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BAHIR DAR UNIVERSITY

COLLEGE OF MEDICINE AND HEALTH SCIENCE

SCHOOL OF PUBLIC HEALTH

PREDICTORS OF BREAST SELF-EXAMINATION BEHAVIORS AMONG SECONDARY SCHOOL FEMALETEACHERS IN AWI ZONE NORTH WEST ETHIOPIA, APPLICATION OF HEALTH BELIEF MODEL,

BY: HAILU BITEW (BSc)

A THESIS RESEARCH SUBMMITED TO SCHOOL OF PUBLIC HEALTH,COLLEGE OF MEDICINE AND HEALTH SCIENCES, BAHIR DAR UNIVERSITY IN PARTIAL FULFILMENT OF THE REQUIRMENTS FOR THE DEGREE OF MASTER OF GENERAL PUBLIC HEALTH

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BAHIR DAR, ETHIOPIA

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PREDICTORS OF BREAST SELF-EXAMINATION AMONG SECONDARY SCHOOL FEMALETEACHERS IN AWI ZONE NORTH WEST ETHIOPIA, APPLICATION OF HEALTH BELIEF MODEL

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Abstract

Background: Early detection of breast cancer using breast self-examination (BSE) plays an important role in decreasing morbidity and mortality due to breast cancer, which is the second leading cause of death in women worldwide. In most parts of Ethiopia access to health care services, especially comprehensive diagnostic services are very low, in some areas completely unavailable hence, individual breast-self-examination is very important.

Objective: The main objective of this study is to assess predictors of breast self-examination among secondary school female teachers in Awi Zone, North west Ethiopia.

Methods: An institutional based cross-sectional study was conducted in October/2019 among randomly selected secondary school female teachers in Awi zone, Ethiopia. A total of 395 secondary school female teachers were randomly selected based on proportional to the size of the number of female teachers in each school using simple random sampling technique. Self-administered structured questionnaire including socio-demographic characteristics, knowledge about breast cancer and perception of teachers on breast self-examination using the Health Belief Model sub scales used as data collection instrument. Multivariable logistic regressions an analysis was used to identify independent predictors of breast self -examination performance with $P < 0.05$ and confidence interval of 95% considering statistically significant.

Result: A total of 379 female teachers participated in this study with 95.9% response rate. Half of respondents 193(51%) have ever heard about BSE. Less than a third of the participants 27% reported that they performed BSE. In the bivariate logistic regression analysis family history of breast cancer, age, knowledge on breast cancer and BSE and all of HBM constructs were found to be associated with performing BSE. After controlling possible confounding variables in the multivariable logistic regression, knowledge about BSE practice, knowledge about breast cancer, perceived benefit and perceived self-efficacy were significantly associated with performing BSE at AOR(95%CI)knowledge about BSE **2.538 (2.036-3.165)**, knowledge about BC **.572(.368-.888)**, perceived benefit**1.121(1.037-1.211)**,and perceived self-efficacy**1.120(1.041-1.205)**.

Conclusion and recommendation: The practice of breast self-examination was found to be low. Perceived self-efficacy, perceived benefit and knowledge were significant predictors of BSE performance. Designing school based education programs to improve their awareness on early screening and improving their self-efficacy through demonstration of correct procedures on performing breast self-examination is recommended.

Key words: breast self-examination, female teachers, health belief mode

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Acronyms and Abbreviations

BC	Breast cancer
BS	Breast screening
BSC	Bachelor of science
BSE	Breast self-examination
CBE	Clinical Breast Examination
E.C	Ethiopian Calendar
EPI Info	Epidemiological information
G.C	Gregorian calendar
HBM	Health belief model
HE	Health education
HEEP	Health education AND Health Promotion
HEWs	Health Extension workers
HSM	Health service management
LR	Logistic Regression
MPH	Masters of Public Health
NGO	Non-Governmental Organization
PI	principal investigator
PP	Population proportion
SPH	School of public health
SPSS	Statistical packages for social sciences
WHO	World Health Organization

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INTRODUCTION

1.1. Background

Globally, breast cancer is the most common cancer among women, comprising 23 % of the female cancers and the second most common cancer overall. Worldwide there were over 2 million new cases in 2018 and the most prevalent cancer in Europe [1,2], accounting for 28.8% of all female cancer incidences with 425,000 new cases diagnosed yearly [3,4]. It is also the primary cause of cancer-related deaths in low-income countries [5,6]. Over the past two decades, breast cancer has become a matter of serious public health concern in developing countries due to a high incidence of this cancer and associated mortality, especially among women [7]. The burden of cancer in developing countries 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 [8]. The efforts in reducing mortality are largely dependent on interventions, such as breast self-examination, clinical breast examination and screening [9]. Despite evidence that breast screening (BS) decreases breast cancer(BC) mortality rates by 25–30% [10–12], BC screening rates remain suboptimal in many developing countries [11, 12].

While mammography and breast examination by health professionals may be costly, inconvenient, and potentially embarrassing to some women, self-breast examination (SBE) is a relatively simple, economical, and safe health-related behavior [13-16]. Several factors affect the practice of BSE, such as the lack of knowledge regarding early detection, perceptions toward the BSE behaviors, lack of time, and lack of self-efficacy in conducting BSE properly [15,16]. Early detection of breast cancer plays an important role in decreasing its morbidity and mortality. BSE is one of the screening methods for early detection of breast cancer [7].

BSE is a sort of examination made by each woman subsequent to the age of 20 and it is an economical, easy to apply, safe, non-invasive procedure with no special material or tool requirements; and it is an effective screening method for breast cancer which only takes five minutes to apply [17]. Women who carry out BSE on a regular basis have been a possibility of easily recognizing both the appearance and feel of their breasts hence often helps them to detect

any changes early. However, if improperly done, BSE has the risk of giving false health security and may actually reduce willingness to undergo screening [18].

The success of improving the well-being and self sufficiency of individuals, families, organizations, and communities requires behavior change at multiple levels. Theories are useful in explaining the dynamics of health behaviors, including processes for changing them, and the influences of the many forces that affect health behaviors [19].

Therefore, the theoretical framework for this study was based on the health belief model (HBM), which emphasizes cognitive and attitudinal influences, and is the most widely used model to predict BSE behavior. Perceived susceptibility, perceived severity or seriousness, perceived benefits and perceived barriers to a behavior, cues to action, and most recently added construct the self-efficacy serve as the main constructs of the model which predict why people will take action to prevent, to screen for, or to control illness conditions[19,20,21].

1.2 Statement of the problem

In 2018 WHO reported that cancers of the lung, female breast, and colorectal are the top three cancer types in terms of incidence, and are ranked within the top five in terms of mortality. Together, these three cancer types are responsible for one third of the cancer incidence and mortality burden worldwide [22]. Breast cancer is the most commonly diagnosed cancer in women (24.2%, i.e. about one in 4 of all new cancer cases diagnosed in women worldwide are breast cancer, and the cancer is the most common in 154 of the 185 countries. Breast cancer is also the leading types worldwide in terms of the number of new cases; approximately 2.1 million diagnoses are estimated in 2018, contributing about 11.6% of the total cancer incidence burden [22].

Although breast cancer has a markedly higher incidence in developed countries, half of new breast cancer diagnosis and about 60% of breast cancer deaths occur in the developing world [5]. Few studies have been conducted in Africa and majority of these studies, reviewed by Brinton et al., were mainly carried out on west and central Africa and reported that breast cancer patients exhibit specific features compared to the western countries [23]. According to these authors, breast cancer in Sub-Saharan Africa is reported to occur in younger age and show more aggressive feature. A significant increase in breast cancer incidence is reported in most Sub-Saharan Africa countries suggesting an increasing public health problem in a continent with existing infrastructures having been developed mainly for maternal, child health and infectious diseases [24].Breast cancer is the most common malignant neoplasm among women in Ethiopia, and the Addis Ababa Cancer registry reports that breast cancer accounts for 34% of all female cancer cases, followed by cervical cancer at 16% [25].

Although, BSE, early detection or screening is the most effective method to reduce morbidity and mortality from breast cancer, BSE is rarely performed by females and reports have indicated that only 66% of the nursing students in Saudi Arabia and 1.3% of Egyptian teachers conduct BSE (6,8). Early detection or screening is the most effective method to reduce morbidity and mortality from breast cancer. Certain methods like clinical breast examination, BSE and mammography have been defined as activities facilitating the early screening and improving

health of females and good for early detection of breast cancer [25].Mammography is the method of choice for the early detection of breast cancer. However its limited use in developing countries due to the high cost and limited availability make BSE a convenient and cost effective method, while less reliable [26,27].

In Ethiopia, for a long period cancer, predominantly breast cancer is on the bottom of priority list [25] and a study in Addis Ababa showed that cancer was reported the second out of the ten top cancers registered but the practice of BSE is very poor [28,29,38].

Despite the high prevalence rate of breast cancer and benefits of BSE, no studies have been published regarding these subjects among female teachers in Ethiopia, particularly in the study area. In most Ethiopia region and zones access to health care services, especially comprehensive diagnostic services is very low, in some areas completely unavailable hence, individual self-health empowerment is very important. Teachers are the best examples in educating and implementing their activities throughout the country, from the big cities to very remote rural villages in Ethiopia. For such reason, female teachers are not only educators, but serve as role models and change agents who often offer useful counsel on health promotion especially for the students and the community.

It is easily understandable that the incidence and mortality of breast cancer is growing at a fast rate. But as we do not have any cancer registry along with relevant data were not well documented and it is difficult to say the exact circumstances in Ethiopia. Few studies reported that only 14.4 % of health extension workers and 12% of teachers practices BSE regularly (every month) [29, 38]. Currently, very few studies have been conducted so far on the perception of BSE among female teachers in Ethiopia which mainly focused on few dimensions like knowledge and attitude. But, several factors could affect the practice of BSE, such as the lack of knowledge regarding early detection, perceptions toward the BSE behaviors, lack of time, and lack of self-efficacy in conducting BSE properly (28,29, 30). Therefore, this study aimed to assess the predictors of BSE among female secondary school teachers in Northwest Ethiopia, through the application of HBM.

1.3 Significance of the study

Understanding the perception and practice of female secondary school teachers on breast self-examination (BSE) may assist health care providers, health educators and other concerned bodies in addressing the factors that determine the participation or non-participation in the BSE through effective strategies and programs. Hence, findings from this study provides a starting point for female teachers to maximize the level of perception amongst themselves, in the community as well as among their female students on breast cancer and to practice BSE as recommended on monthly interval. Moreover, findings from the study can provide information on BSE for governmental health officials and other nongovernmental organizations which are working on cancer particularly breast cancer to raise level of perception among women and practice of BSE in breast cancer prevention and control program.

2. Literature Review

2.1. Practice of breast self-examination

A study conducted among Malaysian women teachers, only 19% performed BSE and 54% had ever performed BSE. Of these 19% stated that they performed BSE on a regular monthly basis; others reported performing BSE every 2–3 months (11%) or occasionally (25%).When asked about their intention to practice BSE in the coming year, 80% of them said that they would consider examining themselves regularly [31].

According to study done among Chinese Women in Hong Kong, Baptist University, only 31.9% of the respondents reported that they did not practice BSE in the past month [32].

