

**KNOWLEDGE OF BREAST CANCER AND ASSOCIATED FACTORS
AMONG WOMEN OF CHILD BEARING AGE IN JIMMA TOWN,
OROMIA REGION, SOUTH WEST ETHIOPIA.**

BY: -YONAS BIRATU (Bsc. N)

**ATHESIS REPORT SUBMITTED TO JIMMA UNIVERSITY, INSTITUTE OF
HEALTH, FACULTY OF HEALTH SCIENCES, SCHOOL OF NURSING AND
MIDWIFERY, IN PARTIALFULFILLMENT OF THE REQUIREMENT FOR
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**JUNE, 2018
JIMMA, ETHIOPIA**

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OF HEALTH SCIENCES, SCHOOL OF NURSING AND
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Abstract

Introduction: Breast cancer is the most frequently diagnosed and the leading cause of death among women worldwide. Good knowledge of breast cancer on part of women enhances timely screening, early detection, and treatment. However; the level of knowledge regarding breast cancer among women of childbearing age living in Jimma is unknown.

Objective: To assess the breast cancer knowledge and associated factors among women of child bearing age group in Jimma town, Oromia region, Southwest Ethiopia.

Methods: A community based cross-sectional study on 724 respondents was conducted in Jimma town, from March 01 to March 31, 2018. respondents were identified using multistage sampling methods. Data was collected using face to face interviewer administered breast cancer awareness measure tool. The data was entered by Epi Data version 3.1 and exported to statistical Package for Social Sciences version 20. Logistic regression analysis was carried out and all variables with p value less than 0.25 in bi-variate analysis were candidates for multiple logistic regression analysis to identify a variable which have significant association on the basis of OR, 95%CI and P value of less than 0.05.

Results: Out of 724 respondents, 686 gave their complete response, which provide a response rate of 95%. Only 35% of respondents knew breast cancer, more specifically 20% had knowledge of risk factors, 45% had knowledge of signs and symptom, and 39 % had knowledge of screening methods. Maternal age, educational level, marital status, occupation, source of information, and monthly income and positive family history breast cancer are significantly associated with women's knowledge of breast cancer at P value less than 0.05.

Conclusion and recommendation: Just over one-third (35%) of women of child bearing age in Jimma Town are knowledgeable about breast cancer. Maternal age, educational level, marital status, occupation, source of information, and monthly income and positive family history breast cancer are statistically associated with women's knowledge of breast cancer Efforts should be made to improve, educational level, occupation, source of information, and monthly income to positively enhance women's knowledge of breast cancer.

Key words: -Cancer, Breast cancer, knowledge, Jimma town.

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Acronyms

ACS-American Cancer Society

BCRF-Breast Cancer Risk Factors

BCSM-Breast Cancer Screening Methods

BCSS- Breast Cancer Sign and Symptom.

BSE-Breast Self-Examination

CBE-Clinical Breast Examination

IARC-International Agency for Research on Cancer

HCP-Health Care Provider

MRI-Magnetic Resonance Image

SSA-Sub-Saharan Africa

TNM- Tissue, Lymph Nodes and degree of Metastasis.

WHO-World Health Organization

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Chapter one Introduction

1.1 Back ground

Cancer is a group of diseases due growth of cells out of control in the body [1]. Breast cancer is a malignant tumor characterized by the growth of abnormal cells in the breast glands and or ducts [2]. Based on the location of the cancer cell and extent of spread in to other organ it's classified into five stages; stage O, I, II, III, and IV. It is assigned with stage O being Insitu, stage I being early and stage IV being the most advanced disease [3].

As breast cancer is a deadly disease, more efforts should be focused on prevention than cure. Knowledge of breast cancer can help women for early consultation consult health care providers to get early detection and treatment which could prevent treatable complications in addition it enhances early detection and diagnosis that can greatly increase chances for successful treatment before reach an advanced stage [4]. Even though, causes of breast cancer are not fully known. Researchers have identified a number of factors that increase one's chances of getting breast cancer. Established risk factors of breast cancer are a familial history of breast cancer, prolonged exposure to endogenous estrogens, such as early menarche, late menopause, late age at first childbirth, Exogenous hormone, Oral contraceptive and hormone replacement therapy. Breastfeeding, weight control, physical activity, and avoidance of smoking also have a protective effect [1,5].

