of Jimma University. The letter of permission from GGZ to each of selected districts and town educational bureau were also obtained to get some of the information and permission for data collection from teachers. Finally the informed consent was obtained from the respondents of this study. For this purpose, an information sheet with consent form was attached to each questionnaire which was explained about the purpose of the study, confidentiality, and the respondent's full right of voluntary participation.

4.12. Dissemination of the report

The finding of this study was submitted in a form of thesis to Jimma University, Institute of health, faculty of Public Health and Department of Population and family health. The copies will be provided to all relevant stake holders and finally, the results will be communicated in scientific conferences and journals.

Chapter five: Results

Socio-demographic characteristics of the study participants

Two hundred thirty nine participants were responded in this study and giving a response rate of 96.6%. The mean (± SD) age of participants was 39.8(± 10.4) years.

Regarding marital status, more than half (59.8%) of the participants were married. Majorities (55.6%) of the participants were Gammo in ethnicity, (52.3%) were orthodox religion followers followed by protestant religion.

The mean (±SD) monthly income of the study participants was 5195.55(± 1762.352) Ethiopian Birr **(Table 2).**

Table 2: Socio-demographic characteristics of secondary school female teachers who were participated in the study, Gammo Gofa Zone, South Ethiopia (N=239).

Variables	Category	Frequency	Percent
Age in years	<29	59	24.7
	30-34	28	11.7
	35-39	35	14.6
	>=40	**117**	**49.0**
Marital status	Single	67	28.0
	Married	**143**	**59.8**
	Widowed/divorced/living separated	29	12
Educational level	Diploma	34	14.2
	First degree	**190**	**79.5**
	Second degree	15	6.3
Religion	**Orthodox**	**125**	**52.3**
	Protestant	105	43.9
	Muslim	5	2.1
	Catholic	4	1.7
Ethnicity	**Gammo**	**133**	**55.6**
	Gofa	33	13.8
	Wolayta	19	7.9
	Amhara	46	19.2
	Others*	8	3.3
Monthly salary	<3000	9	3.8
	3000-5000	90	37.7
	>=5000	**140**	**58.6**
Service years	**<20**	**164**	**68.6**
	>=20	75	31.4
Field of study	**Social Science**	**88**	**36.8**
	Sport Science	32	13.4
	Biology	75	31.4
	Other natural science	35	14.6
	Others**	9	3.8

*Oromo and Konso, **Language and Computer science

Family history of breast cancer and personal current/past history of breast related problems

Out of the total participants, 15.1% and 13.8% of the respondents responded that they had family history of breast cancer and current/previous personal history of breast related problems respectively (**Table three**).

Table 3: Family history of breast cancer and personal current/previous history of breast related problems among secondary school female teachers in Gammo Gofa Zone, South Ethiopia (n=239).

Variables	Category	frequency	percent
Family history of Breast cancer	Yes	36	15.1
	No	203	84.9
Family members affected by breast cancer(n=36)	Mothers	15	6.3
	Aunts	10	4.2
	Others*	11	4.6
Current/past Personal history of breast cancer	Yes	33	13.8
	No	206	86.2

*Sisters and Grand mothers

Knowledge, perceptions and source of information towards Breast self-examination practice

More than half (61.5%) of the study participants were scored below half to knowledge questions of Breast self-examination and were considered as less knowledgeable. Regarding the perception, even though more than three quarters of the respondents had high motivation (78.7%) to breast self- examination practice, more than half of the participants had both low

perceived confidences (56.5%) and high perceived barrier to breast self-examination practice (68.2%). **(Table 4)**

Table 4: knowledge and perceptions level towards breast self-examination practice among female teachers in Gammo Gofa Zone 2018G.C

variables	category	frequency	percentage
Have ever heard of BSE	Yes	**122**	**51**
	No	**117**	**49**
Knowledge on BSE	knowledgeable	**92**	**38.5**
	Not knowledgeable	**147**	**61.5**
Perceived confidence to Perform BSE	High perceived confidence	**104**	**43.5**
	Low perceived confidence	**135**	**56.5**
Perceived barrier BSE	High perceived barrier	**163**	**68.2**
	Low perceived barrier	**76**	**31.8**
Perceived motivation to BSE	High perceived motivation	**188**	**78.7**
	Low perceived motivation	**51**	**21.3**

Regarding the source of information on breast self-examination, the major source were television 80(33.5%), radio 59(24.7%) and health professionals 52(21.8%) among the others.

Practice of Breast self- examination (PBSE)

From the total participants, only Eighty two (34.3%) had ever practiced Breast self-examination. Among these, less than a quarter (13.4%) of participants were practiced BSE in a regular (monthly) basis.
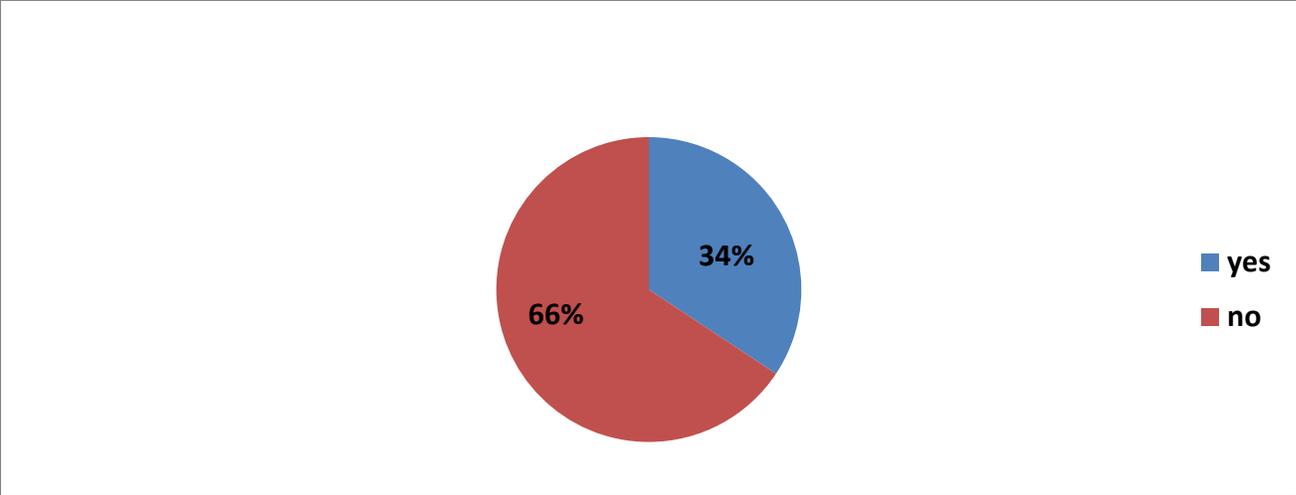
Figure 4: The percentage distribution of breast self–examination ever practiced by secondary school female teachers in GGZ, South Ethiopia, 2018G.C

Out of the total participants, majority (65.7%) were not practicing BSE and the major reasons for not practicing BSE were: not knowing how to perform breast self-examination (49.8%), had no breast related problems (28.5%) and considered that breast self-examination was not beneficial (8.4%) among the others.
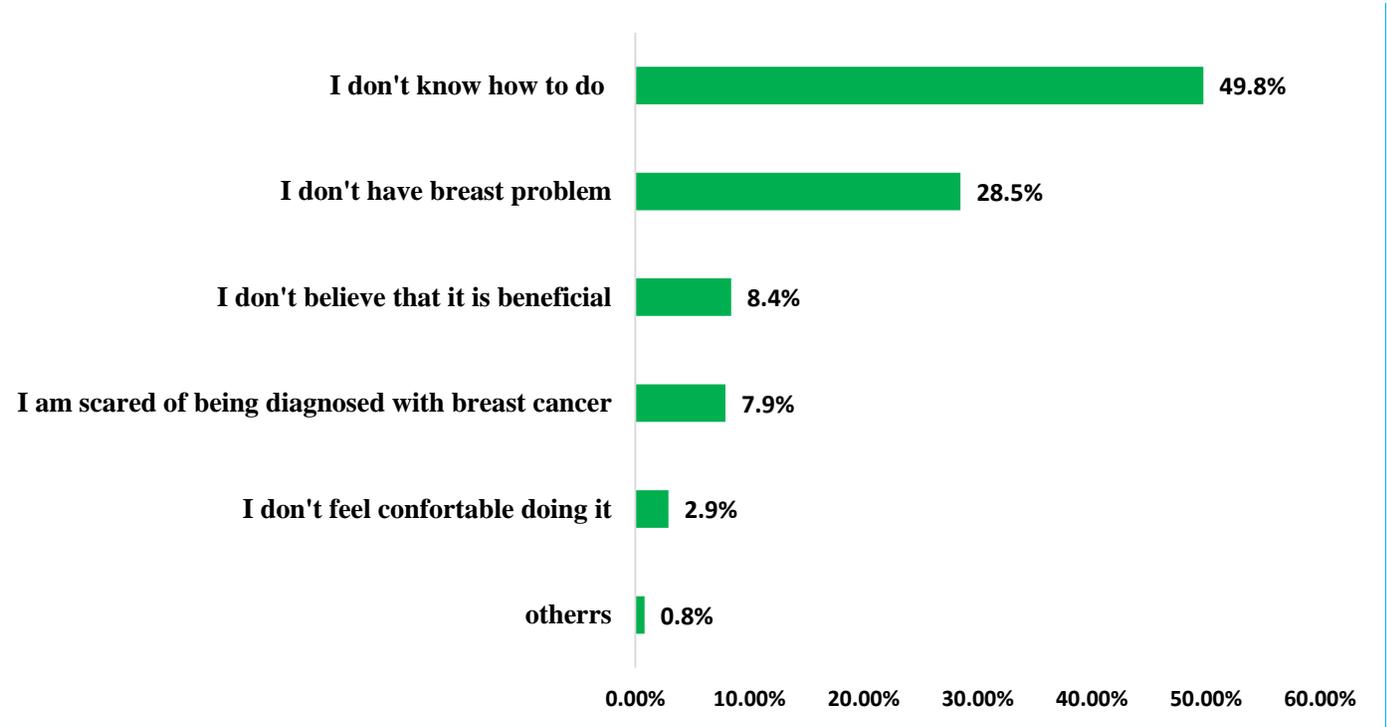
Figure 5: Reasons for not practicing BSE by secondary school female teachers in Gammo Gofa Zone, 2018G.C