According to the study done on Knowledge, Attitude and Practice of Breast Self-Examination among Women in Rivers State, Nigeria, BSE practice were 28.94% and when it is shown by the time spent in performing BSE 5(10.85%) of respondents spend five minutes, 76(11.00%) 10 minutes, 24(3.47%) 15 minutes, 23(3.33%) 30 minutes and 1 (0.14%) more than one hour. BSE was done weekly by 26(3.76%), monthly 68(9.84%), every three months 39(5.64%), yearly24(3.47%) and 23(3.33%) do it whenever they remember [27].

In addition a study conducted in Iraq about Knowledge, attitude and practice regarding breast cancer and breast self-examination among a sample of the educated population shows that 48.3% of the participants practiced BSE [34].

Another study done on the Health beliefs and Breast Self-Examination in a sample of Turkish women academicians in a university shows that ever Performed BSE was 50.9% while the percentage of female who regularly performed BSE was 27.7% [35].

Another study done in Egypt, mentioned that 75.8% never practiced breast self-examination, and 70.7% of those who were practicing it were doing it once per month, while 29.3% were doing breast self-examination only in the presence of complain [36].

The study carried out in Debre Berhan University Students Practices of Breast Self-examination and associated factors among female students revealed that Only 113 (28.3%) of the participants had ever performed BSE one year preceding the study[33].

Another study in Adwa town, North Ethiopia, shows that only 25 (6.25%) of the respondents practiced BSE regularly [37].

In addition according to a study conducted in Kaffa zone, Ethiopia, only 12 % performed breast self-examination among sampled school female teachers [38].

According the study done in Addis Ababa, more than half of the participants319 [56.4%] reported that they never performed BSE while 247(43.6%) have ever performed BSE. Out of those who performed BSE only 62(25.1%) reported to practice as recommended on monthly interval [39].

2.2. Factors affecting breast self-examination practice

2.2.1 Knowledge regarding breast cancer and breast self-examination

A study conducted among Malaysian women teachers, 90% of the participants reported that they had heard about BSE[31]. A study conducted among women in River State, Nigeria, only 39.65% of respondents have heard of BSE. It has been previously documented that women who are better educated are more knowledgeable and more likely to practice BSE [27].

In addition a study conducted in Iraq about Knowledge, attitude and practice regarding breast cancer and breast self-examination among a sample of the educated population shows that 61.2% of the respondents had poor knowledge and 41.8% said that they did not know the technique to perform BSE [34].

Another study done in Egypt, mentioned that 45.4% did not have any knowledge about breast self-examination [36].

The study carried out in Debre Berhan University Students Practices of Breast Self-examination and associated factors among female students revealed that 37.25% of the participants have poor knowledge about how to perform BSE, while 30.52% and 32.23% of them have good and fair knowledge respectively. The main reasons for not performing BSE were lack of knowledge on how to conduct BSE and not having any symptoms of breast disease [33].

In addition according to a study conducted in Kaffa zone, Ethiopia, only 16.5 % of women heard about BSE and from those who heard about BSE 73.07 % of them screened for breast cancer. Knowledge was assessed as continuous variable with possible values ranging from 10 to 90 with the mean score of 40.14 (SD ± 24) [38].

The study done in 566 female secondary school teachers in Addis Ababa, revealed that almost all of the study participants 561(99.1%) were aware of breast cancer and 426 (75.9%) participants stated that they have ever heard of breast cancer screening method, breast self-examination, but

more than half of the participants319 [56.4%] reported that they never performed BSE while 247(43.6%) have ever performed BSE. Out of those who performed BSE only 62(25.1%) reported to practice as recommended on monthly interval, and Knowledge is significantly associated with performing BSE with the Mean score of 9.13 (SD± 4.59) [39].

2.2.2 Socio demographic characteristics

According to the study done in Addis Ababa, age was shown to have significant association with ever performing BSE [39].A study conducted among Turkish women academicians in a university shows that, single academicians perceived susceptibility and seriousness higher than the married ones [35]. According to the study done in Addis Ababa, those who were married were 1.5 times more likely to practice BSE compared to others [39].

A study conducted among women in River State Nigeria, reported that women who are better educated are more knowledgeable and more likely to practice BSE, all those that practiced BSE had some form of formal education 3(0.43%) primary,146(21.13%) secondary and 125(18.09%) tertiary education [27].According to the study done in Addis Ababa, educational status was not associated with ever performing BSE [39].

2.2.3 Other factors affecting practice of BSE

Family history of Breast Cancer and personal history of Breast Disease

According to the study done on the Health beliefs and Breast Self-Examination in a sample of Turkish women academicians in a university shows that approximately 11% of the participants were postmenopausal and11.2% had a family history of breast cancer, Personal history of breast disease 7.6% of the participants [35].

Another study done in Egypt, mentioned that 75.8% never practiced breast self-examination, and 70.7% of those who were practicing it were doing it once per month, while 29.3% were doing breast self-examination only in the presence of complain only 23.3% of the participants had previous breast problems, these problems were in the form of benign lymph nodes (16.1%), breast collection (67%), abscess (37.5%) and nipple secretions (5.3%). As for the family history of breast cancer, 77.5% had no family history of breast cancer and only 22.5% had previous family history, those who had family history of breast cancer indicated that, their mothers were the affected person (38.9%), 22.2% indicated that the affected person were their aunts (mother's

sister), their sisters were affected 20.4% and 18.5% revealed that their grandmothers were the affected person. It was found that, only 5% of the total sample had hysterectomy, 75% of them had hysterectomy at the age of 50 years while 25% at the age of 55 to less than 60 years[36].

In addition according to a study conducted in Kaffa zone, Ethiopia, 86.3% of the respondents reported that they did not have any previous history of breast disease. From the total study participants 9 (2.9 %) of them reported that they had had family history of breast cancer [38].

According to the study done in Addis Ababa, those who had personal history of benign breast disease were three times more likely to perform BSE than those who never had breast disease, while family history of breast cancer was not significantly associated with practice of BSE[39].

2.3. The Health Belief Model

The HBM was developed in the early 19S0's by Hockbaum, Kegeles, Leventhal, and Rosenstock to explain health related behavior at the level of individual decision making (19). The model was formulated to answer questions about why individuals utilized health services, why they did or did not follow up on health care recommendations, and what factors influenced individual compliance with medical regimens. The HBM proposes the following theoretical conditions and components. The individual's psychological readiness to take action relative to a particular health condition is determined by both the perceived susceptibility to a particular condition, by perceptions of the severity of the consequences of contracting the condition, and the individual's evaluation of the advocated health action in terms of its feasibility and efficaciousness. These perceptions are weighed against perceptions of psychological and other "barriers" or costs of the proposed action. Finally a stimulus or cue, either internal or external, must occur to trigger the appropriate health behavior (19, 20).

Perceived susceptibility: refers to a person's view of the likelihood of experiencing a potentially harmful condition" (20). This is a subjective perception of the risk of contracting a particular condition.

Perceived severity: is concerned with how threatening a condition is to the individual. This includes the individual's evaluation of the medical consequences (disability, pain, disfigurement) and the social consequences (effects on family, work, social relationships) (20, 21). These two dimensions make up the individual's psychological state of readiness to take action. "Action will not occur unless the individual believes in both personal susceptibility and the serious

repercussions of illness, should it occur" (20). This combination of susceptibility and severity can be termed the perceived threat.

Perceived Beliefs: about the effectiveness of recommended actions constitute perceived benefits. An individual evaluates the recommended action in terms of its feasibility and efficacy in reducing the perceived threat.

Perceived barriers: can be defined as "beliefs the individual holds concerning the costs associated with taking a health action" (20). Barriers are the potential negative aspects of a particular action. Barriers may be financial, physical, or psychological. Over the past several years the model has been refined and two additional concepts have been added to give the model additional strength: health motivation and confidence.

Self-Efficacy/Confidence: Most recently, Rosenstock, Strecher, and Becker (1988) have proposed the addition of confidence as a separate independent variable. Confidence is defined as "the belief that one can successfully execute a behavior that will then lead to a desirable outcome" (18, 19, 20). In putting the concepts together into a coherent whole, Becker stated, "The combined levels of susceptibility and severity provided the energy or force to act and the perception of benefits (less barriers) provide a preferred path of action" (18). Additionally, there must be a stimulus, or cue, to trigger the action. Cues can be internal (i.e. body states, symptoms) or external (i.e. mass media, advice, reminder cards). The intensity of the cue needed to initiate action is inversely proportional to the individual's psychological readiness. [19]**.**

The Health Belief Model (HBM) was selected as one of the theoretical models for the current study, as it is widely used to identify associated variables with mammography and guides the prediction of screening behaviors. It proposes that the following factors play an important role in an individual's perception about BS, such that women are more likely to perform BS if: a) they feel susceptible (vulnerable) to BC or the risks of contracting the disease (perceived susceptibility), b) believe in the seriousness of BC and its consequences for the individual (perceived severity), c) perceive more benefits than barriers from undergoing mammography, d) have higher confidence for obtaining a mammogram, and e) if a cue to action is present.

2.4. Constructs of Health Belief Model and breast self-examination practice

2.4.1. Perceived susceptibility and severity towards breast cancer

A study conducted among Turkish women academicians in a university shows that 11% of the participants were postmenopausal and11.2% had a family history of breast cancer, Personal history of breast problem7.6% of the participants. Family history of breast cancer of participants affected their health beliefs by perceived susceptibility, and the study also revealed that, single academicians perceived susceptibility and seriousness higher than the married ones [35].

Another study done in Egypt, mentioned that family history of breast cancer, 77.5% had no family history of breast cancer and only 22.5% had previous family history, those who had family history of breast cancer indicated that, Family history of breast cancer of participants affected their health beliefs by perceived susceptibility [36].

Another study in Adwa town, North Ethiopia, shows that 53% of the respondents perceived that they are susceptible to breast cancer and performing regular BSE is beneficial to find a lump in the breast, that might become cancerous in the future[37].

In addition to the study conducted in Kaffa zone, Ethiopia, Perceived susceptibility and perceived severity were analyzed as a continuous variable with possible values ranging from 3 to 15 for susceptibility with the mean score of 8.45 (±2.2), and from 6 to 30 for severity with the mean score of 17.9 1 (±4.0)[38].

The study conducted in Addis Ababa revealed that, HBM constructs were analyzed as continuous variables, perceived susceptibility ranging with possible values from 3 to 15with a mean score of 7.37 (SD± 2.5),and perceived severity value ranging from 8 to 40 showed a mean score of 26.38 (SD± 5.56)[39].

2.4.2. Perceived benefit, barrier and self-efficacy towards BSE

According to study done in Chinese Women in Hong Kong Baptist University, not knowing how to perform BSE was the primary perceived barrier [32]. In addition a study conducted in Iraq about Knowledge, attitude and practice regarding breast cancer and breast self-examination among a sample of the educated population shows that among practiced BSE 33.1% not trusting their own examination only 7.4% did not believe in the benefit of BSE [34].

A study conducted among Turkish women academicians in a university shows that perceived barriers relating to BSE of participants were higher in those who did not have a practice of BSE [35].