American Cancer Society recommends mammography, CBE, and MRI for the early detection of breast cancer by depending on a woman's age. However, Breast self- examination (BSE) is one of the cheapest screening methods for early detection in developing countries that women can do by themselves, in private, in their own schedule. Mammography is a low-dose x-ray procedure that allows visualization of the internal structure of the breast. MRI screening in addition to mammography for women at high lifetime risk begin at 30 years of age [6,7].

In Ethiopia, there is general lack of breast cancer knowledge and believe of all cancers are incurable. Little work has been done to promote breast cancer awareness in the general public. [8]. The level of breast cancer knowledge among women's in Ethiopia is unknown, Thus the purpose of this study is to describe the knowledge of breast cancer in the area of risk factors, sign and symptoms, and screening methods among women of child bearing age in Jimma town.

1.2. Statement of the problem

According to International Agency for Research on Cancer (IARC), there were 14.1 million new cases and 8.2 million cancer-related deaths in 2012 worldwide, of which 8 million occurred in economically developing countries, which contain about 82% of the world's population [1,9]. Breast cancer is the leading cause death among women worldwide. Even though it varies from country to country, Morbidity and mortality related to breast cancers is generally increasing from time to time. Globally in 2012 alone an estimated 1.7 million cases and 521,900 deaths registered due to breast cancer which accounts for 25% of cancer cases and 15% of cancer deaths among women worldwide [10].

Estimates of age-standardized incidence rates of breast cancer (per 100,000 women) are 30.4 in eastern Africa, 26.8 in central Africa, 38.6 in western Africa, and 38.9 in southern Africa [11]. In Ethiopia, breast cancer is the first leading cancer among females with 24.4% prevalence rate. According to WHO country profiles in 2014, 12,956 women were diagnosed with breast cancer and 26,200 women died by breast cancer in Ethiopia [12]. It was also reported the second out of the top ten cancers registered in the Radiotherapy center of Tikur Ambesa Hospital [13]. One of the main reasons for the high cancer mortality in sub-Saharan Africa is due to late diagnosis as the result of poor public knowledge and awareness about cancer. Cancer awareness is important to increase risk reduction behaviors, promote timely cancer screening, enhance case early detection, and ultimately reduce the cancer burden [14]. The low survival rates in less developed countries can be explained mainly by the lack of early detection programme, resulting in a high proportion of women presenting with late-stage disease, as well as by the lack of adequate diagnosis and treatment facilities.

Screening, early detection, and prompt management is the key strategy in reducing breast cancer related mortality and distant complication. Early diagnosis usually results in successful treatment before it metastasizes and signifies a better outcome. More than 90% of cases of breast cancer can be detected by women themselves through BSE [15,16]. A woman who knew about breast cancer and its screening method can be benefited from practicing BSE that can help her to discover lump in the breast [17,18].

In the country like Ethiopia where illiteracy rate is very high and health seeking behavior is poor, it is difficult to detect breast cancer before it reached the advanced stage. In such situation information on the knowledge of women on breast cancer is very important to design and develop information, education, and communication materials [19]. Several studies have been conducted to determine the knowledge of university students [20, 21] and health care providers [22]. Even though there was a study on women knowledge of breast cancer in northern Ethiopia, it not comprehensive enough to provide up to date information at a community level in all parts of the country. Thus, this study aims to determine overall knowledge of breast cancer and associated factors among women of child bearing age. More specifically, the study aimed to describe knowledge of breast cancer risk factors, sign and symptoms, and screening methods among women of child bearing age in Jimma town.

1.3 Significance of the study

Information on breast cancer knowledge of women of child bearing age at a community level is required for policy makers and health planners to addresses the significant factors, enhance breast cancer awareness, and develop future intervention programmes on breast cancer.

The results of this study will also provide a useful data that may be used by health institutions to formulate health education programmes focusing on breast cancer that target child bearing age women. In addition, it will be beneficial to public health educators, school nursing educators, health care professionals and health organizations, in order to carry out breast cancer education-based programmes at the different settings where child bearing age group could be reached, to optimize their level of knowledge on concept of breast cancer, breast cancer risk factors, signs and symptoms and preventive measures.

Chapter two Literature review

A review of the scientific literature about cancer knowledge and awareness in SSA revealed that there are low levels of breast cancer knowledge and awareness[23].specifically, the study conducted in Saudi Arabia, and Mekelle town Ethiopia revealed that the knowledge level of breast cancer was 35.6, and 34.7 respectively [24,25]. However, study conducted in the Adama Ethiopia [21], Addis Ababa Ethiopia [22], Jordan [26], and China [27]. The prevalence is relatively high even though conducted on health professions and students.