Out of the total participants, those who ever practiced BSE in the last twelve months were correctly answered to the ways how BSE performed and the appropriate time to perform BSE as palpating by using palms and three middle fingers and after some days of cessation of menses respectively. However; regarding the numbers of BSE practice which were conducted within one year by the respondents, the majority sixty (25.1%) were practiced below the standard (which is 10-12) and the reasons answered by the majority for not to practice BSE regularly was, forgetfulness (21.8%) among the others.

Table 5: Practice of Breast self–examination among secondary school female teachers in Gammo Gofa Zone, 2018 G.C

parameters		frequency	percent
Ever practiced breast self-examination	Yes	82	34.3
	No	157	65.7
Practiced BSE Monthly (Regular bases)	Yes	32	13.4
	No	50	20.9
Time to perform BSE	2-3 days after cessation of menstruation	82	34.3
Ways BSE Performed	Palpating with pads of three fingers	82	34.3

Factors associated with BSE practice

For bi-variable logistic regression analysis, a total of eighteen variables were used and among these, sixteen of the variables such as Age, current/previous history of breast cancer, Marital status, religion, ethnicity, service years, ever heard of Breast self-examination, ever heard of breast cancer, knowledge on Breast self-examination practice, knowledge on breast cancer, perceived susceptibility, perceived severity, perceived benefit, perceived barrier, perceived confidence and perceived motivation were all candidate variables for multi-variable analysis.

However; monthly income, Family history of breast cancer, field of study and educational level were not.

In multi-variable logistic regression analysis, out of sixteen candidate variables, only six (being ever heard about BSE, having Knowledge on BSE practice, having less perceived barrier to BSE, having high perceived confidence and motivation to BSE and being married) were significant predictors of BSE Practice.

Table 6: Bi-variable logistic regression analysis result of the study conducted among secondary school female teachers in GGZ, South Ethiopia, 2018 G.C

Variables	Category	BSE practice		COR	P-value
		Yes (n=82)	**No** (n=157)	**(with 95%CI)**	
Marital status	Single	9(11%)	58(36.9%)	**1**	
	Married	62(75.6%)	81(51.6%)	**4.93(2.27,10.72)**	**<0.001**
	Widowed/divorced/living separated	11(13.4%)	18(11.5%)	**3.93(1.41,11.0)**	**0.009**
Religion	Orthodox	51(62.2%)	74(47.1%)	**1**	
	protestant	27(32.9%)	78(49.7%)	**0.50(0.29,0.88)**	**0.017**
	Others*	4(4.9%)	5(3.2%)	1.16(0.3,4.53)	0.830
Ethnicity	Gammo	38(46.3%)	95(60.5%)	**1**	
	Gofa	9(11%)	24(15.3%)	0.94(0.4,2.20)	0.882
	Wolayta	6(7.3%)	13(8.3%)	1.15(0.41,3.26)	0.787
	Amhara	26(31.7%)	20(12.7%)	**3.25(1.62,6.50)**	**0.001**

	Others**	3(3.7%)	5(3.2%)	1.50(0.34,6.59)	0.591
Service years	<20 years	47(57.3%)	117(74.5%)	**1**	
	>=20years	35(42.7%)	40(25.5%)	**2.18(1.24,3.84)**	**0.007**
Ever heard of BSE	Yes	59(72%)	63(40.1%)	**3.83(2.15,6.82)**	**<0.001**
	No	23(28%)	94(59.9%)	**1**	
Ever heard of Breast cancer	Yes	80(97.6%)	137(87.3%)	**5.84(133,25.6)**	**0.019**
	No	2(2.4%)	20(12.7%)	**1**	
Knowledge on BSE	knowledgeable	49(59.8%)	43(27.4%)	**3.94(2.24,6.92)**	**<0.001**
	Less knowledgeable	33(40.2%)	114(72.6%)	**1**	
Knowledge on Breast cancer	knowledgeable	74(90.2%)	112(71.3%)	**3.72(1.66,8.33)**	**0.001**
	Less knowledgeable	8(9.8%)	45(28.7%)	**1**	
Perceived susceptibility	High perceived susc.	35(42.7%)	35(22.3%	**2.6(1.46,4.62)**	**0.001**
	Low perceived susc.	47(57.3%)	122(77.7%)	**1**	
Perceived benefit	High perceived ben.	74(90.2%)	124(79%)	**2.5(1.08,5.61)**	**0.032**
	Low perceived ben.	8(9.8%)	33(21%)	**1**	
Perceived barrier	High perceived bar.	40(48.8%)	123(78.3%)	**1**	
	Low perceived bar.	42(51.2%)	34(21.7%)	**3.8(2.14,6.76)**	**<0.001**
Perceived confidence	High perceived con.	58(70.7%)	46(29.3%)	**5.8(3.24,10.49)**	**<0.001**
	Low perceived con.	24(29.3%)	111(70.7%)	**1**	

Perceived motivation	High perceived mo.	75(91.5%)	113(72%)	**4.2(1.78,9.75)**	**0.001**
	Low perceived mot.	7(8.5%)	44(28%)	**1**	
Age	<29	16(19.5%)	43(27.4%)	**0.52(0.26,1.02)**	**0.057*****
	30-34	9(11%)	19(12.1%)	**0.66(0.27,1.57)**	**0.347**
	35-39	8(9.8%)	27(17.2%)	**0.41(0.17,0.98)**	**0.45**
	>=40	49(59.8%)	68(43.3%)	**1**	
Current/past Personal hx of Brest problem	Yes	16(19.5%)	17(10.8%)	**2(0.95,4.19)**	**0.068*****
	No	66(80.5%	140(89.2%)	**1**	
Perceived severity	High perceived sev.	57(69.5%)	92(58.6%)	**1.61(0.91,2.88)**	**0.100*****
	Low perceived sev.	25(30.5%)	65(41.4%)	**1**	

∗**Catholic, **Konso, Oromo, 1- reference category, ***candidate variables**

In Multi-variable logistic regression analysis, Participants who ever heard about BSE were twice more likely to practice BSE [AOR=2.26, 95%CI (1.07, 4.77)] than their counter parts, having Knowledge on BSE practice were three times more likely to practice BSE [AOR=2.84, 95%CI (1.41, 5.72)] as compared with those less knowledgeable, having less perceived barrier to BSE were three times more likely to practice BSE [AOR=2.62, 95%CI (1.26, 5.46)] than their counterparts, having high perceived confidence and motivation were four and three times more likely to practice BSE [AOR=3.63, 95%CI (1.79, 7.39)] and [AOR=3.29, 95%CI (1.15, 9.45)] than their counterparts respectively and being Married were four times more likely [AOR=4.098, 95%CI (1.644, 10.219)] to practice than their counterparts

Table 7: Multi-variable logistic regression analysis result of the study conducted among secondary school female teachers in GGZ, South Ethiopia, 2018G.C

Variables	Category	Practice of BSE		COR	AOR
		Yes(n=82)	No(n=157)	(with 95%CI)	(with 95%CI)
Marital status	single	9(11%)	58(36.9%)	1	1
	Married	62(75.6%)	81(51.6%)	**4.93(2.27,10.72)***	**4.09(1.64,10.22)****
	Widowed/divorced/living separated	11(13.4%)	18(11.5%)	3.94(1.41,11.00)**	1.55(0.42,5.73)
Ever heard of BSE	Yes	59(72%)	63(40.1%)	**3.83(2.15,6.82)***	**2.26(1.07,4.77)****
	No	23(28%)	94(59.9%)	1	1
Knowledge on BSE	Knowledgeable	49(59.8%)	43(27.4%)	**4(2.24,6.92)***	**2.85(1.42,5.73)****
	Less knowledgeable	33(40.2%)	114(72.6%)	1	1
Perceived barrier to BSE	High perceived barrier	40(48.8%)	123(78.3%)	1	1
	Low perceived barrier	42(51.2%)	34(21.7%)	**3.79(1.13,6.76)***	**2.62(1.26,5.47)****
Perceived confidence to BSE	High perceived confidence	58(70.7%)	46(29.3%)	**5.83(3.24,10.49)***	**3.63(1.79,7.39)***
	Low perceived confidence	24(29.3%)	111(70.7%)	1	1
Perceived motivation to BSE	High perceived motivation	75(91.5%)	113(72%)	**4.17(1.78,9.75)****	**3.29(1.15,9.45)****
	Low perceived motivation	7(8.5%)	44(28%)	1	1

*P-value <0.001, **P-value <0.05, 1-Reference category

Chapter six: Discussion

It is very fundamental that women should know how their breasts normally look and feel. Having a good knowledge and performing regular breast self-examination is the best way to know this. Breast self-examination is one of the screening methods that help one to become aware of changes that may occur in the breast early. Any change from the normal look and feel can be a sign of diseases related to breast.