In addition a study conducted in Debre Berhan University Students, Almost all of the study participants approved that BSE is important and useful to detect breast cancer and 89.9% of the participants also believed that early detection will increase the chance of long term survival. Moreover, 93% of the participant students believe that BSE is not out of the community social norm [33].

Another study in Adwa town, North Ethiopia, shows that 42% of the respondents had perceived barriers to perform BSE, and 38.0% of the respondents were not confident enough to do BSE [37]. In addition to the study conducted in Kaffa zone, Ethiopia, Perceived barriers, Perceived benefits and self-efficacy were analyzed as a continuous variable with possible values ranging from 8 to 40 for barriers with the mean score of 16.99 (±5.4), from 4 to 20 for benefits with the mean score of 14.65 (±3.9) and from 10 to 50 for self-efficacy with the mean score of 27.74 (±9.9)[38].

According to study done in Addis Ababa, the HBM constructs were analyzed as continuous variables, perceived benefits value ranges from 6 to 30 is found with a mean score of 22.87 (SD± 4.65), for barrier questions the response score ranges from 11 to 55 was found with a mean score of 23.3 (SD± 8.06), the possible value of self-efficacy is between 10 to 50 with a mean score of 31.37 (SD±7.74), perceived self-efficacy is found to be significant predictor of BSE performance [39].

2.4.3 Cues to action to breast self-examination practice

Cues to action are strategies taken to activate one's readiness to take health action may include health education, media or recommendations by a physician. In some studies cues to action was observed to predict the likelihood of performing BSE [31].

A study conducted among Malaysian women teachers, 90% of the participants reported that they had heard about BSE, 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 mentioned as other sources of information on breast cancer and BSE [31].

According to study done in Chinese Women in Hong Kong Baptist University, Source of health information Mass media, such as newspaper and television, is the major information source of breast cancer (73.2%) and BSE (60.3%), followed by doctors or health care providers (16.1% for breast cancer information; 25.9% for BSE information) [32]

Knowledge, Attitude and Practice of Breast Self-Examination among Women in Rivers State, Nigeria, 39.65% of respondents have heard of breast self-examination while 60.35% have not heard of it. All the respondents who have heard of BSE said they encourage other women to practice BSE [27].

In addition to the study conducted in Kaffa zone, Ethiopia, 52 (16.5 %) of respondents had information from various sources and 263 (84.5 %) said they didn't receive any information from any source about BSE. [38].

From the literature we can conclude that there is significant association between breast cancer and participant's having good knowledge, the extent to which teachers perceived they are susceptible to cancer, perceived that cancer is severe, feel benefitted from BSE and self-efficacy to conduct the correct procedure and performing during the right time interval has surfaced as some of the most important predictors to affect decisions about performing BSE. Designing effective strategies and implementing community and school based education programs to improve their awareness that underline the necessity of early screening and enhancing their self-efficacy through demonstration of correct procedures and enabling females to screen breast cancer including breast self-examination is recommended.

2.5 Conceptual frame work

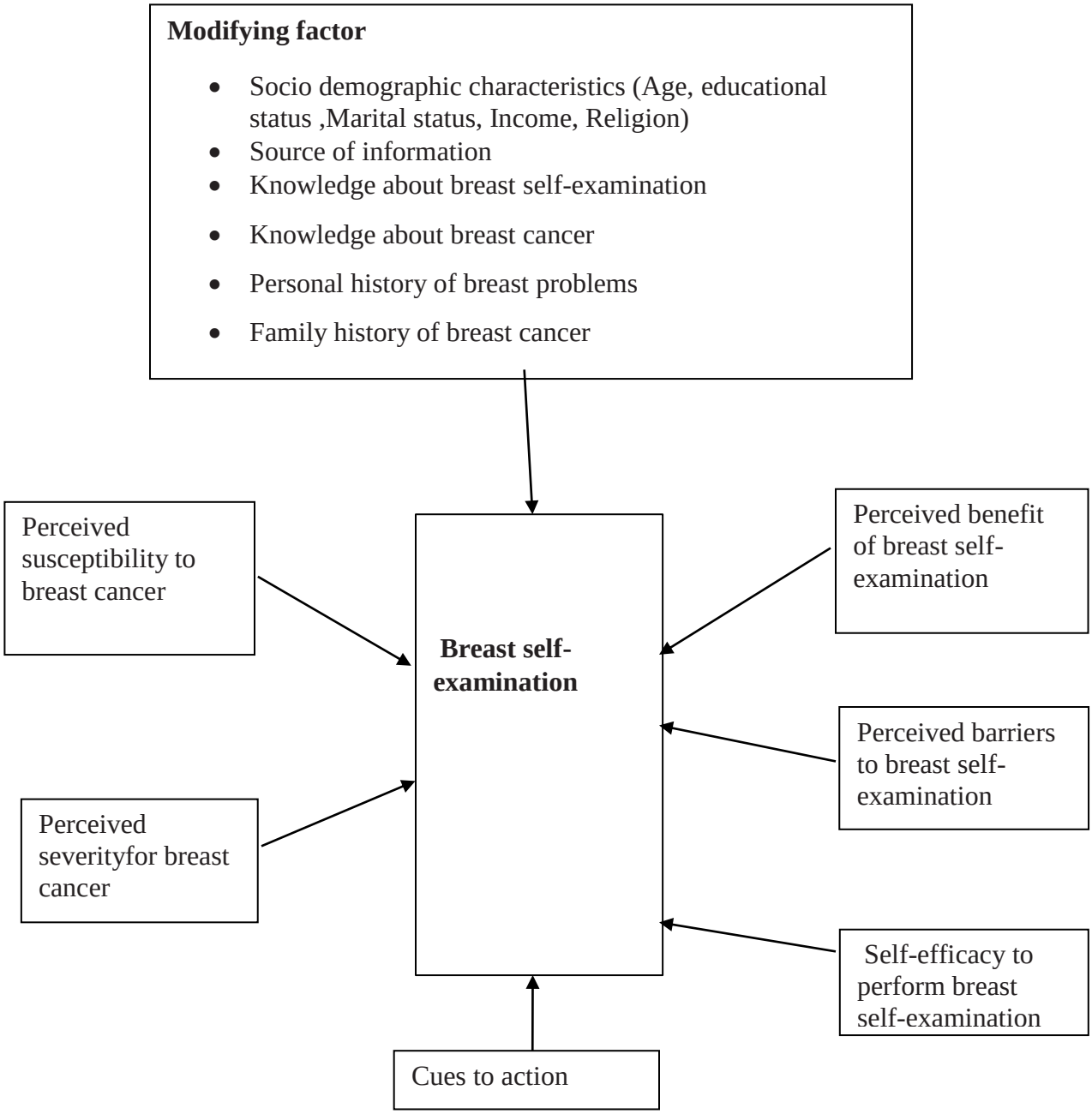

Figure 1: Conceptual framework of predictors of breast self-examination among school teachers, Awi zone, Ethiopia; adapted from (Turner L, Hunt S, Diberzzo R, Johon C. Health Belief Model.

3. OBJECTIVES OF THE STUDY

3.1. General objective

To assess predictors of breast self-examination behaviors among secondary school female teachers in Awi Zone, Northwest Ethiopia.

3.2. Specific objectives

1. To determine the magnitude of breast self-examination among secondary school female teachers in Awi Zone, Northwestern Ethiopia
2. To assess perceptions towards breast self-examination among secondary school female teachers in Awi Zone, Northwestern Ethiopia
3. To identify factors associated with breast self-examination among secondary school female teachers in Awi Zone, Northwestern Ethiopia

4. Methods and Materials

4.1 Study area

The study was conducted in Awi zone, which is located 450 Km far from the capital city Addis Ababa with an area of 9,148.43 km2. Awi zone is one of the 15 zones in Amhara region and which is situated in the western part of the region. It is administratively divided in to 12 Woreda (districts) with 233 kebeles (the lowest administrative unit) (201 rural and 32 urban) with a projected total population of 1,282,242 Rural 1,068,036 (83.1%) and Urban 217,206 (16.9%); in which 50.9 % female and 49.1 % of them are male. According to 1999 E.C census, in the zone there are different group of people who speak different languages like Agew 60.0%, Amhara 38%, Oromo 0.1, Gumuz 0.7% and others 1.2%. The religious composition is Orthodox 94.4%, Muslim 4.5%, Protestant 0.2% and others 0.9%. The total number of secondary schools (Grade 9-12) is 38 in which 543 female teachers are working in, there are201 health posts, 46 public health centers and 5 hospitals in the Zone, and the health service coverage is estimated to be 91.0% [40].

4.2 Study period

The study was conducted from October 1-31/ 2019.

4.3 Study design

An institution based cross sectional study design was employed.

4.4 Populations

4.4.1 Source population

All female secondary schools teachers in the academic year of 2019/2020 in Awi zone

4.4.2 Study population

Randomly selected secondary school female teachers during the study period.

4.5 Eligibility Criteria

4.5.1 Inclusion criteria

All female secondary school teachers who provided service (teaching) during the time of data collection

4.5.2. Exclusion criteria

Female secondary school teachers who were on annual leave and sick leave and were not found on official work day at the time of data collection were excluded from the study.

4.6 Sample size and Sampling technique

4.6.1 Sample size determination

Sample size was determined by using single population proportion formula, and calculated by using prevalence of dependent and independent variables to consider the larger sample size, so that using this assumption the prevalence of knowledge towards BSE, know performing BSE is 37.52% among females Debre Birhan University students [33] with 95% confidence level and 5% margin of error and z= Standard variant (1.96) to get an optimum sample size.

$$n = \frac{z^2 p(1-p)}{d^2}$$

Using this formula, the final sample size was359, adding 10 % non-response rate total sample size was 395femalesecondary school teachers were selected.

4.6.2 Sampling technique

The study was conducted in Awi zone female secondary school teachers.

First, all 543 female secondary school teachers who were working in 38 secondary schools of the zone during the study period were incorporated in sampling procedure.

Then the number of female teachers in each school was listed and final sample was determined by proportionally allocating the female teachers to each school according to their size. Finally the female teachers were selected from each school using simple random sampling technique.

P = n/N in which, P is sampling proportion n denotes the maximum sample size N indicates the total number of female teachers in all secondary schools which is 543. P = 395/543 = 0.728 then this fraction (0.73) is multiplied by the number of female teachers in each school to obtain the final sample (Figure 2).