Breast Cancer Risk Factors

A cross sectional study conducted across the world reported that, there are multiples of risk factors of breast cancer: those factors include; positive family history, early menarche, obesity, use of oral pills for long period of time, alcohol consumption, history of BC, positive family history, obesity, hereditary, aging, exposed to radiation at young age, smoking, lack of breastfeeding, late marriage, late pregnancies, the use of brassieres, trauma to breast, hormonal replacement therapy, drug abuse, and earlier menarche[1,23,25,27,28].

A descriptive Study undergone among Nurses in Jordan also showed that the majority of the participants identified positive family history, hereditary history, aging, radiation, consumption of contraceptive pills for a long period, smoking and alcohol consuming as a risk factors for BC[27]. Another similar cross sectional Study done among female students in Jordan showed that the factors for BC were a medical condition, followed by old age, lack of breastfeeding, heredity, late marriage, pregnancies in older women , the use of brassieres, and excessive breastfeeding[28].Study conducted in Bahawalpur Pakistan showed that; breast feeding, painless breast lump , trauma to breast, frequent use of oral contraceptives, hormone replacement therapy, and high fats intake or obesity were reported by majority of respondents as a risk factors[29].Another study conducted in India revealed that majority subjects mentioned aging, null parity, oral pills, radiation at young age increases the risk of getting breast cancer[30].

A community based study conducted in china showed that poor awareness of breast cancer risk factors and respondents lists ;family history of breast cancer ,earlier menarche, null parity or late childbirth, later menopause, consuming high-fat diets, alcohol consumption and long-term use of estrogen drugs as a risk factor[31]. Another study conducted in china revealed that slightly more than half of the study participants acknowledged having a past history of BC, drinking alcohol and having close relative with breast cancer as potential risk factors for BC[27].

A cross sectional study conducted among female students in Nigeria revealed that the knowledge of the cancer risk factors among the respondents was very low, except for smoking (57.6%), alcohol (52.1%) and previous history of breast cancer [32]. A descriptive study in, South Egypt revealed that more than half of the students were a poor knowledge about BCRF, in which only (20.8%) had a good knowledge and they identified; exposure to radiation, and family history of the breast cancer as a breast cancer risk factors[33]. Study conducted in Cameroon revealed that the risk factors most frequently indexed by participants were smoking, consumption of genetically modified products, alcohol consumption and an inactive sedentary lifestyle[16].

A study done among female healthcare professionals working in governmental Hospitals of Addis Ababa revealed that 84.3% knew that a high-dose radiation to chest is a risk factor for the development of breast cancer followed by smoking (81.1%), sex (79.1%) and positive family history (77.3%) [22]. An institution based descriptive cross-sectional study conducted in Mekelle University, showed that smoking was the most common risk factor identified by 71.3% of the participants followed by alcohol consumption 44.2% and high fat diet 38.8% [20]. Another similar study conducted in Mekelle city also revealed that the proportion of respondents who identified cigarette smoking, alcohol consumption and radiation exposure as risk factors for breast cancer was 35%, 23.7% and 17.6%, respectively[25]. A cross sectional study conducted in Adama Ethiopia also revealed that Respondents who correctly answered the BCRF were 58.9%. The most listed risk groups reported by the respondents were exposed to high dose of chest radiation followed by women who had first child after the age of 30 years [21].

The sign and symptoms of breast cancer

Different descriptive cross sectional studies done Asian ,Arab emirate and African countries reported that the most common presenting symptom of breast cancer were; a lump in the breast, lump under the armpit, a change in the size or shape of the breast, a change to the nipple, nipple discharge, a change in the skin of the breast, swelling in the breast or the armpit and unusual pain in the breast region[3,25,30,26,27,32].