In this study, only 34.3% of the respondents had ever practiced breast self-examination. This finding is nearly similar with a cross sectional study conducted among Egyptian women in 2013 and Nigerian school female teachers in 2014 which revealed that 35.3 % of Egyptian women and 36.2% of the Nigerian female teachers had ever practiced breast self-examination. This similarity might be explained by; the study participants in this study might obtained information on BSE from the available HEWs, health professionals and others in the community. The other possible reason might be due to similarity in some socio-demographic characteristics like educational level and marital status that the majorities were married that they might have obtained information about BSE in health facilities during their ANC follow up, FP service and other MCH services from the available HEWs and other health professionals.

On the contrary; it is much lower than the findings from other cross sectional studies conducted in Selangor Malaysia in 2011, Saudi Arabiya in 2015, Nigeria in 2014, Malaysia in 2012, and in western Ethiopia in 2015 which revealed that 54% of Malaysian school female teachers, 41.6% of Saudi women,79.3% of Nigerian school female teachers,55% in Malaysian women,77% HPs in western Ethiopia ever practiced BSE (2,14,18,19,25,31). The possible explanation for these great differences in ever practice of breast self-examination might be due to the difference in the knowledge on BSE, the access to information on the screening methods, difference in time interval between the studies, socio-economic and socio-demographic characteristics among the study population, difference in the study participants and its compositions.

The finding of this study is somehow higher than the study conducted in Mosul city among school teachers in 2013 and Jordan women in 2001 which revealed that 26% of the participants had ever practiced BSE(23,27).

This difference might be as this study was based on self-report (with no observation of performance or proficiency) the prevalence could be an over-estimated or more attention by the study participants were given to BSE for the lack of accessibility of advanced screening methods in this study area though heard about BSE was low among this study participants than Mosul and Jordan women.

From those who had ever practiced Breast self-examination in this study, only less than one quarter of the participants (13.4%) had practiced breast self-examination on regular (monthly) bases. This finding is more similar with other cross sectional studies done among female teachers in Kafa Zone South west of Ethiopia in 2015 and health extension workers in west Gojam in 2013 Which revealed that (12.1%) of female teachers and 14. 4% of health extension workers had practiced BSE regularly (monthly) bases.(5,10). This similarity might be due to the study conducted in the same geographical area (the same country) that made similarity in certain characteristics in this population. On the contrary; it is also much lower than the cross sectional studies conducted in Selangor Malaysia among school female teachers (19%) in 2011, Saudi women (21%) in 2015, Malaysian women (28.5%) in 2012, Nigeria female teachers (19%) in 2014, and female health professionals in western Ethiopia (33.7%) in 2017.(2,14,18,19,25,31). This differences observed in this study might be for the same reasons as mentioned before in ever practiced BSE.

This study also found that the major reasons for not practicing BSE were, not knowing how to perform breast self-examination, had no breast related problems, considered that breast self-examination was not beneficial and forgetfulness (for not practicing regularly) among the others. Different literatures also agree with this study that the most common reason for not doing breast self-examination were, not knowing how to perform BSE as the study conducted in Kerman Iran among Kerman women in 2016 (34), not know how to do it by the same study area in Iran in 2008(33),do not believe it is beneficial and do not know how to do it by the study conducted among health professionals in west Ethiopia in 2017 (2), no breast problem, not knowing BSE technique, and not knowing the importance of BSE by the study conducted among HEWs in West Gojam in 2013(5), not knowing how to perform BSE, and not useful by the study conducted among Mosul city in2012 (23) and have reported by other similar findings (36,32). This might be as a result of poor health education and giving less attention to BSE both by the government as well as in our society.

In the current study, being ever heard about BSE was two times more likely to practice BSE than their counterparts. This finding is highly comparable with the cross sectional study conducted among Thailand women in 2009 which revealed that those who had ever heard of breast self-examination had more likely to practice than their counterpart (28). On the contrary; the study conducted in Selangor Malaysia among school female teachers in 2011 revealed no statistical association (18). This difference might be due to that, those who ever heard about BSE in this study were given more attentions for BSE. The other possible reasons might be due to the difference in socio-economic and socio-demographic and difference in the study period.

This study also found that only 122 (51%) of the study participants had ever heard about breast Self-examination. Regarding the source of information on breast self-examination, the major sources were television 80(33.5%), radio 59(24.7%) and health professionals 52(21.8%) among the others. This finding was inconsistent with the study conducted in Saudi Arabia (91.2%), Selangor Malaysia (90%), Thailand (90%), Jordan women (67%), Egyptian women (74%), and Kafa zone in south Ethiopia(16.5%) were ever heard BSE (10,14,18,19,24,28).This difference might be due to the difference in accessibility on health information on BSE in different study areas. The other possible reason might be similarly, due to the difference in socio-economic, socio-demographic and the time of study.

In many findings, practice of BSE was determined by the knowledge of women or having information on diagnostic methods of breast cancer (22,18,40). Similarly in the current study, participants who were knowledgeable on BSE were more likely to perform BSE. In this study, only 38.5% of the study participants were knowledgeable about BSE. This result was lower than cross sectional studies conducted among female teachers in Nigeria (46%) in 2012, in Mosul city among school teachers (84%) in 2013, among health professionals in western Ethiopia (58%) in 2017 and Addis Ababa (77.6%) in 2012 (2,22,38).The reasons for this difference might be difference in accessibility to information because in this study area, only half of the study participants had ever heard about BSE than the comparable groups that might have an effect on the knowledge on BSE among this study participants. However; it is higher than the study conducted in Nigeria among antenatal care following women(12.7%) in 2009 (26). This might be due to that teachers might have more awareness than the general population and were more open to adopt health behaviors easily than the other. The other possible reason might be as it was self-report; the study might be overestimated.

In this study, BSE practice was more likely to be in female teachers shown higher confidence, higher motivation and those who perceived fewer barriers. These results were fulfilling the conceptual structure of HBM. On the basis of HBM theory, those with high perceptions of health motivation, high benefits to BSE, high Confidence to BSE, low perceptions of barriers to BSE, high perceived susceptibility and severity to breast cancer demonstrate increased levels of BSE performance.

The current study revealed that those who had high perceived confidence were nearly four times more likely to practice BSE than their counter parts. The finding of this study is also supported by the study conducted among Iranian women on breast self-examination and breast cancer screening in 2012,selangor Malaysia 2011 among school teachers, in Saudi Arabiya women in 2015(14,18,28,35,38) which revealed that those who had high confidence in performing BSE were more likely to practice than their counterparts.

Similarly, those who had high perceived motivation and low perceived barrier were three times more likely to practice BSE than their counterparts. This finding is also supported by other cross sectional studies conducted among Iranian women in 2014 on breast cancer screening methods, Saudi women in 2015,and Turkish women in 2009 (14,35,38) which revealed that those with high perceived motivation and low perceived barriers were more likely to practice BSE than their counterparts.

In this study, perceived susceptibility and severity to breast cancer and perceived benefits to breast self-examination were not significantly associated in this study. Although a significant proportion of women perceived breast cancer to be serious, most of them did not perceive themselves as being susceptible. This could be due to a lack of education on breast cancer and BSE practice in the study area.

Regarding perceived severity, Previous other study in Kefa southwest Ethiopia among school teachers in 2015 have suggested that BSE practice will increases with increased perceived seriousness of breast cancer and shown about the relationship of perceived seriousness/severity of breast cancer with BSE practices (10). While similar to this study, other studies in 2015 among Saudi women, 2011 among Malaysian female teachers, 2001 among Jordan women, 2009 among Thailand women, Turkish academicians and among Iranian women (14,18,27,28,35,38), found that there is no association between perceived seriousness and BSE behaviors. Therefore;

this indicates that teachers might have misconceptions about breast cancer and early detection methods.

In this study, majority of women had high beliefs about the benefits of BSE but not significantly associated. Studies conducted in south west Ethiopia among school female teachers in 2015, Jordan women in 2001 have reported a significant positive relationship between perceived benefits of screening and BSE practice(10,27), whereas similar to this study, other studies in Saudi women in 2015, Malaysian female teachers in 2011, Thailand women and Turkish women academician in 2009 and have found no significant effect (14,18,28,35). This indicates that there are no well-designed awareness programmes that underline the benefits of preventive care and early screening.