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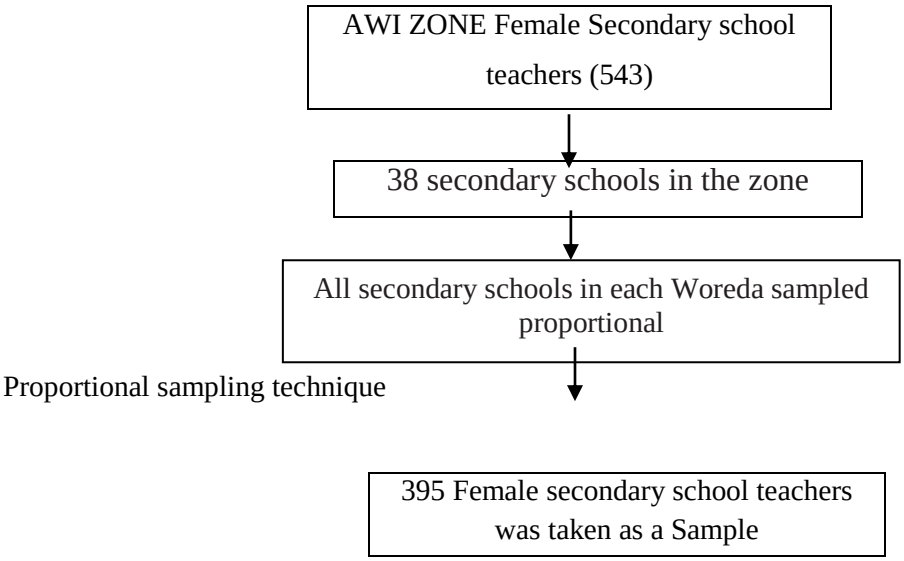

Figure 2 schematic presentation of sampling procedure

4.7 Variables

4.7.1 Dependent variable:

Breast self-examination (BSE)

4.7.2 Independent variables

- Socio demographic characteristics
  - ✓ Age
  - ✓ Marital status
  - ✓ Educational status
  - ✓ Income
  - ✓ Religion
- Source of Information about breast cancer and BSE
- Knowledge about breast cancer
- Knowledge about breast self-examination
- History of breast disease
- Family history of breast cancer
- **HBM constructs**
  - ✓ Perceived susceptibility
  - ✓ Perceived severity
  - ✓ Perceived benefit
  - ✓ Perceived barrier
  - ✓ Perceived Self-efficacy
  - ✓ Cues to action

4.8 Data collection Procedure

A self-administered questionnaire capturing socio-demographic characteristics, Knowledge adapted from other similar studies prepared by the investigator and Health Belief Model Scale (HBMS) was used as data collection instruments for this study. The questionnaire consisted of 33 items for the HBM constructs, after factor analysis performed. All items of HBM constructs except cues for action offered five response choices ranging from "strongly disagree (scores 1 point)" to "strongly agree (scores 5 points). Higher scores indicated a positive perception towards BSE except for barriers to BSE. For knowledge questions, knowledge about breast cancer was assessed using 5 items of ””Yes” or “No” type questions and the responses of all items were summed and higher scores indicated having higher knowledge towards breast cancer. Knowledge about breast cancer screening methods/BSE was also assessed with 9 items of ””Yes” or “No”

type questions and the responses of all items were summed and higher scores indicated having higher knowledge towards BSE. Practice of breast self-examination (BSE) was assessed using item with the responses of "Yes or No" type like "have you ever perform BSE for screening of cancer?" Those who responded "Yes" to this question again asked the frequency of BSE and those who respond as 'every month' considered as they were practicing regular breast self-examination.

4.9. Data Management and Analysis

After the data was checked for completeness and consistency, it entered and analyzed using SPSS program version 21.0. Summery result was presented using Frequency table & cross tabulation. Bivariate analysis was done to determine association between factors and breast self-examination. Variables with p value < 0.05 were considered as a candidate to be entered to multivariable logistic regression. Final model was fitted by using back ward LR and P value ≤0.05 was considered as statistical significant. The strength of association was determined by using odds ratio with 95% CI.

4.10. Operational definition for HBM constructs

- **Perceived susceptibility**: The responses of susceptibility question were summed and the total score was computed; those who scored higher value indicating higher perceived susceptibility and lower score indicated low perceived susceptibility.
- **Perceived severity**: The responses of severity question were summed and the total score was computed; those who scored higher value indicating higher perceived severity and lower score indicated low perceived severity.
- **Perceived benefit**: The responses of benefit question were summed and the total score was computed; those who scored higher value indicating higher perceived benefit and lower score indicated low perceived benefit.
- **Perceived barrier**: The responses of barrier question was summed and the total score was computed; those who scored higher value indicating higher perceived barriers and lower score indicated low perceived barriers.

- **Self-efficacy**: The responses of self-efficacy question were summed and the total score was computed; those who scored higher value indicating higher self-efficacy and lower score indicated low self-efficacy.

4.11 Data quality assurance

Twelve data collectors and 4 supervisors who have degree/Diploma teachers were trained for two days on the objective of the study, method of data collection &content of questionnaire to avoid any ambiguity raised during data collection.. Data was checked for completeness, accuracy, and consistency by supervisors &and principal Investigator after the data collection on daily basis. Double entry was performed to assure quality of data. The questionnaire was prepared first in English and translated together with standard questionnaire into Amharic and retranslated back to English to check for consistency by competent person. The prepared questionnaire was pre-tested on 5% of female teachers in schools those which did not include in the study to identify the clarity & sequence of question and difficulties that may arise in the data collection process. Based on the results of the pretest necessary modification of the tool contents was made, and data collectors were collecting data under close supervision of their supervisors and principal investigator. We also conducted construct validity with Principal Component Analysis (PCA) using varimax rotation for all HBM constructs, and finally reliability assessment was done by checking internal consistency using Cronbach's alpha coefficient.

4.12 Principal Components Analysis for HBM constructs

Before the final analysis was conducted, construct validity for HBM constructs was examined using exploratory factor analysis (EFA) through Principal Component Analysis (PCA) with varimax rotation. The Kaiser-Meyer-Olkin (KMO) value greater than 0.5 was used as cut off point for the adequacy of the sample size in EFA. Eigen value was used to decide the number of factors to retain; those factors with Eigen value greater than or equal to 1 was retained. Therefore, all items of perceived susceptibility [5 items] and self-efficacy [6 items] were loaded with communality over .5 and all five items of susceptibility and six items of self-efficacy explaining about 74% and 92% of the variance respectively. From perceived severity one item [When I think about breast cancer, my heart beats faster] and from perceived benefit one item [Regular BSE each month do not decrease the rate of death from breast cancer] were removed

because they failed to meet a minimum criteria of having a primary factor loading of .4 or above. But six items of perceived severity and five items of perceived benefits were loaded under their respective factors and explaining about 80% and 72% of the variance respectively. From ten items of perceived barriers, three of them [1_ BSE is not embarrassing to me, 2_BSE will not take too much time and 3_It is not as such hard to remember to do BSE] were removed from final analysis as these items produced multicollinearity with other items of perceived barriers. The rest seven items were loaded on perceived barriers and explaining about 74% of the variance, and the reliability assessment was done by checking internal consistency using Cronbach's alpha coefficient and the scales for perceived susceptibility, seriousness, benefits, barriers, self-efficacy and cues to action were 0.91, 0.94, 0.90, 0.76, 0.91 and 0.63 respectively.

4.13 Ethical Consideration

Ethical approval and clearance was obtained from the Bahir-Dar University College of Health Science Institutional Review Board. Letter of cooperation to Amhara Public Health Institute, Awi zone Department of Health, Awi zone Department of Education and for each secondary schools was obtained sequentially. Verbal Informed consent was obtained from the study participants after clear explanation about the purpose and benefit of the study along with their right to refuse. Furthermore, the study participants were reassured for an attainment of confidentiality.

5. Result

5.1 Socio- demographic characteristics of the study participants

Three hundred seventy nine female teachers returned their questionnaire, giving a response rate of 95.9%. Their mean age was 35.98 ± SD 5.54 (range: 22 to 51). Regarding their religion 356 (93.9%) were orthodox Christians and 303(79.9%) were married. Majority of the respondents, 298 (78.6%) had first University degree, 41(10.8%) had second University degree and 40(10.6%) had diploma. The mean monthly income of the study population was 5381 (SD ± 1405) Ethiopian Birr. Most of the study participants 352(92.9%) had no previous history of breast problem (table 1).

Table 1: Socio-demographic characteristics of secondary school female teachers in Awi Zone, North west, Ethiopia (n=379)

Characteristics	**Category**	**Frequency**	**Percentage (%)**
Age	20-24	4	1.1
	25-29	29	7.7
	30-34	135	35.6
	35-39	107	28.2
	40-44	73	19.3
	45+	31	8.2
Educational status	Diploma	40	10.6
	Degree	298	78.6
	Second degree	41	10.8
Marital status	Single	54	14.2
	Married	303	79.9
	Divorced	14	3.7
	Widowed	8	2.1
Religion	Orthodox	356	93.9
	Muslim	10	2.6
	Protestant	13	3.4
Monthly income	1st Quartile	50	13.2
	2nd Quartile	201	53.0
	3rd Quartile	115	30.3
	4th Quartile	13	3.4

5.2. Knowledge, Practice and source of information about breast cancer and BSE

Knowledge questions were analyzed as continuous variables, so the scores for knowledge about breast cancer were computed with the values ranging from 1 to 5 with mean score of 3.2(±3.0). Among all respondents, more than one fourth of them 100 (27%) reported that they performed BSE on monthly interval. The scores for knowledge about breast cancer screening methods/BSE were computed with the values ranging from 1 to 9 with mean score of 4.4(±4.0).Half of respondents 193(51%) have ever heard about BSE

Table 2: Practices of breast self-examination of female secondary school teachers Awi Zone,North west, Ethiopia.

Variable	Category	Frequency	Percentage (%)
Ever heard of breast cancer	Yes No	371 8	97.9 2.1
Ever heard of breast self-examination (BSE)	Yes No	193 186	50.9 49.1
Ever perform BSE	Yes No	151 228	39.8 60.2
Frequency of BSE	Monthly Not monthly	100 279	26.4 73.6
History of previous breast disease	Yes No	27 352	7.1 92.9
Family history of breast cancer	Yes No	29 350	7.7 92.3

For those participants who reported that they are aware of breast cancer, they were asked from all possible sources they had heard. The most identified source of information for breast cancer was Television and radio (63.1%) followed by friends (26.9%), health care workers (26.1%), and printed media (5%) and from other sources (4.5%). Regarding sources of information about the breast cancer screening measures, breast self-examination (BSE),

Television and radio (34.3%) was the main media mentioned followed by friends (16.6%) (Figure 3).

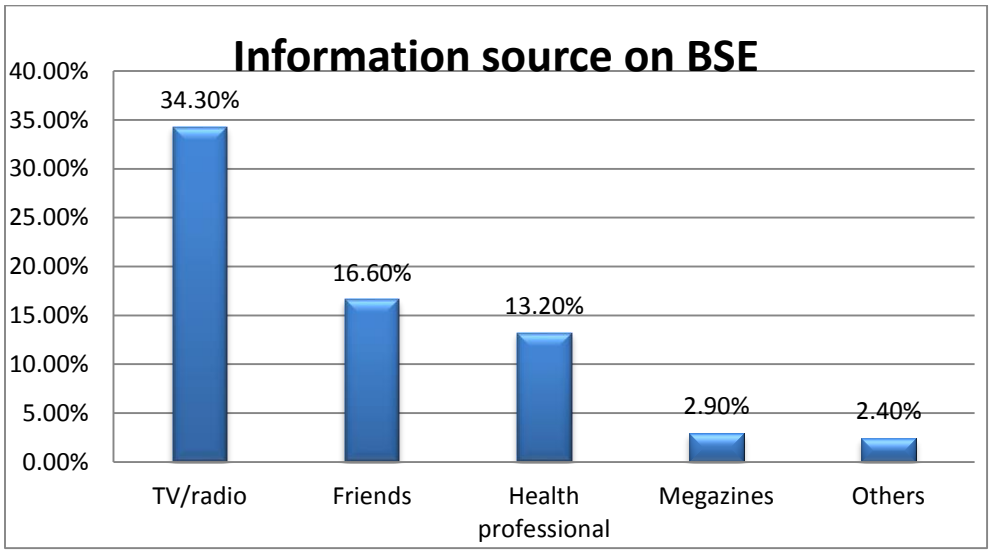

Figure 3: Source of information about breast self-examination (BSE) among female secondary school teachers.