Study conducted in Kuwaiti showed that more than half of Participants' listed the following symptoms; breast mass, enlargement of neighboring lymph nodes, abnormal enlargement of breast, bloody discharge from nipple, breast pain, and asymmetric sagging in breast[26]..Another

study conducted in china again showed that 46.7% women had good awareness about breast cancer. Breast lump was the most commonly known symptom of cancer 61.7%[27].

study undergone in Pakistan showed that 47.3% 41.6,77.3,56.7,88.2,50.8,72.8,71.2 respondents reported change in nipple position, pulling in nipple, pain in one of the breast or armpit, dimpling in nipple, lump in breast, redness in the breast, lump under armpit, and changes in size and shape of the breast respectively as the symptoms of breast cancer [29].A study conducted in, south Egypt showed that the main signs of breast cancer as reported by the students are Swelling in the underarm area (92.5%), a change in size and shape of breast (78%) and (60.4 %) a swelling or thickening in or near the breast[33].A facility based cross sectional study conducted in Addis Ababa, Ethiopia showed that ;breast lump was the predominantly mentioned symptom by the respondents followed by nipple retraction, breast pain, breast skin change, and bloody nipple discharge[34]. Another study undergone in Mekelle university showed that majority of the respondents explain non-lump symptoms of breast cancer such as discharge from the breast and change in the size of the breast, swelling of the breast, and ulceration of the breast as a SSBC [20]. A cross sectional study done in Adama showed that, Proportion of respondents who correctly answered SSBC are 61.2%. Respondents who replied that lump is common symptom of breast cancer were 47.8%, followed by Swelling of all or part of a breast (7.6%),Skin irritation or dimpling (9.7%), Breast or nipple pain (5%) and Nipple retraction (5%)[21]

Screening methods of breast cancer

Study conducted in Egypt revealed that Majority of the respondents (75%) are aware that breast cancer could be detected early. Only (48%) knew that mammography, ultrasound, clinical breast examination, and BSE used in early detection of breast cancer [31]. A study done in the Turkey revealed that the respondents had high knowledge level of BSE; however, the knowledge level of BC and mammography screen was low [35].A study done in Rwanda showed that the respondents cited mammography (34%), BSE (19%), clinical physical exam (17%), and ultrasound (1.7%) as a BCSM. About 25% did not know any technique to detect BC[36].

An institutional based cross sectional study conducted among Nurses in Addis Ababa, Ethiopia revealed that Respondents were state the following as early detection measures for BC;BSE,CBE, and stated mammography as an early detection measures. Regarding BSE 51.5% of the study subjects reported that monthly 1–7 days after menses, together with that 71.9% respondents identified starting age to perform BSE to be at year of 20[34].Also a similar study

conducted among female students in Mekelle University, showed that ;CBE was the most common means of detecting breast cancer, followed by SBE and ultrasound[20].A facility based cross sectional study conducted Among Female Healthcare Professionals in Addis Ababa showed that; an out 77.6% respondents were aware of BSE as a screening method followed by mammography (81.4%) and CBE which was known by (71.4%) respondents[22].

Factors associated with awareness of breast cancer

Study conducted in, Saudi Arabia showed that the age, residence and educational level of the females are significantly associated with awareness of breast cancer[24].A Similar study done in Kuwaiti revealed that; older age, marriage, history of child death, and use of contraceptive pills are significantly associated with knowledge level of BC[37].Another study undergone in eastern china indicated that the awareness and understanding of BC is associated with age, occupation, educational level, family income, and family histories of breast cancer[27].Across sectional study conducted among females in Pakistan showed that the breast cancer awareness scores are significantly associated with old age, personal history of cancer and occupation[29].

A study conducted Among Women of child bearing age in Cairo Egypt revealed that statistically significant positive correlation between study sample's knowledge about BC and screening methods. Family history of breast cancer, education level and previous breast problems are statistically significant positive correlation with breast cancer screening measures[38].The study done in Angola indicated that family history of breast cancer is only variable that had a significant effect on breast cancer awareness [39]. A study conducted among Nurses in University Hospitals in Addis Ababa, Ethiopia showed that KBC was found to be significantly associated with regular course in nursing, family history of respondents, unit of work, years of nursing experience and Marital status[34]. Another similar Study done in governmental Hospitals of Addis Ababa, revealed that; Age, marital status, educational level, work experience and type of profession were statistically associated with study participants' practice of early screening measures[22].An institutional based cross sectional study conducted in Rift Valley University, Adama campus showed that knowledge score of breast cancer is significantly associated with faculty enrollment, family history of breast cancer and year of study[21].A community based cross sectional study conducted in northern Ethiopia revealed that educational level and occupation of the respondents are statistically significant with overall breast cancer knowledge[25].

Conceptual frame work

Conceptual framework of the study developed after reviewing relevant literatures[17,22,25,40,41]. There is an interaction between all variables within and between boxes. Our interest to identify the interaction between variable in each identified box and breast cancer knowledge of women as indicated in the direction of the arrow.