Consistent to the findings of cross sectional studies among Iranian women in 2010 and health workers in governmental hospital in Ethiopia in 2012 (22,37), women's marital status in this study was also found to be the predictor of BSE which revealed that, those who married were four times more likely to practice BSE than their counterparts. However; this result was in contradiction with the finding of some other studies conducted among school teachers in Malaysia and Kefa Zone in south west Ethiopia(10,18).

The possible explanation to this might be the participants in this study might have more information about BSE that they might obtained from the available HEWs and health professionals during their ANC follow up, Family planning service and at the time of other MCH service. However; it seems still more investigations are required in this area by using different communities with different socio- demographic characteristics.

Strength of this study

- Use of Revised Champions Health Belief Model (RHBM)

Limitations of this study

- The behavioral study outcomes are based on self-reported information. Therefore, some information may not be reported honestly and possibility of underestimation and over estimation cannot be ruled out (social desirability).

- The information collected quantitatively was not triangulated with qualitative method.

- Lack of validated tool to measure Breast self-examination practice in Ethiopian context

Chapter seven: conclusions and recommendations

Conclusions

In this study, both ever practice and regular (less than a quarter) practice of breast self-examination were very low. The main reasons mentioned for not practicing Breast self-examination were, not knowing how to perform Breast self- examination and forgetfulness. Being (knowledgeable on Breast self-examination practice, Ever heard about Breast self-examination and Married), having (less perceived barrier, high perceived confidence and motivation to Breast self-examination) were significant predictors of BSE practice.

Recommendations

An integrated work on behavioral change communication and interferences focusing on improving the knowledge on BSE, Skills on how to perform BSE and identified domains of health belief model through training, continuous health educational at school and through Medias to disseminate information regarding BSE may be the most effective strategies that should be considered by Gammo Gofa Zone Health and Educational offices including other non-governmental organizations working on health and health related issues. This is very important latter to obtain the large benefits that the teachers will contribute to the community at large and country as well.

To Gammo Gofa Zone health office

✓ Should arrange the training session on BSE in collaboration with educational bureau and other NGOs through focusing on improving the knowledge on BSE, Skills on how to perform BSE, and identified HBM domains particularly for those unmarried secondary school female teachers.

✓ Strengthening the collaboration with education office to give BSE education by health professional on routine basis

✓ Take the responsibility to facilitate local social Medias as a means of disseminating information on breast self-examination practice to improve the knowledge on BSE practice, Skills how to perform BSE, confidence, motivation and minimize the barriers of BSE practice through inviting well educated professionals.

To district health office

➢ Health education program should be prepared on BSE and its techniques to give at local secondary school levels in collaboration with district educational bureau and others.

➢ The existing health extension workers and other health professionals should be encouraged to teach about BSE and its techniques at school level for female teachers.

Health professionals and HEWs

➢ Since they are a major means of disseminating information about healthy behavior regarding BSE and its techniques to school teachers, they have to be committed to teach

and disseminate information at home, at school level, through Medias, at health facilities and using different opportunities to improve the gaps identified.

For Ministry of health

➢ Arranging senior experts on BSE to give interview at television and radio to give message for the general public on the importance with the right time and procedures.

➢ Guidelines and Programs regarding proper technique of breast self-examination should be developed and distributed in the country.

➢ Work in collaboration with ministry of Education in order to address the community at large by using school female teachers. This will latter prevent late presentation of cases to health facilities and reduce the contribution of disease to maternal mortality and morbidity from the coming generation.

For scientific community

❖ Further research should be conducted using a larger sample size at regional or country level including other community members with different socio-demographic characteristics.

❖ Qualitative research should be conducted in order to explore the other socio-cultural contexts of breast self-examination as this is important to establish the effective preventive strategies

❖ Other quantitative research should also be conducted by using combination of other theories of models to explore other factors more.

❖ Study on tool validation to measure breast self-examination practice should be considered

References

1. American cancer society(ACS). Breast Cancer factes and figures. 2016.

2. Legesse EN,Dechassa WH, and Sufa AM. Assessment of breast self-examination practice and associated factors among female health professionals in Western Ethiopia: A cross sectional study. Int J Med Med Sci [Internet]. 2017;9(12):148–57. Available from: http://academicjournals.org/journal/IJMMS/article-abstract/AF0F26766734

3. Birhanu MG et al. Breast Cancer Knowledge and Breast Self-examination Practice among Female Students in Rift Valley University , Adama campus , Adama , Journal of Women â€™ s Health Care. 2017;6(5).

4. Minasie A, Hinsermu B and Abraham A. Reproductive System & Sexual Disorders : Current Research Breast Self-examination Practice among Female Health Extension. 2017;6(4):4–11.

5. Azage M, Abebe G, Mekonnen A. Assessment of Factors Associated with Breast Self-Examination among Health Extension Workers in West Gojjam Zone, Northwest Ethiopia. Int J Breast Cancer [Internet]. 2013;2013(November):1–6. Available from: http://www.hindawi.com/journals/ijbc/2013/814395/

6. Birhane K, Alemayehu M, Anawte B et. al. Practices of Breast Self-Examination and Associated Factors among Female Debre Berhan University Students. Int J Breast Cancer. 2017;

7. Nde FP, Clement J, Assob N et. al. Knowledge , attitude and practice of breast self-examination among female undergraduate students in the University of Buea. 2015;4–9.

8. Erdem O and Toktas I. Knowledge , Attitudes , and Behaviors about Breast Self-Examination and Mammography among Female Primary Healthcare Workers in Diyarbak J r , Turkey. 2016;2016.

9. Shrivastava SR, Shrivastava PS, Ramasamy J. Self Breast Examination : A Tool for Early Diagnosis of Breast Cancer. 2013;1(6):135–9.

10. Birhane N, Mamo A, Girma E, et.al. Predictors of breast self - examination among female teachers in Ethiopia using health belief model. Arch Public Heal [Internet]. 2015;73(1):39. Available from: http://archpublichealth.biomedcentral.com/articles/10.1186/s13690-015-0087-7

11. Khatib OMN, Modjtabai A. Guidelines for the Early Detection and Screening of Breast Cancer. EMRO Technical Publications Series, 30. WHO World Health Organization. 2006. 1-57 p.

12. Shrivastava SR, Shrivastava PS, Ramasamy J. Self Breast Examination: A Tool for Early Diagnosis of Breast Cancer. Am J Public Heal Res [Internet]. 2013;1(6):135–9. Available from: http://pubs.sciepub.com/ajphr/1/6/2/index.html

13. Mihiret MK,Azaria EK,Kiros NG,et.al. Knowledge and Practice of Breast Self Examination Among Female College Students in Eritrea. Am J Heal Res [Internet]. 2016;4(4):104.Availablefrom: http://www.sciencepublishinggroup.com/journal/paperinfo?journalid=656&doi=10.11648/j.ajhr.20160404.16

14. Abolfotouh MA, Banimustafa AA, Mahfouz AA, Al-assiri MH, Al-juhani AF, Alaskar AS. Using the health belief model to predict breast self examination among Saudi Women.BMC Public Health [Internet]. 2015;(November). Available from: http://dx.doi.org/10.1186/s12889-015-2510-y

15. Mohammad FA, Bayoumi M, Megahed MM. Efficacy of Instructional Training Program in Breast Self-Examination & Breast Screening for Cancer among University Students. Public Heal Res. 2013;3(3):71–8.

16. Marzo RR, Salam A. Teachers ' Knowledge , Beliefs and Practices of Breast Self - Examination in a City of Philippine : A Most Cost-Effective Tool for Early Detection of Breast Cancer. 2016;6(2):16–21.

17. Bray F, Ren JS, Masuyer E,et.al. Global estimates of cancer prevalence for 27 sites in the adult population in 2008. Int J Cancer. 2013;132(5):1133–45.

18. Parsa P, Kandiah M, Parsa N. Factors associated with breast self-examination among Malaysian women teachers. East Mediterr Health J [Internet]. 2011;17(6):509–16. Available from: http://www.ncbi.nlm.nih.gov/pubmed/21796969

19. Sharaa HM. Beliefs and Reported Practices Related to Breast Self Examination among Sample of Egyptian Women. Acad J Cancer Res. 2013;6(2):99–110.

20. Ibrahim NA, Odusanya OO. Knowledge of risk factors, beliefs and practices of female healthcare professionals towards breast cancer in a tertiary institution in Lagos, Nigeria. BMC Cancer. 2009;9:1–8.

21. Atanga M, Atashili J, Asoh E, et.al. Breast Self-Examination and breast cancer awareness

in women in developing countries : a survey of women in Buea , Cameroon. BMC Res Notes [Internet]. 2012;5(1):1. Available from: BMC Research Notes

22. Dellie ST, Neguse TM, Demissie M. Knowledge About Breast Cancer Risk-Factors , Breast Screening Method And Practice Of Breast Screening Among Female Healthcare Professionals Working In Governmental Hospitals ,. 2012;2(1):5–12.

23. Younis.MBA. knowledge,attitude and practice of BSE among school teachers in mosul city *. 2012;19(2):221–38.

24. Petro-Nustus W,Sc.D,et.al. Factors associated with breast self-examination among jordanian women. Public Heal Nurs. 2002;19(4):263–71.

25. Alice TE and Phiomena O. Breast self examination among secondary school teachers in South-South , Nigeria : A survey of perception and practice. 2014;6(169):169–73.