5.3 Perception towards BSE

Perception of female teachers on BSE was measured using the constructs of health belief model and all constructs were analyzed as continuous variables or perceived susceptibility the possible values ranging from 10 to 25 with a mean score of 21.1 (SD± 4.0), for perceived severity value ranging from 11 to 30 with a mean score of 24.6 (SD± 5.4), for perceived benefits value ranges from 7 to 25 with a mean score 20.9 (SD± 4.19), for barrier questions the response score ranges from 17 to 34 with mean score of 29.54 (SD± 4.25), the possible value of self-efficacy with the range between 12 to 30 with a mean score of 24.4 (SD±4.84) and for cues to action the response score ranges from 0 to 4 with mean score of 0.596 (SD± 0.969) (Table 3).

Table 3. Constructs of health belief model among secondary school female teachers in Awi Zone, North west, Ethiopia, 2019 (n=379)

	Variables	Mean[±SD]	Minimum	Maximum
1	Perceived susceptibility	21.1 (SD± 4.0)	10	25
2	Perceived severity	24.6 (SD± 5.4)	11	30
3	Perceived benefit	20.9 (SD± 4.19)	7	25
4	Perceived barrier	29.54 (SD± 4.25)	17	34
5	Perceived Self-efficacy	24.4 (SD±4.84)	12	30
6	Cues to action	0.596 (SD± 0.969)	0	4

5.4 Factors associated with breast self-examination among female secondary school teachers

In effort to identify predictors of breast self-examination binary logistic regression model was fitted. In the bivariate logistic regression analysis family history of breast cancer, age, knowledge on breast cancer and BSE and all of HBM constructs were identified as candidate variables and entered in to multivariable analysis as cut off point p value ≤0.05 was considered as statistical significant. The strength of association was determined by using odds ratio with 95% CI. Finally knowledge about breast cancer, knowledge about breast self-examination, perceived benefits and perceived self-efficacy were shown to have significant association with breast self-examination in the multivariable regression analysis.

The result showed that a unit increases in total score of knowledge about breast cancer the odds of performing BSE reduced by 0.57 and the observed difference was statistically significant at [AOR, 95%CI .572(.368-.888)]. Similarly, a unit increase in total score of knowledge about BSE the likelihood of performing BSE was increased by 2.54and the observed difference was statistically significant at [AOR, 95%CI 2.54 (2.036-3.165)].

Further, the result showed that, a unit increment in the total score of perceived self-efficacy towards BSE the likelihood of performing BSE was also increased by 1.12 and the observed

difference was statistically significant at [AOR, 95%CI, 1.120 (1.041-1.205)]. likewise a unit increment in the total score of perceived benefit towards BSE the likelihood of performing BSE was increased by 1.121 and the observed difference was statistically significant at [AOR, 95%CI, 1.121**(1.037-1.211)]**(table 4).

Table 4: Bivariable and multivariable logistic regression analysis for factors associated with breast self-examination among female secondary school teachers in Awi Zone North west Ethiopia, 2019

Variables	**Practicing BSE**		COR(95%CI)	AOR(95%CI)	P value Bivariate	P value Multivariate
	Yes	**No**				
Educational status						
Diploma	17	23	1			
Degree	72	218	2.016 (0.793-5.124)			
Master`s degree	11	30	0.901 (0.430- 1.889)			
Personal History of breast problem						
Yes	8	19	1.15(0.488- 2.725)			
No	92	260	1			
Family history of breast cancer						
Yes	16	13	3.78 (1.747-8.182)*	.597(.196 -1.818)	0.000	
No	84	258	1	1		
	Mean(±SD) ***					
Age **	35.98(± 5.5)		1.058(1.015 - 1.103)*	1.018(.962-1.077)	0.017	
Income **	5381 (±1405)		1.00(1.00 - 1.00)		0.000	
Knowledge on breast cancer**	3.2(±3.0)		.661(.469 - .932)*	.572(.368-.888)*	0.016	0.000
Knowledge about BSE**	4.4(±4.0)		2.479(2.018 - 3.045)*	2.538(2.036-3.165)*	0.000	0.000
Perceived susceptibility**	21.1 (± 4.0)		1.141(1.065 - 1.223)*	1.027(.755 - 1.397)	0.003	
Perceived severity**	24.6 (± 5.4)		1.113(1.058-1.171)*	1.024(.767-1.366)	0.000	
Perceived benefit**	20.9 (± 4.19)		1.128(1.053-1.207)*	1.121(1.037-1.211)*	0.000	0.002
Perceived barrier**	29.54 (± 4.25)		1.154(1.079-1.233)*	.880(.686 - 1.130)	0.000	
Perceived Self-efficacy**	24.4 (±4.84)		1.120(1.058 - 1.185)*	1.120(1.041-1.205)*	0.014	0.003
Cues to action**	0.596 (± 0.97)		1.518(1.216 - 1.895)*	1.339(.979-1.831)	0.000	

** P-value < 0.05, ** Continuous variables, COR -> Crude odd ratio, AOR -> Adjusted odd ratio*

*** Mean (±SD) for continuous variables

6. Discussion

This study aimed to assess the practice of breast self-examination (BSE) and to identify the predictors of BSE performance. It found that less than third of school female teachers 100 (27 %) performed breast self-examination. The prevalence of this study is higher than the study conducted in Kaffa zone, southern Ethiopia in which 12% of participants were performed BSE [38].The difference might be most of the participants had awareness about BSE due to the initiation of BSE through different media in this study area.

In this study having high knowledge score on screening methods/BSE emerged as the strongest and significant predictors in performing BSE. This finding was consistent with study conducted in Turkish academic women and housewives, and also congruent with similar study among female secondary school teachers in Ilorin, Nigeria [30, 35]. This may be explained by the fact that knowledge of BSE was recognized as a necessary precursor to women's adherence for the performance of BSE. On the other hand, this study showed that as a unit increase in total score of knowledge of school teachers on breast cancer, the likely hood of performing BSE was decreased. This finding is inconsistent with various similar studies [14, 30, 35, and 38]. This difference has different implications; and one scholar found that intentions were better predictors of behavior than the actual behaviors when they were based on high amounts of knowledge and attitude can be the direct predictor of behaviors. Further they explained that attitude plays the direct causal role in actual behavior and that knowledge is only one of several distal determinants of people's willingness to act on their attitude and behavior. So, this finding may imply that knowledge may not actually initiate the behaviors; instead, high knowledge may initiate positive attitudes which can be better predictors of the actual behaviors [41].Consistent with present findings, Gasalberti reported that women with high knowledge do not perform BSE in a thorough manner. It reported that in addition to knowledge, BSE required a consistent commitment by the individual as it is a personal responsibility [42]. From this explanation we can say that, having good knowledge about breast cancer might not sufficient; they might lack the required beliefs and skills regarding the proper practice of BSE. In addition, this finding may imply that sometimes when people's knowledge about specific disease increases they may not go

for screening because of the fear that they may get positive result or may have the disease of interest

Further, the results of multiple logistic regression showed that among the constructs of the health belief model perceived benefits and perceived self-efficacy were a significant predictor in performing BSE. So perceived benefits was significantly associated with performing BSE and indicated that as a unit increases in sum score of perceived benefits the likelihood of performing BSE was also increased. Similar findings were reported from cross sectional study conducted in Kuwaiti female school teachers and Turkish women [35, 43]. This finding could be explained as expecting that performing BSE and other screening methods could result to adopt health behaviors to reduce risk of getting breast cancer and also believing that performing BSE would be worthwhile to reduce acquiring breast cancer.

The result of this study also revealed that female school teachers with greater perceived self-efficacy were more likely to perform BSE than those with lower perceived self-efficacy. Different studies and a systematic review regarding the effect of the HBM on the early diagnosis of breast cancer support the findings of the current research in this regard (34, 44).

Other similarly study on nurses also reported that, confidence was the most statistically significant concept related to BSE. It reported that if a nurse felt satisfied in her ability to perform BSE correctly and detect she was more likely to engage in BSE [45]. So this finding can be explained as if women were generally motivated to perform healthy behaviors and perceived capable to perform BSE, they were also more likely to practice BSE. It also implies that BSE requires self-efficacy, which is regarded as an indispensible prerequisite for the development of skills and paramount importance to promote BSE, hence in practicing BSE.

As a result, it could be concluded that benefits and confidence may encourage women to perform BSE. Evidently, early detection of breast cancer could remarkably contribute to effective treatment and increase the survival rate. Therefore, it is recommended that healthcare educational interventions be developed based on the HBM in order to enhance perceived benefits and self-efficacy and eliminate barriers, such as the common concerns about BSE.

7. Strength and limitation of the study

Strength

This is among the few studies in Ethiopia that focused female teachers in the secondary schools, as well as using behavioral models.

Limitation

- ✓ This study may not be representative of all teachers in Ethiopia as it focused on one specific zone of Amhara regional state.
- ✓ The strength of the outcome variable measurement may not be found as such strong to measure teacher's procedural and technical skill in performing self- screening.

8. Conclusion

This study aimed to assess the predictors of breast self-examination (BSE) performance among female secondary school teachers based on the health belief model and it was discovered that the practice of breast self-examination among the participants was relatively low.

The study evidenced that, participant's having good knowledge, the extent to which teachers perceived that they are benefitted from performing BSE and feel confident or perceived that they have high self-efficacy to perform BSE has surfaced as some of the most important predictors to affect teacher's decisions about performing BSE.

9. Recommendations

Female teachers are considered as vital health promoter who has regular contact with young female students and by far with the community who see them as role models.

The result of this study emphasizes the need for planning and implementing well-designed school based education programs to improve their awareness that underline the benefit of early screening and improving their self-efficacy through demonstration of correct procedures on performing BSE.

Therefore,

1. Amhara Regional Health Bureau better to organize school-based health education programs, develop strategies, providing and cascading trainings that target women teachers to improve knowledge on breast cancer and breast cancer screening behaviors.
2. Amhara Education Bureau and teachers association should work together with the health sector for the implementation of school-based health education programs that target women teachers to improve knowledge on breast cancer screening behaviors.
3. Nongovernmental organizations which are working on cancer particularly in breast cancer prevention and control program should support and strengthen school-based health education programs that target women teachers to improve their knowledge, understanding its benefit and developing self-confidence on breast cancer screening behaviors.
4. Similarly, district health offices in collaboration with other stake holders should promote breast health education program at school level by focusing on the benefit of BSE and increasing

the confidence of teachers to practice BSE since these factors and having good knowledge found as the independent predictors of teachers' decisions about performing BSE

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Annexe 1: Questionnaire

BAHIR DAR UNIVERSITY

College of Public and Medical Sciences

School of Public Health

Department of Public Health General

Questionnaire prepared to identify the predictors of Breast Self-Examination (BSE) among female teachers in, AWI Zone, Ethiopia, 2019site, Awi zone ;

My name is _____. I am working with Ato Hailu Bitew, who is doing a research as partial fulfillment for the requirement of Master of Public Health at Bahir Dar University to identify the factors associated with the practice of Breast Self-Examination (BSE) among female secondary school teachers of, Awi Zone, North West Ethiopia.