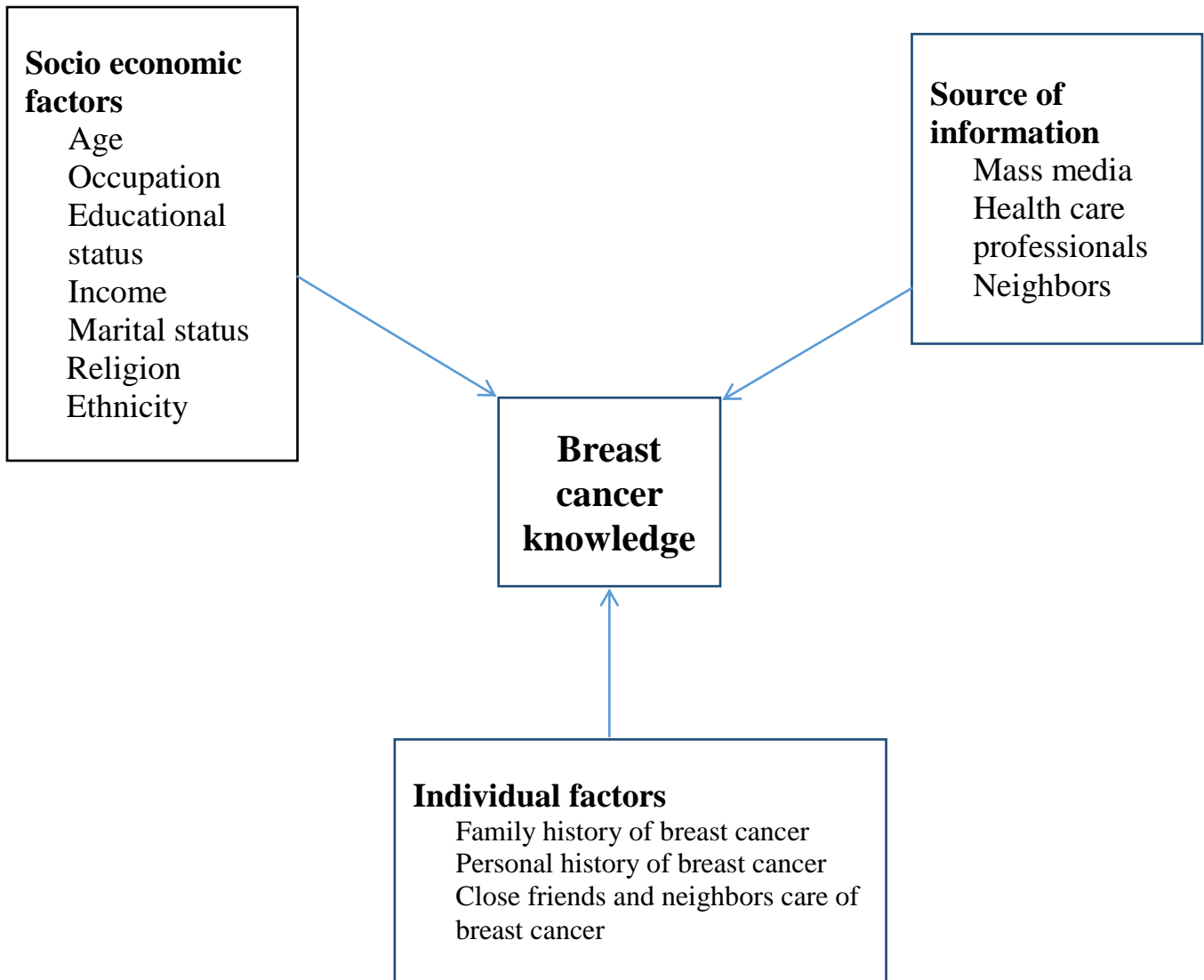


Figure 1 Conceptual frame work adapted after review of different literatures for awareness of breast cancer and associated factors.