26. Onwere S, Okoro O, Chigbu B,et.al. breast -self examiation as amethod of early detection of breast cancer: knowledge and practice among antenatal. 2009;25(1):27–30.

27. Petro-nustus W, Sc D, Mikhail BI. Factors Associated with Breast Self-Examination Among Jordanian Women. 2001;19(4):263–71.

28. pitiphat W et al siramporn S. Factors Associated with Breast Self-Examination among Thai Women Living in Rural Areas in Northeastern Thailand. J Med Assoc Thai 2009; 92 (Suppl 7) S29-35. 2009;92:29–35.

29. Balogun M and Owoaje E. Knowledge and practice of breast self-examination among female traders in Ibadan, Nigeria [Internet]. Vol. 3, Annals of Ibadan Postgraduate Medicine.2007.p.52–6.Availablefrom: http://www.ajol.info/index.php/aipm/article/view/ 39067

30. Dye TD, Bogale S, Hobden C,et.al. Experience of Initial Symptoms of Breast Cancer and Triggers for Action in Ethiopia. Int J Breast Cancer [Internet]. 2012;2012:1–5. Available from: http://www.hindawi.com/journals/ijbc/2012/908547/

31. Al-Dubai SAR, Ganasegeran K, Alabsi AM,et.al. Exploration of barriers to breast-self examination among urban women in Shah Alam, Malaysia: A cross sectional study. Asian Pacific J Cancer Prev. 2012;13(4):1627–32.

32. Alharbi NA, Alshammari MS, Almutairi BM, Makboul G, El-shazly MK. Knowledge , awareness , and practices concerning breast cancer among Kuwaiti female school teachers. Alexandria J Med [Internet]. 2012;48(1):75–82. Available from:

http://dx.doi.org/10.1016/j.ajme.2011.10.003

33.   Montazeri A, Vahdaninia M, Harirchi I,et.al. Breast cancer in Iran: need for greater women awareness of warning signs and effective screening methods. Asia Pac Fam Med [Internet].2008;7(1):6.Availablefrom: http://apfmj.biomedcentral.com/articles/10.1186/ 1447-056X-7-6

34.   Esmat R,et al. Breast Self-examination and its Effective Factors Based on the Theory of Planned Behavior among Women in Kerman, Iran. J EducCommunityHeal.2016;3(3):1–8.

35.   Ceber E, Yücel U, Mermer G, Özentürk G. Health Beliefs and Breast Self-Examination in a Sample of Turkish Women Academicians in a University. 2009;10:213–8.

36.   Ojewusi.a A. Breast cancer knowledge and screening practices among female secondary schools teachers in an urban local government area , Ibadan , N. 2016;(August).

37.   Noroozi A, Jomand T, Tahmasebi R. Determinants of Breast Self-Examination Performance Among Iranian Women : An Application of the Health Belief Model. 2010;

38.   Hajian-Tilaki K, Auladi S. Health belief model and practice of breast self-examination and breast cancer screening in Iranian women. Breast Cancer [Internet]. 2014;21(4):429–34. Available from: http://www.ncbi.nlm.nih.gov/pubmed/22990912

39.   Faronbi JO, Abolade J. Breast self examination practices among female secondary school teachers in a rural community in Oyo State , Nigeria. 2012;2012(June):111–5.

40.   Parsa P, Kandiah M, Zulkefli NAM, Rahman HA. Knowledge and behavior regarding breast cancer screening among female teachers in Selangor, Malaysia. Asian Pacific J Cancer Prev. 2008;9(2):221–8.

Appendices

Jimma University, institute of health, faculty of public health; and department of population and family health

Appendix I: Questionnaire of English version

Participant information sheet and informed consent form

Hello, my name is_____, I am here to collect data for the research purpose which is conducted to complete a thesis for Master's Degree of Public Health in reproductive health. The purpose of this study is to assess the practice and associated factors of Breast self-examination among high school female teachers in GGZ.

You are selected to be one of the participants in this study. I would like to ask you to fill this questionnaire that takes 35 to 40 minute of your time. No harm is imposed to you except the time you commit for filling the question but some of the questions may look too personal but it is helpful for the study. In addition, there is no payment for participation even though the result of the study may benefit as a citizen.

Participation in this study is voluntary and you have the right to refuse or with draw from the study at any time for any reason without penalty. However, your honest answers to these questions are important since it provide relevant information to design interventions that aims to improve the practice of Breast self- examination among school teachers, students and further to strengthen the program by model professionals like you . The information you provide is confidential and it will be used only for study purpose and it will not be disclosed to anyone. A code number will be used to identify the participant therefore, writing your name is not needed.

If you have something that is not clear about the study, please contact the principal investigator, Mesele Mekuria (Mobile 0913870677, 0913870718, mesele.mekuria@yahoo.com) at any time. Are you willing to participate in this study**? 1. Yes □   2. No □**

Questionnaire code_____

Data collection facilitators Signature _____Date_____

Thank you!!!

Instructions: Respond to the following questions by encircling or writing on the blank space

Part I: Socio-Demographic characteristics

S.no	Questions	Responses	Skip to pattern
Q01	Age	_____years/month	
Q02	Marital status	1. Married 3. Widow 2. Single 4. Divorced 5.Separatd	
Q03	Educational level	1. Diploma 3. Masters 2. Degree 4. Others_____	
Q04	Religion	1. Orthodox 3. Muslim 2. Protestant 4. Catholic 5. Others specify_____	
Q05	Ethnicity	1. Gammo 3. Wolayta 2. Gofa 4. Amhara 5. Other specify_____	
Q06	Average monthly Income	_____Eth. Birr in number	
Q07	Service years	_____years/months	
Q08	Field of study	1. Social studies 2. Physical education 3. Biology 4. Other natural sciences 5. Others(specify)_____	

Q09	Do you have any family history of Breast cancer (mother, sister, grandmother, aunt)?	1.Yes 2.no	If no, skip to Q 011
Q010	If yes to Q09 , who is affected	1. Mother 3. Sister 2. Grandmother 4. Aunt	
Q011	Do you have current or past history of breast related problem?	1.Yes 2.No	

Part II: Information source and knowledge questions regarding breast self-examination and breast cancer

Part II A: Questions regarding source of information and knowledge about breast self-examination

s/no.	Questions	Response		Skip to pattern
Q012	Have you ever heard of Breast Self-Examination (BSE)?	1. Yes 2. No		If no skip to Q 014
Q013	If yes, from where did you hear about Breast self-examination? (multiple answer is possible)	1. Radio 2. Television 3. Health professionals 4. Friends/relatives 5. Brochures 6. Others specify_____		
Answer the following questions by using an "x" mark		True(1)	False(2)	I don't know(3)
Q014	Breast self-examination should be done every month			
Q015	Breast self-examination should be conducted by both sex			
Q016	Examining breasts is done after 2-3 days after the end of menstrual period			
Q017	Breast self-examination should be done by looking at breasts in the mirror			

Q018	Examining one's breast is possible while lying down			
Q019	Breast self-examination is done with arms raised over head			
Q020	Examining one's right breast is done while lying down on right side			
Q021	In breast self-examination, the women needs to look for lumps using tips of fingers			
Q022	Breast self-examination is done in a circular, clockwise motion moving from outside in			
Q023	Examining breast should begin at age 20			
Q024	Examining breast using hands is not highly painful			
Q025	When examining breasts, women need to look for lumps under armpits			
Q026	When examining breast, feel for lumps, hard knots, or thickening			
Q027	In breast self-examination, the women needs to squeeze the nipples of each breast to look for discharge			

Part II B: Information source and knowledge questions towards breast cancer

No.	Question	Answer	Skip to
Q028	Have you ever heard about breast cancer?	1. Yes 2. No	If your answer is no, skip to 030
Q029	If yes, from where have you heard about it? (You can choose more than one answer)	1. Radio 2. Television 3. Newspaper/magazine 4. Health professional 5. Other(mention)	
Q030	Breast cancer affects both women and men	1.True 2.False 3.I don't	

		know	
Q031	Breast cancer is one type of cancer and the commonest type in women.	1. True 2. False 3.I don't know	
Q032	Every woman has a chance of acquiring breast cancer	1. True 2. False 3.I don't know	
Q033	If detected early, breast cancer is treatable	1. True 2. False 3.I don't know	
Q034	Breast cancer is dangerous	1. True 2. False 3.I don't know	
Q035	The cause of breast cancer is not evil spirit	1. True 2. False 3.I don't know	
Q036	Breast cancer is not communicable disease	1. True 2. False 3.I don't know	
Q037	Breast cancer is a killer disease	1. True 2. False 3.I don't know	
Q038	Do you know the methods of screening for early detection of breast cancer	1. Yes 2. no	If no skip to Q 40
Q039	If yes to question 038 which methods do you know?(more than one answer is possible)	1. Breast self-examination 2. Clinical breast examination 3. Mammography 4. Others specify____	

PART III: Questions towards Practice of breast self-examination

S.no	Questions	Responses	Skip to patterns
Q040	Have you ever performed Breast self-examination by your hands in the last one year?	1. Yes 2. No	If yes skip to Q42a
Q041	If no to Q40, what are the reasons?(more than one answer is possible)	1. I don't have breast problem 2. I don't feel comfortable doing it	