Confidentiality and consent: "You are kindly requested to respond some very personal questions that some people find difficult to answer. Your answers are completely confidential. Your name will not be written on this form, and will never be used in connection with any of the information you provide. You do not have to answer any questions that you do not want to answer, and you may end this interview at any time you want to. However, your honest answers to these questions will help us for planning and prominent policy making regarding the problem and so your responses are vital for achieving the goal of the research and for decrement of the problem facing Ethiopian women's like you. We would greatly appreciate your help in responding to this survey. If you need any further information or explanation regarding to this study, you can contact the principal investigator. Here are his contact details;

Name_ Hailu Bitew

Phone number_ +251 918 20 37 78

Email address_ hailub311@gmail.com the survey will take about 20 minutes to ask the questions. Would you be willing to participate?" If yes, proceed. If no, thank and stop here.

Informed consent

I have read the above information and I have understood the purpose of the study. I also understand that the research imposes no risk to me. I am assured that there was confidentiality of my responses and collected data was used only for the study. It has also been explained to me that I have the right to stop participating at any time.

But, I understood that participating in this study is important for scientific knowledge and base for further study. Therefore, I have now consented to participate in the study.

Questionnaire number_____

Time started_____ Time completed_____

Part I: Socio demographic information

Instruction: for each of the following questions please circles the number of alternative(s) that fit for your response.

No	Question	Response category						Skip
101	What is your age in completed years?							
102	What is the highest education level you have attained?	1. Diploma	2. Degree	3. Master‟s degree				
103	What is your current marital status?	1. Single	2. Married	3. Divorced	4. Separated	5. Widowed		
104	What is your religion?	1. Orthodox	2. Muslim	3. Protestant	4. Catholic	5. Other specify ___		
105	What is your monthly personal income in Ethiopian Birr?	_____ birr						If No go to next section
106	Do you have previous history of breast problem?	1.yes	2.No					
107	Do you have Family history of breast cancer?	1.yes	2.No					

Part II: Source of information on Breast cancer and breast self-examination practice

No	Question	Response category						Skip
201	Have you ever heard about breast cancer?	1. Yes	2. No					If No go to Q 203
202	If your answer to question 201 is yes, from where did you hear the information? (More than one answer is possible)		1. Television/ Radio	2. Friends	3. Health professional	4. Magazines/ brochures	5. other specify_ _____	
203	Have you ever heard about BSE?	1. Yes	2. No					If No go to next section
204	If your answer to question 203 is yes, from where did you hear the information? (More than one answer is possible)		1. Television/ Radio	2. Friends	3. Health professional	4. Magazines/ brochures	5. other specify_ _____	

Part III: Female teachers' knowledge on breast cancer and breast self-examination

No	Question	Response category						Skip
301	How often should a breast self-examination be performed?	1. Weekly	2. Monthly	3. Every 6 month	4. Once a year	5. I don"t know__		
302	At what age should a woman begin breast self-examination?	1. Below 20 year	2. Starting from 20 year	3. Above 30 year	4. I don"t know			
303	Breast cancer is transmittable disease	1. Yes	2. No	3. I don"t know				
304	What is the appropriate time in a woman with regular menstruation for performing breast self-examination?	1. during menses	2. few days before menses	3. few days after menses	4. At any time	5. I don"t know		
305	What was the position of body while performing breast self-examination?(More than one answer is possible)	1. standing straight in front of mirror	2. lying down	3. sitting down	4. I don"t know			

306	How is breast self-examination performed?	1. Palpate with palm and three middle fingers	2. Palpate with any of the fingers	3. I don‟t know	4. If other specify ……..			
307	What are the risk factors for breast cancer?(More than one answer is possible)	1. Positive family history of cancer	3. Early onset of menarche(under 12 years old)	5. Not breast feeding	7. Alcohol consumption	9. Having large breast	11. I don‟t know	
		2. First child at late age(above 30 years old)	4. 4.Late menopause (above 55 years old)	6. Obesity	8. Exposure to radiation	10. Punishment from God	12. If other specify …… …..	
308	What are the sign and symptoms of breast cancer?	1. Lump in the breast	3. Changes in shape of the breast	5. Swelling under the armpit	7. Dimpling of the breast	9. Inversion/ Pulling in of nipple	11. If other specify _____	
		2. Nipple Discharge	4. Change in size of the breast	6. Pain in the breast	8. Discoloration of the breast	10. I don‟t know		
309	Do you know any breast cancer screening method?	1. Yes	2. No					If no skip to Q 311

310	What are the types of breast cancer screening methods?(More than one answer is possible)	1. breast self-examination	2. CBE or breast exam by health personnel	3. Mammography	4. If others specify ____			
311	Is breast cancer hereditary?	1. Yes	2. No	3. I don‟t know				
312	Breast cancer is curable if detected at early stage of the disease	1. Yes	2. No	3. I don‟t know				

Part IV: Practice of breast self-examination

No	Question	Response category						Skip
401	Have you ever performed breast self-examination to screen for breast cancer?	1.yes	2.No					If No go to Q 203
402	If you answer is yes to Q401 How often do you perform breast self-examination?	1. Once a week	2. Once a month	3. Every three month	4. Every 6 month	5. Once a year	6. If other specify …… …….	
403	If you answer is [yes] to Q401 what is your reason?	1. I have previous history of breast problem	2. I have family history of breast cancer	3. Health professional's recommendation	4. I fear developing breast cancer	5. If other specify …….		

Part V: Perception about susceptibility to breast cancer

Instruction: Please circle how you agree/disagree with the following statements

No	Question	Response category				
		Strongly disagree	disagree	Neutral	agree	Strongly agree
501	It is not likely that I will get breast cancer	1	2	3	4	5
502	I never feel I will get breast cancer sometime during my life	1	2	3	4	5
503	Women with family history of breast cancer are more prone to breast cancer	1	2	3	4	5
504	Women with history of breast disease are more prone to breast cancer	1	2	3	4	5
505	I don't think that my risk behavior may expose me to breast cancer in the future	1	2	3	4	5

Part VI: Perception about seriousness or severity of breast cancer

Instruction: Please circle how you agree/disagree with the following statements

No	Question	Response category				
		Strongly disagree	disagree	Neutral	agree	Strongly agree
601	When I think about breast cancer, my heart beats faster	1	2	3	4	5
602	Breast cancer would threaten a relationship with my boyfriend, husband.	1	2	3	4	5
603	I am afraid to think about breast cancer.	1	2	3	4	5
604	If I got breast cancer it would not be more serious than other disease	1	2	3	4	5
605	Breast cancer is not as serious as other types of cancers	1	2	3	4	5
606	I feel I can live longer if I got breast cancer	1	2	3	4	5
607	Death resulting from breast cancer is rare	1	2	3	4	5

Part VII: Perceptions on benefits of breast self-examination practice

Instruction: Please circle how you agree/disagree with the following statements

No	Question	Response category				
		Strongly disagree	disagree	Neutral	agree	Strongly agree
701	When I do breast self-examination, I am doing something to take care of myself	1	2	3	4	5
702	Completing breast self-examination each month may help me find breast lumps early	1	2	3	4	5
703	Regular breast self-examination each month do not decrease the rate of death from breast cancer	1	2	3	4	5
704	If I find a lump early through breast self-examination, my treatment for breast cancer may not be as bad	1	2	3	4	5
705	When I complete monthly breast self-examination I don't worry as much about BC	1	2	3	4	5
706	Even though I complete breast self-examination monthly I can't decrease my chances of requiring radical or disfiguring surgery if breast cancer occurs	1	2	3	4	5

Part VIII: Perceptions on barriers to breast self-examination practice

Instruction: Please circle how you agree/disagree with the following statements

No	Question	Response category				
		Strongly disagree	disagree	Neutral	agree	Strongly agree
801	Breast self-examination is not embarrassing to me	1	2	3	4	5
802	Breast self-examination will not take too much time	1	2	3	4	5
803	It is not as such hard to remember to do Breast self-examination	1	2	3	4	5
804	I don't have enough privacy to do Breast self-examination	1	2	3	4	5
805	Breast self-examination is not necessary if you have a routine mammogram and / or breast exam by a health professional.	1	2	3	4	5
806	My breast is too large for me to complete breast self-examination	1	2	3	4	5
807	I don't have other problems more important than doing breast self-examination	1	2	3	4	5

808	For me , performing Breast self-examination would not lead me to worry about breast cancer	1	2	3	4	5
809	My family would make fun of me if I did Breast self-examination -	1	2	3	4	5
810	Doing Breast self-examination would require starting a new habit , which is difficult	1	2	3	4	5

Part IX: Perceptions on self-efficacy to do BSE

Instruction: Please circle how you agree/disagree with the following statements

No	Question	Response category				
		Strongly disagree	disagree	Neutral	agree	Strongly agree
901	I am not confident I can perform Breast self-examination correctly	1	2	3	4	5
902	I am not able to find a breast lump that is the size of a hazelnut, by performing Breast self-examination	1	2	3	4	5
903	I am not sure of the steps to follow for doing Breast self-examination	1	2	3	4	5
904	I am able to tell something is wrong with my breast when doing breast self-examination	1	2	3	4	5
905	I can use the correct part of my fingers when examining my breasts	1	2	3	4	5
906	I feel confident that I perform a breast self-exam	1	2	3	4	5

Part X: Perception on cues to action to practice BSE

No	Question	Response category				
1001	Do you have a family member with breast cancer?	1. Yes	2. No			
1002	Have you ever seen /heard about women who perform Breast self-examination last one month	1. Yes	2. No			
1003	Have you ever seen /heard a women having breast cancer last one month	1. Yes	2. No			
1004	Have you ever heard though media /newspaper about Breast self-examination during last one month	1. Yes	2. No			

Annex 2: መረጃ መሰብሰቢ ያቅጽ

በባህር ዳር ዩኒቨርስቲ የህብረተሰብ ጤናና ሕክምና ሳይንስ ኮሌጅ

የህብረተሰብ ጤና ትምህርት ክፍል የማብራሪያና የስምምነት ቅጽ

ጤና ይስጥልኝ የተከበሩ መምህርት ስሜ ---------- ይባላል የምሰራው ከባህር ዳር ዩኒቨርስቲ የህብረተሰብ ጤና ትምህርት ክፍል የድህረ ምረቃ ተማሪ ከሆነው ከኃይሉ ቢተው ጋር ሲሆን የመጣሁትም ይህን እርስዎ እንዲሳተፉበት የምንጠይቅዎትን የምርምር ጥናት መረጃ ለመሰብሰብ ነው