CHAPTER THREE OBJECTIVES

3.1. General objective

- To assess the Knowledge of breast cancer and associated factors among women of child bearing age in Jimma town, southwest Ethiopia,2018

3.2. Specific objectives

1. To determine Knowledge level of breast cancer among women of child bearing age in Jimma town, southwest Ethiopia,2018
2. To identify factor associated with Knowledge of breast cancer among women of child bearing age in Jimma town, southwest Ethiopia,2018

CHAPTER FOUR Methods and Materials

4.1 Study area and period

The study was conducted in Jimma town, Oromia regional state, south west Ethiopia. Jimma town is located at 352km southwest from Addis Ababa. Based on data 2008E.C from the town administration, it has a total population of 195,443 of which 97,629 are male and 97184 are the female and 48502 are child bearing age in the 2008 E.C. For administrative reason the town divided three sub city, and 17 kebeles(Hermata, Ginjo Guduru, Ginjo, Mantina, Mandera Kochi, Kofe, Hermata Mantina, AwetuMandera, Bore, Hermata Markato, Becho Bore,Ifa Bula, Bosa Kito ,Seto Semaro,Hora Gibe,Bosa Addis ketama ,and Jiren). The town has total of 128 health institution; one referral hospital, one governmental and one private hospital, 4 governmental health centers, 55 private clinics, 25 pharmacies, 36 drug stores, and 5 drug distributors) which are providing health service in Jimma city. The study was conducted from March 01 to March 31, 2018.

4.2 Study design

Community based cross sectional study design was used.

4.3 Population

4.3.1 Source population: -all women of child bearing age group of Jimma town.

4.3.2 Study population: -all randomly selected women of child bearing age living of Jimma town.

4.4 Eligibility criteria

4.4.1 Inclusion criteria

All women who live at least for six months in the selected kebeles of Jimma Town.

4.4.2 Exclusion Criteria

Women who had known cognitive impairment or hearing impairments, and critically ill to give response.

4.5 Sample Size determination and sampling technique

4.5.1 Sample size determination

Sample size was determined using sample size formula for estimating a single population proportions with margin of error of 5%, confidence interval of 95%, and assumption of design

effect of 2 and expected non-response rate of 5 %. It is calculated based on the proportion of knowledge of breast cancer 31.1% (25).

$$n = \frac{(Z_{\alpha/2})^2 P(1-P)}{d^2} = \frac{(1.96)^2 0.311(1-0.311)}{(0.05)^2} = 329$$

After adding 10% for non-response rate and 2 of design effect the final sample size was **724**.

4.5.2 Sampling technique

We used lists of kebeles developed by the city administration. Then five kebeles was randomly selected and predetermined study sample was proportionally allocated to women population size of randomly selected kebeles. Using Health extension family data, sampling frame of all women of child bearing age corresponding to house number was prepared at kebele. The required number of samples, from each kebele, was selected by systematic random sampling technique. The first women in the list was selected randomly, and subsequent subject was selected based on the calculated interval of 18 and senior women were selected if more than one childbearing age were available in the selected house. Sampling procedure depicted here in the figure.