		3. I am scared of being diagnosed with breast cancer 4. I don't believe that it is beneficial 5. I don't know how to do it 6. others, specify_____	
Q042a	If yes to Q040, How often you practice BSE?	1. monthly 2. not monthly 3. I don't know	
Q042b	When do you perform Breast self-examination	1. 2 to 3 days after caseation of menstruation 2. When it comes to mind 3. Before some days of menses 4. I don't know	
Q043	How is Breast self-examination done?	1. palpate with pads of three middle fingers 2. palpate with any of the fingers 3.I Don't know 4.others,specify_____	
Q044	What will be the position of the body while performing Breast self-examination? (multiple answer is possible)	1.standing straight in front of a Mirror only 2. Lying down only 3. Standing in front of a mirror or sitting down and lying down 4. I don't know	

Q045	Why you conduct breast self-examination? (multiple answer is possible)	1. To detect any abnormality in the breast 2. To learn how the breast normally looks and feels 3. To detect breast cancer earlier 4. Other ,specify_____	
Q046	At what age you started practicing Breast self- examination?	_____ years old	
Q047	How many times in the last 12 months did you perform breast self-examination?	_____ times	
Q048	If it is not10-12 times in the last 12month what was the barrier to perform it?	1. Forgetfulness 2. too busy/not having enough time 3.performing it causes discomfort 4.Fear of finding something or having breast cancer 5.not convinced about its effectiveness 6. Others, specify_____	

PART IV: Questions towards Perception of Breast self-examination

S.NO	Questions	Strongly disagree(1)	Disagree (2)	Neutral (3)	Agree(4)	Strongly agree(5)
Q 049	I worry a lot about getting breast cancer					
Q050	There is a good possibility that I will get breast cancer in the next 10 years					
Q051	My chances of getting breast cancer is great					
Q052	I feel I will get breast cancer					

	sometime during my life					
Q053	The thought of breast cancer scares me					
Q054	When I think about breast cancer, my heart beat faster					
Q055	Problems I would experience with breast cancer would last a long time					
Q056	Breast cancer would threaten a relationship with my boyfriend, husband or partner					
Q057	If I had breast cancer my whole life would change					
Q068	If I developed breast cancer, I would not live longer than 5 years					
Q059	BC is a hopeless disease					
Q060	When I do breast self-examination I feel good about myself					
Q061	When I complete monthly breast self-examination I don't worry as much about breast cancer					
Q062	Completing breast self-examination each month will allow me to find lumps early					
Q063	If I complete breast self-examination monthly during the next year I will decrease					

	my chance of dying from breast cancer					
Q064	If I complete breast self-examination monthly I will decrease my chances of requiring radical or disfiguring surgery if breast cancer occurs					
Q065	If I complete monthly breast self-examination it will help me to find a lump which might be cancer in the future					
Q066	It is hard to remember to do breast examination					
Q067	Doing breast self-examination will make me worry about breast cancer					
Q068	Doing Breast self-examination will be embarrassing to me					
Q069	Doing breast self-examination will take too much time					
Q070	Doing breast self-examination cause Discomfort					
Q071	I don't have enough privacy to do breast self-examination					
Q072	Performing BSE is a trivial thing					
Q073	I know how to perform breast self-examination					
Q074	I am confident I can perform breast self-examination					

	correctly					
Q075	If I were to develop breast cancer I would be able to find a lump by performing breast self -examination					
Q076	I am able to find a breast lump if I practice breast self-examination					
Q077	I am sure of the steps to follow for doing breast self-examination					
Q078	I am able to identify normal and abnormal breast tissue when I do breast self-examination					
Q079	I want to discover health problems early					
Q080	Maintaining good health is extremely important to me					
Q081	I search new information to improve my health					
Q082	I feel it is important to carry out activities which will improve my health					

Thank you very much for your cooperation!!!

በጅማ ዩኒቨርሲቲ የህብረተሰብ ጤናና ህክምና ሳይንስ ፋካሌቲ የስነ ህዝብና ቤተሰብ ጤና ትምህርት ክፍል የ ድህረ ምረቃ መርሀ ግብር

Appendix II: Questionnaire of Amharic version

የመረጃ እና የበጎ ፍቃደኝነት ቅጽ (የአማርኛው ትርጉም)

ጤና ይስጥልኝ ስሜ------------------------------------ይባላል። እዚህ የመጣሁት የሁለተኛ ድግሪ ትምህርት ለማጠናቀቅ የመመረቂያ ጥናት በተመለከተ አሁን በጅማ ዩኒቨርሲቲ በጤና ሳይንስ ተቋም፣ በህብረተሰብ ጤና ት/ቤት በሚሰጠው የህብረተሰብ ጤና የሁለተኛ ዲግሪ ጥናት ላይ መረጃ እየሰበሰብኩ እገኛሁ።

የጥናቱ ዋና ዓላማ በጋም ጎፋ ዞን በሁለተኛና በመሰናዶ ት/ቤቶች ላይ በሚገኙ ሴት መምህራኖች ላይ የራስ በራስ የጡት ምርመራ ትግበራ ምን እንደሚመስል እና ተያያዥ ምክንያቶችን ለመዳሰስ ነው። የመጠየቂያ ቅጹን ለመሙላት ከ30-35 ደቂቃ ይፈጃል። በዚህ ጥናት ላይ በመሳተፉዎ መጠይቁን ለመሙላት የሚጠይቀውን የተወሰነ ደቂቃዎችን ከማጥፋትዎ በስተቀር የሚደርስብዎት ምንም ጉዳት የለም፤ ነገር ግን አንዳንድ ጥያቄዎች ግላዊ ቢመስሉም ለጥናቱ በጣም አስፈላጊ ናቸው። በተጨማሪም በዚህ ጥናት ስለተሳተፉ የሚያገኙት ክፍያ የለም ምንም እንኳን ከጥናቱ ውጤት እንደ ዜጋ ሊያገኙት የሚችሉት ጥቅም ሊኖር ቢችልም።

በዚህ ጥናት መጠየቅ ተሳታፊ የሚሆኑት በፍቃደኝነት ነው። ያለመሳተፍ ወይም በመሀል የማቆም መብት አለሽ/ አለዎት ያለቅጣት፣ ቢሆንም ግን የአንቺ/ የርሶ ትክክለኛ መረጃ ለዚህ ጥናት ጠቃሚ ነው፤ እንዲሁም "የራስ በራስ የጡት ምርመራ ትግበራን" በተመለከተ እርሶ በህብረተሰብ ውስጥ ትልቅ ሚና መጫወት የሚችሉ ከመሆኖ የተነሳ በስራ ባልደራባዎ፣ በሴት ተማሪዎች እና በህብረተሰቡ ውስጥ በሚገኙ በሴሎች ሴቶች ላይ ከላይ የተጠቀሰውን የራስ በራስ የጡት ምርመራ ትግበራን የተሻለ ለማድረግ በሚደረገው እንቅስቃሴ ላይ ትልቅ አስተዋጽአ አለው።

የሚሰጡትን መረጃ ሚስጥራዊነቱ የተጠበቀ እና ለጥናታዊ ተግባር ብቻ የሚውል እና ለማንም የማይገለጽ ይሆናል። ተሳታፊዎችን ለመለየት ልዩ የመለያ ቁጥር ስለምንጠቀም ስሞትን መጻፍ አስፈላጊ አይደለም። መረጃ ለመጠየቅ ካስፈለግዎ የጥናቱን ባለቤት አቶ መሠለ መኩሪያን በስልክ ቁጥር 09-13-87-07-18/09-13-87-06-77 ወይም በኢ-ሜል mesele.mekuria@yahoo.com ማግኘት ይቻላል። በጥናቱ ለመሳተፍ ተስማምተዋል? **1.አዎን ተስማምቻለሁ** ☐

2.አልተስማማሁም ☐

የመጠይቁ መለያ ቁጥር _____

የመረጃ ሰብሳቢ ፊርማ _____ ቀን _____

አመስግናለሁ!!!