ይህ የማብራሪያና የስምምነት ቅጽ አሁን እርስዎ እንዲሳተፉበት የምንጠይቅዎትን የምርምር ጥናት የሚያብራራ ነው፡፡ እባክዎ በዚህ ጥናት ለመሳተፍ ከመወሰንዎ በፊት ይህንን ቅጽ በጥንቃቄ በማንበብ ጥያቄዎች ካልዎት ይጠይቁ፡፡ በዚህ ጥናት መሳተፍ ከጀመሩ በኋላ በማንኛውም ጊዜ ጥያቄዎች ካሉዎት መጠየቅ ይችላሉ፡፡ ጥናቱን የሚያካሂደው ሀይሉ ቢተው የተባለ በባህር ዳር ዩኒቨርስቲ የህብረተሰብ ጤናና ሕክምና ሳይንስ ኮሌጅ የድህረ ምረቃ ተማሪ እና በሁለት የባህርዳር ዩኒቨርስቲ የጥናቱ አማካሪዎች ነው፡፡

የጥናቱ ዓላማ ሴት መምህራን ራሳቸውን በራሳቸው ጡታቸውን ለካንሰር ምርመራ የማካሄድ ባህሪያቸውን ማጥናት ነው፡፡

የጥናቱ ቦታ አዊ ዞን ሲሆን በዚህ ጥናት ላይ የሚያደርጉት ተሳትፎ ሙሉበሙሉ በፍቃደኝነት ላይ የተመሰረተ ሲሆን ከጥናቱ የምናገኘዉ መረጃ ለምርምር እና ለጥናት ከመሆንም አልፎ በሀገራችን የካንሰር በሽታን ለመከላከል የሚያስችል የመነሻሀሳብን ለማመንጨት ጠቀሜታ ይኖረዋል በችግሩ ዙሪያ ለሚሰሩ መንግስታዊ እና መንግሰታዊ ላልሆኑ ድርጅቶችም እንደአንድ ግብዓት ከማገልገሉ ባሻገር በእርስዎ ላይ ምንም አይነት ተፅዕኖ የለውም ሚስጥርን ከመጠበቅም አንፃር በቃለመጠየቁ ላይ ስም አይፃፍም መጠይቁ የሚካሄደዉም በግል ሲሆን እስከ 20 ደቂቃዎችን ሊወስድ ይችላል መመለስ ያልፈለጉትን ጥያቄ እንዲመልሱ አይገደዱም በሂደቱ ላይ በጥናቱ ላለመካፈል በማንኛውም ወቅት ለመወሰን ይችላሉ ነገር ግን ሁሉንም ጥያቄዎች እንዲመልሱልን እናበረታታለን ለበለጠ መረጃ እና ማብራሪያ የጥናቱን ባለቤት በዚህ አድራሻ ማግኘት ይችላሉ

የጥናቱ ተመራማሪ ስም ኃይሉ ቢተው የስልክ ቁጥር +251 918 20 37 78 ኢ-ሜይል hailub311@gmail.com

ጥያቄዎቹ በአስር ዋና ዋና ክፍሎች የተከፈሉና በምርጫ መልክ የተዘጋጁ ሲሆን ከተዘረዘሩት አማራጮች ውስጥ ትክክለኛ ነዉ የሚሉትን አንዱን ብቻ በመምረጥ ይክበቡ ግልፅ ያልሆነ ነገር ካለ በማንኛውም ጊዜ ሊጠይቁን ይችላሉ፡፡

ስለትብብርዎ በጣም አመሰግናለሁ ከዚህ ቀጥሎ በጥናቱ ለመሳተፍ መስማማትዎን ለማረጋገጥ የሚከተለውን የስምምነት ቅጽ ያንብቡ፡፡

የስምምነት ቅጽ

መረጃ ሰብሳቢው የጥናቱን ዓላማ በሚገባ አስረድተውኛል በተጨማሪም በጥናቱ ያለመሳተፍና በማንኛውም ጊዜ ለማቋረጥ ያለኝን መብት ገልፀውልኛል፡፡

በዚህም መሠረት በጥናቱ ለመሳተፍ ተስማምቻለሁ --------አልተስማማሁም------ ከተስማሙ ወደ መጀመሪያው የጥያቄ ክፍል ይለፉ፡፡

ክፍል 1: ማህበራዊ እና የስነ- ህዝብ መረጃ

ተ.ቁ.	ጥያቄ	የመልስ ምድብ						ይለፉ
101	ዕድሜዎት ስንት ነው(በሙሉ ዓመት)?	----------						
102	የትምህርት ደረጃወትን ይግለፁ	1. ዲፕሎማ	2. ዲግሪ	3. 2ተኛ ዲግሪ				
103	በአሁኑ ጊዜ የጋብቻ ሁኔታ?	1. ያላገባች	2. ያገባች	3. የተፋታች	4. የትዳር አጋር የሞተባት			
104	ሃይማኖትዎ?	1. ኦርቶድክስ	2. ሙስሊም	3. ፕሮቴስታንት	4. ካቶሊክ	5.ሌላካለ(ይገለጽ)_____		
105	ወርሓዊ ገቢ(ብር)?	_____ ብር						
106	ከዚህ በፊት በጡት በሽታ ታመዉ ያውቃሉ	1. ኣዎ	2. አልታመምኩም					

107	በቤተሰብዎ ዉስጥ ከዚህ በፊት በጡት ካንሰር የታመመ ሰው ይኖራል?	1. ኣዎ	2. የለም					

ክፍል 2: በጡት ካንሰርና የራስን በራስ የጡት ምርመራ የመረጃ ምንጭ በተመለከተ

ተ. ቁ.	ጥያቄ	የመልስ ምድብ						ይለፉ
201	ስለጡት ካንሰር ሰምተው ያውቃሉ?	1. ኣዎ	2. አላውቅም					ወደ.ቁ. 303
202	ለተ.ቁ 201 መልስዎኣዎ ከሆነ ለመጀመሪያ ጊዜ የሰሙት ከየትነው ? (ከአንድ በላይ መልስ መስጠት ይቻላል)	1. ከተሌ ቪዥን/ ሬዱዩ	2. ከጓደኞቹ	3. ከጤና ባለሙያ	4. ጋዜጣ/መ ጽሄት	5. ሌላ ካለ ይግለጹ_____ _____ _____		
203	ስለጡት የራስ በራስ ምርመራ ሰምተው ያውቃሉ?	1. ኣዎ	2. አላውቅም					
204	ለተ.ቁ 203 መልስዎ ኣዎ ከሆነ ለመጀመሪያ ግዜ የሰሙት ከየትነው ? (ከአንድ በላይ መልስ መስጠት ይቻላል)	1. ከተሌ ቪዥን/ ሬዱዩ	2. ከጓደኞቹ	3. ከጤና ባለሙያ	4. ጋዜጣ/መ ጽሄት	5. ሌላ ካለይግለጹ_ _____ _____		

ክፍል 3: ስለጡት ካንሰርና ራስ በራስ የጡት ምርመራን እውቀትን በተመለከተ

ተ. ቁ.	ጥያቄ	የመልስ ምድብ						ይለ ፉ
301	የራስ በራስ የጡት ምርመራ በየስንት ጊዜ መተግበር አለበት ብለው ያስባሉ?	1. በሳምንት ኣንዴ	2. በወር ኣንዴ	3. በስድስት ወር ኣንዴ	4. በኣመት ኣንዴ	5. አላ ውቅ ም		
302	አንድ ሴት ከየትኛው የእድሜ ደረጃ ጀምሮ የራስ በራስ የጡት ምርመራ ማድረግ መጀመር አለባት ብለው ያስባሉ?	1. ከሀያ አመት በታች	2. ከሀያ አመት ጀምሮ	3. ከስልሳ አመት በላይ	4. አላውቅም			
303	የጡት ካንሰር ከሰው ወደ ሰው የሚተላለፍ በሽታ ነው	1. ኣዎ	2. ኣይደለም	3. አላውቅም				
304	መደበኛ የሆነ የወር አበባ የምታይ ሴት የራስ በራስ ጡት ምርመራ ማድረግ ያለባት መቼ ነው?	1. የወር አበባ እየታየ	2. የወር አበባ ከመታየቱ ጥቂት ቀናት ቀደም ብሎ	3. የወር አበባ ከታየ ከጥቂት ቀናት በኋላ	4. በማንኛውም ጊዜ መመርመር ይቻላል	5. አላ ውቅ ም		
305	ራስ በራስ የጡት ምርመራ ስናደርግ የተክለ ሰውነት ሁኔታ እንዴት መሆን አለበት? ከአንድ በላይ መልስ	1. መስታዎት ፊት	2. በጀርባ በመተኛት	3. በመቀመጥ	4. አላውቅም			

	መስጠት ይቻላል)	ለፊት በመቆም						
306	የራስ በራስ የጡት ምርመራ እንዴት ይተገበራል?	1. በሶስት መሀል ጣቶችና በመዳፍ በመዳሰስ	2. በአንድ ጣት በመዳሰስ	3. አላውቅም	4. ሌላ ካለ ይግለጹ_ _____ _____ ___			
307	እርስዎ የሚያውቋቸው ለጡት ካንሰር ሊያጋልጡ የሚችሉ ሁኔታዎችን ይጥቀሱልን (ከአንድ በላይ መልስ መስጠት ይቻላል))	1. በዘር ሀረግ በጡት ካንሰር የተያዘ ቤተሰብ ካለ	3. እድሜ ሳይደርስ የወር አበባ ማየት(ከ12 ዕድሜ በታች)	5. ጡት አለማ ጥባት	7. የአልኮል መጠጥ ማብዛት	9. ትልቅ ጡት መኖር	11. አላውቅም	
		2. የመጀመሪያ ልጅ ዘግይቶ መውለድ (ከ30 ዓመት በላይ)	4. የወር አበባ ዘግይቶ ማቆም (ከ55 ዓመትበላይ)	6. ከመጠን ያለፈ የሰውነት ውፍረት	8. ለረዥም ጊዜ ለጨረር መጋለጥ	10. እርግማን	12. ሌላካለ ይግለጹ ___ ___ ___ ___ ___ ___ ___	
308	እርስዎ የሚያቋቸው የጡት ካንሰር ምልክቶች ካሉ ይጥቀሱልን (ከአንድ በላይ መልስ መስጠት ይቻላል)	1. ህመም የሌለው የጡት እጢ	3. የጡት ቅርፅ መቀየር	5. በጡት አካባቢና በብብት ውስጥ እብጠት መኖር	7. የጡት ቆዳ መሸብሸብ	9. የጡት ጫፍ መሰርጎድ		
		2. ከጡት ጫፍ የሚወጣ ፈሳሽ	4. የጡት መጠን መቀየር	6. የጡት ህመም	8. የጡት ቆዳ መቅላት/ መልክ መቀየር	10. አላውቅም		