መመሪያ፡ ከዚህ ባታች የተዘረዘሩትን መጠይቅ በማክበብ ወይንም በተሰጠው ክፍት ቦታ በመጻፍ ይሙሉ

ክፍል አንድ፡- ማህበራዊ እና የስነ- ህዝብ መረጃ

የጥ. ተ.ቁ	ጥያቄ	ምላሽ	እሴሬ
ጥ01	እድሜሽ ስንት ነው?	_____ በዓመት/በወር	
ጥ02	የጋብቻ ሁኔታ	1. አግብቻለሁ 3. ባሌ ሞቶብኛል 2. አላገባሁም 4. ተፋትቻለሁ 5. ተለያይተን ነው የሚንኖረው	
ጥ03	የትምህር ደረጃ	1. ዲፕሎማ 3. ሁለተኛ ዲግሪ 2. ዲግሪ 4. ሌላ ካለ ጥቀሽ__	
ጥ04	ሃይማኖትሽ	1. ኦርቶዶክስ 3. ሙስሊም 2. ፕሮቲስታንት 4. ካቶሊክ 5. ሌላ ካለ ጥቀሽ_____	
ጥ05	ብሔርሽ	1. ጋሞ 3. ወላይታ 2. ጎፋ 4. አማራ 5. ሌላ ካለ ጥቀሽ_____	
ጥ06	የወር ግቢሽ በአማካይ ስንት ነው?	_____ በቁጥር ስንት ነው?	
ጥ07	የሥራ ልምድ	_____በዓመት/በወር	
ጥ08	የተመረቅሽበት የት/ት ዘርፍ	1. ማህበራዊ ሳይንስ 2. እስፖርት ሳይንስ 3. ስነ-ህይወት ሳይንስ (Biology) 4. ሌላ የተፈጥሮ ሳይንስ 5. ሌላ ካለ ጥቀሽ_____	
ጥ09	በቤተሰብሽ ውስጥ በጡት ካንሰር በሽታ የታመመ/የሞተ ሰው አለ? (እያት፣ እናት፣ እህት፣ አክስት	1. አለ 2. የለም	ከሌላ ወደ ጥያቄ ቁጥር 011 እሴሬ

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ጥ010	ለጥያቄ ቁጥር 09 ምላሽ "አዎ አለ" ከሆነ በጡት ካንሰር በሽታ የተያዘው የቤተሰብ አካል ማን ነው	1. እናት 3. እህት 2. አያት 4. አክስት	
ጥ011	አሁን ወይንም ከዚህ በፊት ከጡቶቿቶቿሽ ጋር የተያያዘ ችግር አለ/ነበር?	1. አዎ 2. የለም	

ክፍል 2: ስለራስ በራስ የጡት ምርመራና ስለ ጡት ካንሰር ግንዛቤ እና የመረጃ ምንጭ ለማጥናት የተዘጋጀ መጠይቅ . ክፍል ሁለት ሀ: ስለራስ በራስ የጡት ምርመራ ግንዛቤ እና የመረጃ ምንጭ ለማጥናት የተዘጋጀ መጠይቅ

የጥ.ተ.ቁ	ዓረፍተ ነገር	መልስ	እለፌ
ጥ012	ስለራስ በራስ የጡት ምርመራ ከዚህ በፊት ሰምተሽ ታዉቂያለሽ?	1. አዎ 2. 2. ሰምቼ አላዉቅም	መልስሽ 2 ከሆነ ወደ ጥ.ቁ.014
ጥ013	ለጥያቄ ቁጥር 012 መልስሽ አዎን ከሆነ መረጃዉን ከየት ነበር የሰማሽዉ (ከአንድ በላይ መልስ ይቻላል)	1. ከሬድዮ 2. ከተሌቪዥን 3. ከጤና ባለሙያ 4. ከጓደኞች /ከዘመድ 5. ከበራር ወረቀቶች 6. ሌላ ካለ ጥቀሽ_____	

ከዚህ በታች የተዘረዘሩትን መጠይቅ "X" መልክት በመጠቀም መልሽ		እውነት	ውሸት	አላውቅም
ጥ014	የራስን ጡት በራስ እጅ ምርመራ በየወሩ መሠራት አለበት			
ጥ015	የራስ በራስ የጡት ምርመራ ሴቶችም ወንዶችም መተግበር አለባቸዉ.			
ጥ016	አንዲት ሴት የራሷን ጡት በራሷ እጅ መመርመር ያለባት የወር አበባ ከሄደ ከ2 እስከ 3 ቀን በኃላ ነዉ			

ጥ017	እንዲት እናት የራሷን ጡት በራሷ እጅ ስትመረምር ከመስታወት ፊት ቆማ መሆን አለበት			
ጥ018	እንዲት እናት የራሷን ጡት በራሷ እጅ በጀርባዋ ተኝታ መመርመር ትችላለች			
ጥ019	እንዲት እናት የራሷን ጡት በራሷ እጅ ስተመረምር እጆቿን በየተራ እራሷ ላይ አድርጋ መሆን አለበት			
ጥ020	እንዲት እናት የራሷን ጡት በራሷ እጅ ስትመረምር የቀኝ ጡቷን ለመመርመር በቀኝ ጎኗ ተኝታ መሆን አለበት			
ጥ021	ጡት ላይ እብጠትን ወይም የጠነከረ ቦታ ለመመርመር መጠቀም ያለብን የጣቶቻችንን መዳፍ መሆን አለበት			
ጥ022	እንዲት እናት የራሷን ጡት በራሷ እጅ ስትመረምር ቀጥተኛ ወይም ክብ መስመሮችን መከተል አለባት			
ጥ023	የራስን ጡት በራስ እጅ ምርመራ ለመጀመር ትክክለኛ ጊዜ 20 ዓመት ነው			
ጥ024	የራስን ጡት በራስ እጅ መመርመር ከፍተኛ የህመም ስሜት የለውም			
ጥ025	እንዲት እናት የራሷን ጡት በራሷ እጅ ስትመርምር ብብት ውስጥ መነካካት ያስፈልጋታል			
ጥ026	የራሷን ጡት በራሷ እጅ ስትመረምር ያልተለመደ ቅርፅና የጡት መጠን መኖር አለመኖርን ማረጋገጥ ያስፈልጋል			
ጥ027	የራሷን ጡት በራሷ እጅ ስትመረምር የጡቷን ጫፍ በመጫን ፈሳሽ መኖር አለመኖሩን ማረጋገጥ ያስፈልጋል			

ክፍል ሁለት ለ: ስለ ጡት ካንሰር ግንዛቤ እና የመረጃ ምንጭ ለማጥናት የተዘጋጀ መጠይቅ

የጥ.ተ.ቁ	ጥያቄ	መልስ	እለፊ
ጥ028	ስለ ጡት ካንሰር ስምተሽ ታውቂያለሽ	1. አዎን 2. ስምቼ አላውቅም	መልስሽ 2 ከሆነ ወደ ጥያቄ ቁ 030
ጥ029	ለጥያቄ ቁጥር 028 መልስሽ አዎን ከሆነ ስለጡት ካንሰር የሰማሽው ከየት ነበር?(ከአንድ በላይ	1. ከሬድዮ 2. ከቴሌቪዥን 3. መፅሐት/ከጋዜጣ 4. ከጤና ባለሙያ	

	መልስ መምረጥ ይቻላል)	5. ሌላ(ጥቀሺ)_____	
ጥ030	የጡት ካንሰር ሴቶችንም ወንዶችንም የምያጠቃ በሽታ ነዉ::	1. እዉነት 2. ሐሰት 3. አላዉቅም	
ጥ031	የጡት ካንሰር በሴቶች ላይ ከሚከሰቱ የካሰር አይነቶች አንዱና በጣም የተለመደ ነው	1. እውነት 2. ሐሰት 3. አላውቅም	
ጥ032	ማንኛዋም ሴት በጡት ካንሰር የመያዝ ዕድል አላት	1.እውነት 2. ሐሰት 3.አላውቅም	
ጥ033	የጡት ካንሰር ቶሎ ከታወቀ ታክሞ ይድናል	1.እውነት 2. ሐሰት 3.አላውቅም	
ጥ034	የጡት ካንሰር አደገኛ በሽታ ነው	1.እውነት 2. ሐሰት 3.አላውቅም	
ጥ035	የጡት ካንሰር በሽታ መንስኤው ርኩስ መንፈስ አይደለም	1.እውነት 2. ሐሰት 3.አላውቅም	
ጥ036	የጡት ካንሰር ተላላፊ በሽታ አይደለም	1.እውነት 2. ሐሰት	

		3.አላውቅም	
ጥ037	የጡት ካንሰር ለሞት ሊያደርግ ይችላል	1.እውነት 2. ሐሰት 3.አላውቅም	
ጥ038	የጡት ካንሰር መመርመሪ ዘዴዎችን ታቅያቿዋለሽ?	1. አዎን 2. አላውቃቸዉም	መልስሽ 2 ከሆነ ወደ ጥያቄ ቁ 040
ጥ039	ለጥያቄ ቁጥር 039 መልስሽ አዎን ከሆነ የትኞቹን ታቅያቿዋለሽ? (ከአንድ በላይ መልስ መምረጥ ይቻላል)	1. የራስን ጡት በራስ እጅ መመርመር 2. በጤና ባለሙያ እጅ መመርመር 3. በመሳሪያ መመርመር 4. ሌላ(ጥቀሺ)_____	

ክፍል ሦስት: ስለራስ በራስ የጡት ምርመራ ትግበራን ለመዳሰስ የተዘጋጁ መጠይቅ

የጥ.ተ.ቁ	ጥያቄ	መልስ	እሴፊ
ጥ040	ከዚህ በፊት ባለፈዉ አንድ አመት የራስሽን ጡት በራስሽ እጅ መርምረሽ ታውቂያለሽ?	1. አዎን 2. አላውቅም	መልስሽ አዎን ከሆነ ወደ ጥያቄ ቁ 042a
ጥ041	ለጥያቄ ቁጥር 040 መልስሽ አላውቅም ከሆነ ምክንያትሽ ምንድን ነዉ?(ከአንድ በላይ መልስ መምረጥ ይቻላል)	1. ከጡት ጋር የተያያዘ ችግር ስለሌለብኝ 2. ጥሩ ስሜት ስለማይሰማኝ 3. የጡት ካንሰር ሊገኝብኝ ስለሚችልና ስለሚፈራ 4. ጥቅሙ ብዙም ስለማይታየኝ 5. እንዴት እንዴሚሰራ ስለማላዉቅ 6. ሌላ(ጥቀሺ)_____	
ጥ042a	ለጥያቄ ቁጥር 040 መልስሽ አዎን ከሆነ መች መች ትተገብሪያለሽ?	1. በየወሩ 2. በየወሩ አይደለም 3. አላዉቅም	

ጥ042b	የራስ በራስ የጡት ምርመራ ስታዴርጊ በየትኛዉ ጊዜ ነዉ የሚታደርጊዉ?	1.የወር አበባ ከሄዴ ከ2-3 ቀን በኃላ 2.ባስታወስኩት ግዜ ብቻ 3.የወር አበባ ከመምጣቱ ከጥቂት ቀናት በፊት 4. ሌላ(ጥቀሽ)_____	
ጥ043	የራስ በራስ የጡት ምርመራ እንዴት ትተገበሪያለሽ?	1.በሶስት መሀል ጣቶች በመዳሰስ 2. በማንኛውም ጣት በመዳሰስ 3. አላውቅም 4. ሌላ ካለ ይጠቀስ__	
ጥ044	የራስ በራስ የጡት ምርመራ ስናዴርግ የተከለ ሰዉነት ሁኔታ እንዴት መሆን አለበት?	1. መስታዋስ ፌትለፌት በመቆም ብቻ 2. ጋዴም በማለት ብቻ 3.መስታዋትፌት ለፌት በመቆም፤በመቀመጥ እና ጋዴም በማለት 4.አላውቅም	
ጥ045	የራስ በራስ የጡት ምርመራ ለምን ታዴርጊዋለሽ?(ከአንድ በላይ መልስ መምረጥ ይቻላል)	1.በጡቶቼ ላይ ሊከስት ያለዉን ማንኛዉንም ችግር በቶሎ ለማወቅ 2. ጡቶቼ ጤናማ መሆናቸዉን ለመረዳት 3. የጡት ካንሰር ካለብኝ ቶሎ ለማወቅና ወደ ህክምና ለመሄድ 4. ሌላ(ጥቀሽ)_____	
ጥ046	የራስ በራስ የጡት ምርመራ በስንት ዓመትሽ ጀመርሽ?	_____ዓመት	

ጥ047	ባለፈት 12 ወራት ምን ያህል ጊዜ የራስ በራስ የጡት ምርመራ አደረግሽ?	_____ ጊዜ		
ጥ048	ባለፈት 12 ወራት ዉስጥ ከ10-12 ጊዜ ካላደረግሽ እንዳታደርግ የከለከለሽ ምንድን ነዉ?	1. ስለሚረሳ 2. በቂ ጊዜ ስላልነበረኝ 3. ምቾትን ስለማይሰጥ 4. የሆነ ነገር ይገኝብኛል ብዬ ስለሚፈራ 5. ስለ ጥቅሙ ስላላመንኩበት 6. ሌላ(ጥቀሺ)_____		

ክፍል አራት፡ ስለ ራስ በራስ የጡት ምርመራ አመለካከትን ለመዳሰስ የተዘጋጀ መጠይቅ

ከዚህ በታች የተዘረዘሩትን መጠይቅ "X" መልክት በመጠቀም መልሽ

ተ.ቁ	ጥያቄ	በፍጹም አልስማማም(1)	አልስማማም(2)	ሃሳብ የለኝም(3)	እስማማለሁ(4)	በጣም እስማማለሁ(5)
ጥ049	እኔ ስለጡት ካንሰር ስለመያዝ በጣም እጨነቃለሁ					
ጥ050	በሚቀጥለው 10 ዓመት ውስጥ በጡት ካንሰር የመያዝ ዕድል ይኖረኛል					
ጥ051	በጡት ካንሰር የመያዝ ዕድሌ ሰፊ ነው					
ጥ052	በህይወት ዘመኔ የሆነ ጊዜ ላይ በጡት ካንሰር እንደምያዝ ይሰማኛል					
ጥ053	ስለ ጡት ካንሰር በሽታ ሳስብ ያስጨንኘኛል					

ጥ054	ስለ ጡት ካንሰር ሳስብ ልቤ በጣም ያመታል					
ጥ055	የጡት ካንሰር ቢኖርብኝ በጡት ካንሰር ምክንያት የሚመጣብኝ ችግር ለረጅም ጊዜ ይቆያል					
ጥ056	የጡት ካንሰር ከፍቅር ጎደኛዬ ወይም ከባለቤቴ ጋር ያለውን ግንኙነት ያሻክራል					
ጥ057	የጡት ካንሰር ቢኖርብኝ አጠቃላይ ህይወቴ ያለወጣል					
ጥ058	የጡት ካንሰር ብያዝ ከአምስት ዓመት በላይ በህይወት አልኖርም					
ጥ059	የጡት ካንሰር በሽታ ተስፋ የሌለው በሽታ ነው					
ጥ060	የራስ በራስ የጡት ምርመራ ሳካሄድ ስለራሴ ጥሩ ስሜት ይሰማኛል					
ጥ061	በየወሩ የራስ በራስ የጡት ምርመራ ሳደረግ ስለጡት ካንሰር ብዙም አልጨነቅም					
ጥ062	በየወሩ የራስ በራስ የጡት ምርመራ ማድረግ የጡት እጢን በጊዜው እንዳገኝ ይረዳኛል					
ጥ063	በሚቀጥለው አመት በየወሩ የራስ በራስ የጡት ምረመራ ባደርግ በጡት ካንሰር የመሞት እድሌን እቀንሳለሁ					

ጥ064	በየወሩ የራስ በራስ የጡት ምርመራ ባደረግ በጡት ካንሰር ብያዝም እንኳን የስውነት ቅርጹን ከሚለውጥ ቀዶ ህክምና የመጋለጥ እድሌን እቀንሳለሁ					
ጥ065	በየወሩ የራስ በራስ የጡት ምርመራ ባደረግ ወደ ፊት ወደ ካንሰር ሊቀየር የሚችል የጡት ዕጢን ለማግኘት ይረዳኛል					
ጥ066	የራስ በራስ የጡት ምርመራን ለማድረግ ማስታወስ ይከብዳል					
ጥ067	የራስ በራስ የጡት ምርመራ ማድረግ ስለ ጡት ካንሰር እንድጨነቅ/እንዳስብ ያደርገኛል					
ጥ068	ለእኔ የራስ በራስ የጡት ምርመራ ማድረግ አሳፋሪ ነው					
ጥ069	የራስ በራስ የጡት ምርመራ ማድረግ ረጅም ጊዜ ይወስዳል					
ጥ070	የራስ በራስ የጡት ምርመራ ማድረግ ምቾትን አይሰጥም					
ጥ071	የራስ በራስ የጡት ምርመራን ብቻዬን በነፃነት የማድረግበት ምቹ የሆነ ቦታ የለኝም					
ጥ072	የራስ በራስ የጡት ምርመራ ማድረግ ምንም ጥቅም የሌለው ነገር ነው					
ጥ073	የራስ በራስ የጡት ምርመራ እንዴት እንደሚደረግ አውቃለሁ					

ጥ074	የራስ በራስ የጡት ምርመራን በትክክል እንዴት ማድረግ እንደሚችል በራሴ እተማመናለው					
ጥ075	የጡት ካንሰር ቢኖርብኝ የራስ በራስ የጡት ምርመራን በመተግበር የጡት ዕጢን ማግኘት እችላለሁ					
ጥ076	የራስ በራስ የጡት ምርመራን ከተገበርኩ የጡት ዕጢን ማግኘት እችላለሁ					
ጥ077	የራስ በራስ የጡት ምርመራን ለማካሄድ የሚያስፈልጉትን ቅድም ተከተሎችን በእርግጠኝነት አውቃለሁ					
ጥ078	የራስ በራስ የጡት ምርመራን ሳደረግ ጤነኛ የሆነን እና ጤነኛ ያልሆነን ጡት መለየት እችላለሁ					
ጥ079	የጤና ችግሮችን በጊዜው መለየት ወይም ማወቅ እፈልጋለሁ					
ጥ080	የራስ ጤንነትን መጠበቅ ለእኔ በጣም ጠቃሚ ነው					
ጥ081	የእኔን የጤና ሁኔታ ለማሻሻልና ለመጠበቅ አዳዲስ መረጃዎችን እፈልጋለሁ/አዳስሳለው					
ጥ082	የግል ጤንነቴን የሚያሻሽሉ እንቅስቃሴዎች ማካሄድ ጠቃሚ መሆኑ ይሰማኛል					

ስለትብብሮ እጅግ በጣም አመሰግናለሁ!!!

<u>Declaration</u>

I, the undersigned, declare that this Thesis is my original work and has not been presented for a Degree in this or any other University, and all source of materials used for this Thesis have been Fully Acknowledged.

Name: _____

Signature_____ Date_____

Place: Jimma University

Date of Submission_____

This Thesis has been submitted with my approval as the University Advisor.

Name of the **First** Advisor: _____

Date_____ Signature_____

Name of **Second** Advisor: _____

Date_____ Signature_____