309	የጡት ካንሰር በሽታ ለማወቅ የሚያስችል የቅድመ ካንሰር ምርመራ ዘዴ ያውቃሉ?	1. አዎ	2. አላውቅም					ወዮ ቁ.311
310	ከላይ ላለውጥያቄ መልስዎ አዎ ከሆነ የትኛውን የቅድመ ካንሰር ምርመራ አይነት ያውቃሉ? (ከአንድ በላይ መልስ መስጠት ይቻላል)	1. የራስን ጡት በራስ መመር መር	2. ጡትን በሃኪምማስ መርመር	3. ማሞግራፊ (የጡት ራጅ መነሳት)	4. ሌላ ካለ ይግለጹ_ _____ _____ ____			
311	ጡት ካንሰር በዘር የሚተላለፍ በሽታ ነው	1. አዎ	2. አይደለም	3. አላውቅም				
312	ጡት ካንሰር በግዜው ከተደረሰበት ሊድን የሚችል በሽታ ነው	1. አዎ	2. አይድንም	3. አላውቅም				

ክፍል 4: የራስ በራስ የጡት ምርመራ “ተግባርን” በተመለከተ

ተ.ቁ.	ጥያቄ	የመልስ ምድብ						ይለፉ
401	የራስ በራስ የጡት ምርመራን ያደርጋሉ?	1. አዎ	2. አላደርግም					
402	ለጥያቄ ቁጥር 401 መልስዎ አዎ ከሆነ በምን ያህል ግዜ ያደርጋሉ?	1. በሳምንት አንዴ	2. በወር አንዴ	3. በሶስት ወር አንዴ	4. በስድስት ወር አንዴ	5. በአመት አንዴ	6. ሌላ ካለ ይግለጹ_ _____ _____ ____	
403	ለጥያቄቁ.401 ምላሽ “አዎ” ከሆነ የራስ በራስ የጡት ምርመራ የምታደርጊው በምን ምክንያት ነው?	1. ከዚህ በፊት የጡት ችግር ስለነበረኝ	2. በቤተሰብ የጡት ካንሰር ስላለና ስለምፈራ	3. በጤና ባለሙያ ስለሚመከር፤ በጊዜ ለማወቅና እርምጃ ለመውሰድ	4. በጡት ካንሰር መያዝ ስለምፈራ	5. ሌላ ካለ ይግለጹ _____ _____ _____ _		

ክፍል 5: ለጡት ካንሰር ያለዎት ተጋላጭነት በተመለከተ

ተ.ቁ	ጥያቄ	የመልስ ምድብ				
		በፍፁም አልስማማም	አልስማማም	እርግጠኛ አይደለሁም	እስማማለሁ	በጣም እስማማለሁ
501	በጡት ካንሰር የመታመም እድሌ ዝቅተኛ ነው	1	2	3	4	5
502	በሕይወት ዘመኔ የሆነ ጊዜ ላይ በጡት ካንሰር እያዛለሁ ብዬ አላስብም	1	2	3	4	5
503	በቤተሰቧ ውስጥ የጡት ካንሰር ታሪክ ያላት ሴት ለጡት ካንሰር የመጋለጥ እድሏ ከፍተኛ ነው	1	2	3	4	5
504	የጡት በሽታ ታሪክ ያላት ሴት ለጡት ካንሰር የመጋለጥ እድል ከፍተኛ ነው	1	2	3	4	5
505	ያለኝ ባህሪ ወደፊት ለጡት ካንሠር ሊያጋልጠኝ ይችላል ብዬ አላስብም	1	2	3	4	5

ክፍል 6፡ስለጡት ካንሰር ከባድነት ወይም ኣደገኝነት

ተ.ቁ	ጥያቄ	የመልስ ምድብ				
		በፍፁም አልስማማም	አልስማማም	እርግጠኛ አይደለሁም	እስማማለሁ	በጣም እስማማለሁ
601	ስለጡት ካንሰር ሳስብ ልብ ትርታዬ ይጨምራል	1	2	3	4	5
602	የጡት ካንሰር በእኔ ላይ ቢከሰት ከፍቅር ጓደኛዬ ወይም ከባለቤቴ ጋር ያለኝን ግንኙነት አደጋ ላይ ይጥላል	1	2	3	4	5
603	ስለጡት ካንሰር ሳስብ ፍርሀት ይሰማኛል	1	2	3	4	5
604	የጡት ካንሰር ቢይዘኝ ከሌሎች በሽታዎች የበለጠ አደገኛ ሊሆን እንደማይችል እገምታለሁ	1	2	3	4	5
605	የጡት ካንሰር እንደሌሎች አይነት የካንሰር አይነቶች አደገኛ አይደለም	1	2	3	4	5
606	የጡት ካንሰር በሽታ ቢይዘኝ ለረጅም ጊዜ በሕይወት እቆያለሁ ብዬ አስባለሁ	1	2	3	4	5
607	በጡት ካንሰር ምክንያት የሚከሰት የመሞት እድል በጣም አነስተኛ ነው	1	2	3	4	5

ክፍል• 7: የራስን ጡት በራስ መመርመር ስላለው ጠቀሜታ

ተ.ቁ	ጥያቄ	የመልስ ምድብ				
		በፍፁም አልስማማም	አልስማማም	እርግጠኛ አይደለሁም	እስማማለሁ	በጣም እስማማለሁ
701	የራሴን ጡት በራሴ ምርመራ ማድረጌ ለራሴ ጤንነት ጥንቃቄ እያደረግሁ ነው ብዬ አስባለሁ	1	2	3	4	5
702	በየወሩ የራሴን ጡት በራሴ ምርመራ ማድረጌ የጡት እጢ በግዜው እንዲገኝ ይረዳኛል	1	2	3	4	5
703	በየወሩ የራስን ጡት በራስ ምርመራ ማዴረግ በጡት ካንሰር ሳቢያ ሊመጣ የሚችለውን ሞት ሊቀንስ አይችልም	1	2	3	4	5
704	የራሴን ጡት በራሴ ምርመራ ሳደርግ የካንሰር ምልክት የሆነውን እብጠት ወዲያውኑ ባገኝ እንኳን የጡት ካንሰር ሕክምናዬ የተሻለ ሊሆን ይችላል	1	2	3	4	5
705	በየወሩ የራሴን ጡት በራሴ ምርመራ ማድረጌ ስለጡት ካንሰር የሚኖረኝን ጭንቀት ይቀንሳል	1	2	3	4	5
706	በየወሩ የራስ በራስ የጡት ምርመራ ማድረግ በጡት ካንሰር ብያዝ እንኳን የሰውነት ቅርጼን ከሚለውጥ ቀዶህክምና የመጋለጥ እድሌን ይቀንስልኛል ብዬ አላስብም	1	2	3	4	5

ክፍል 8: የራስን ጡት በራስ መመርመር ትግበራን የሚያግዱ/ እንከን የሚፈጥሩ

ተ.ቁ	ጥያቄ	የመልስ ምድብ				
		በፍፁም አልስማማም	አልስማማም	እርግጠኛ አይደለሁም	እስማማለሁ	በጣም እስማማለሁ
801	የራሴን ጡት በራሴ ምርመራ ማድረግ ለእኔ ኣሳፋሪ አይደለም	1	2	3	4	5
802	የራሴን ጡት በራሴ ምርመራ ማድረግ ረጅም ሰኣት አይወስድብኝም	1	2	3	4	5
803	የራሴንጡትበራሴ ምርመራ ለማድረግ የማካሂድበትን ጊዜ ማስታወስ ለኔ ከባድ	1	2	3	4	5

	አይደለም					
804	የራስ በራስ የጡት ምርመራን ብቻዬን በነጻነት የማደርግበት ምቹ የሆነ ቦታ የለኝም።	1	2	3	4	5
805	በጤና ባለሙያ የሚደረግ የጡት ምርመራ ወይም በጡት መመርመሪያ ማሽን(ማሞግራፊ) በየወቅቱ ምርመራ የምታደርጊ ከሆነ ራስን በራስ ጡትን መመርመር አስፈላጊ አይደለም	1	2	3	4	5
806	የራሴን ጡት በራሴ ምርመራ ለማድረግ ጡቱ በጣም ትልቅ ነው	1	2	3	4	5
807	ራስን በራስ የጡት ምርመራ ከማካሄድ የበለጠ ሌላ አንገብጋቢ ችግር የለብኝም	1	2	3	4	5
808	የራሴን ጡት በራሴ ምርመራ ማድረግ ለጡት ካንሰር የሚኖረኝን ጭንቀት አይጨምርብኝም	1	2	3	4	5
809	የራሴን ጡት በራሴ ብመረምር ቤተሰቦቼ መሳቂያ ያደርጉኛል	1	2	3	4	5
810	የራስን ጡት በራስ መመርመር አዲስና አስቸጋሪ የሆነ ልማድ መጀመር ነው	1	2	3	4	5

ክፍል 9: የራስን ጡት በራስ መመርመርን በተገቢው ሁኔታ ስለማድረግ

ተ.ቁ	ጥያቄ	የመልስምድብ				
		በፍፁም አልስማማም	አልስማማም	እርግጠኛ አይደለሁም	እስማማለሁ	በጣም እስማማለሁ
901	የራስን ጡት በራስ ምርመራ ማድረጉን በትክክል አልችልበትም	1	2	3	4	5
902	የራስን ጡት በራስ ምርመራ በማድረግ የአተር ፍሬ የሚያክል የጡት እጢ ማግኘት ለእኔ ይከብደኛል	1	2	3	4	5
903	ራስን በራስ የጡት ምርመራ ለማድረግ የሚያስችል ቅደም ተከተሎችን እርግጠኛ ሆኜ አላውቅም	1	2	3	4	5
904	ራስን በራስ የጡት ምርመራ በማደርግበት ጊዜ የተለየ ነገር ቢገጥመኝ መናገር እችላለሁ	1	2	3	4	5
905	የራሴን ጡት በራሴ በምመረምርበት ጊዜ ትክክለኛውን የጣቶቼን ክፍል መጠቀም እችላለሁ	1	2	3	4	5
906	የራሴን ጡት በራሴ ምርመራ በማድረጌ በራሴ መተማመን ይሰማኛል	1	2	3	4	5

ክፍል• 10: የራስን ጡት ምርመራ ለማድረግ ተነሳሽነት

ተ.ቁ	ጥያቄ	የመልስምድብ	
1001	የጡት ካንሰር ያለባትየቤተሰብ አባል አለዎት ?	1. አዎ	2. የለኝም
1002	ባለፈው አንድ ወር ውስጥ ራሷን በራሷ ጡቷን የምትመረምር ሴት አጋጥሞወታል ወይም ስለ እርሷ ሰምተዋል?	1. ኣዎ	2. ኣልሰማሁም
1003	ባለፈው አንድ ወር ውስጥ በጡት ካንሰር የተያዘች ሴት አይተዋል ወይንም መያዟን ሰምተዋል	1. ኣዎ	2. ኣልሰማሁም
1004	ባለፈው አንድ ወር ውስጥ ከሚዲያ /ከጋዜጣ ወዘተ ስለራስን በራስ የጡት ምርመራስ ለማድረግ ሰምተዋል /አንብበዋል	1. አዎ	2. ኣልሰማሁም

Declaration

I, the undersigned, senior MPH student declare that this thesis is my original work in partial fulfillment of the requirement for the degree of Master of Public Health.

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Date of Submission: _____

This thesis work has been submitted for examination with our approval as Bahir Dar University thesis advisors.

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ASSURANCE OF EXAMINERS

Name of Examiner **Signature**

1. ---------- ----------
2. ---------- ----------