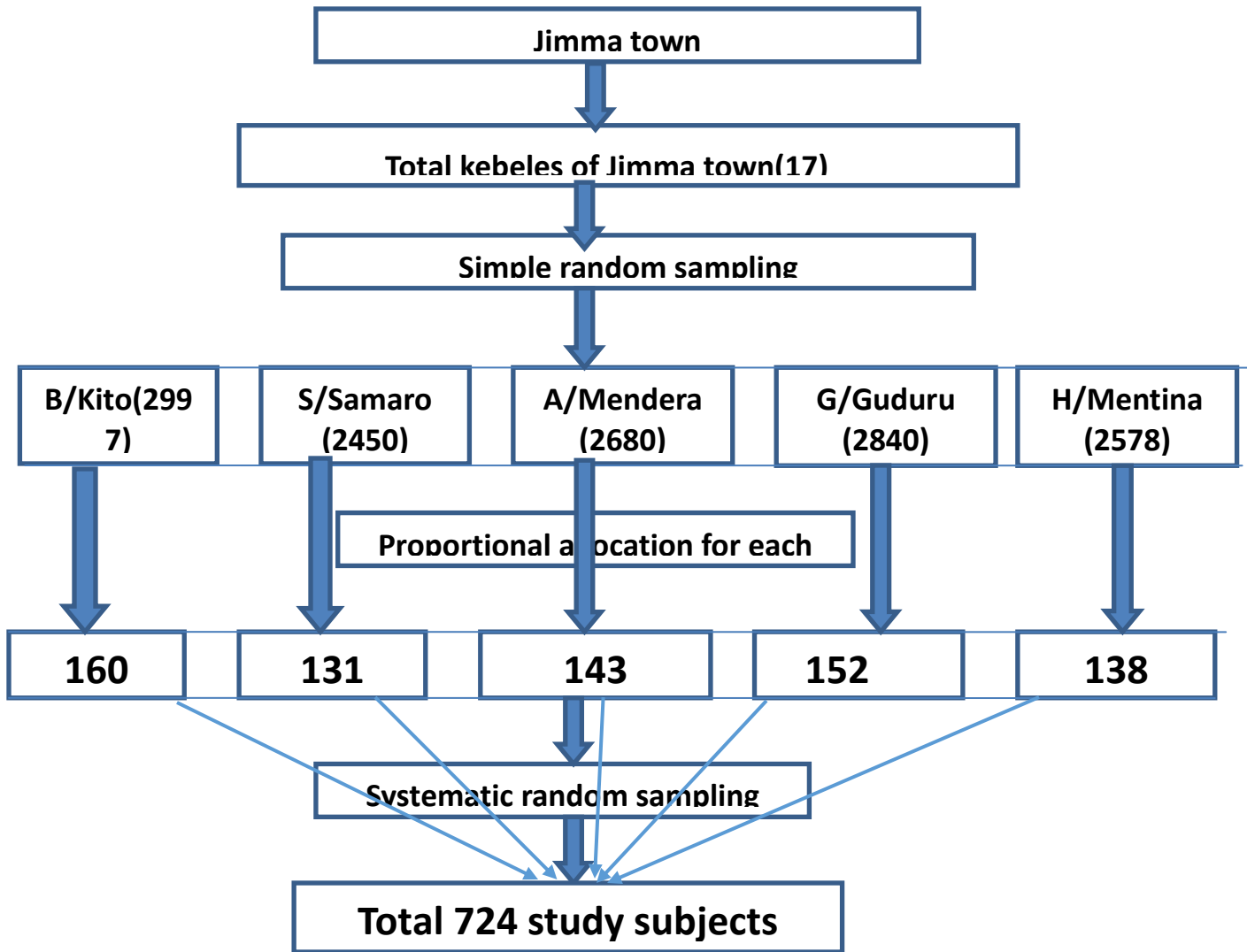


Figure 2. Schematic presentation of the sampling procedure in Jimma town, Oromia region, south west Ethiopia.

4.6 Study Variables

4.6.1 Dependent variable

- Knowledge of breast cancer

4.6.2. Independent variables

- Socio demographic characteristics (Age, Occupation, Educational status, Income, Marital, status, and Religious)
- Family history of breast cancer
- Personal history of breast cancer
- Source of information

4.7 Operational definitions and definition of terms

Knowledge of breast cancer: is the ability of women to aware and knew important information related to BCRF, BCSS and BC screening methods.

Knowledge level: For this study, those study respondents who answered greater than 50% of the BCA awareness measurement questionnaire items are considered knowledgeable otherwise not knowledgeable. In the same manner similar criteria was used to judge the knowledge of specific areas of BC knowledge such as BCRF, BCSS and BCSM [20].

4.8 Data collection tools and procedure

4.8.1 Data collection Tools

Data was collected using standard questionnaire developed by cancer research UK and used in different languages in many parts of the world [42].The tool has five parts; part one is about socio demographic characteristics of respondents, part two about general knowledge/concepts of breast cancer, part three about breast cancer risk factors, part four about breast cancer sign and symptom and part five about breast cancer screening method, which contains 10, 8, 15, 11, and 06 items respectively.

4.8.2 Data Collection Procedure

The questionnaire was first prepared in English and then translated to Afaan Oromo and Amharic by expert and then translated back to English. Data collection was carried out by using ten trained Bsc Nurse and two supervisors with previous experience of data collection. Training was provided for the data collectors and the supervisor for two days by the principal investigator. The sessions of the training are the objective of the study, meaning of each question, techniques of interview and filling the questioner and how to keep confidentiality of information obtained from respondents. All the collected data was checked for completeness, accuracy and consistency by the supervisors and principal investigator.

4.9 Data quality assurance

To assure the quality of data collection tool Pre-test was conducted on 10 % of the sample at serbo town to identify any weakness in the organization and structuring of the research instruments. Following the pretest, the tool was improved in terms of its clarity for some unclear words, understandability on the way of interviewing and simplicity in collecting the data

required for the study. Adequate training and supervision was provided for the data collectors and supervisor. The filled questionnaire was checked for completeness by supervisor every day.

4.10. Data Analysis procedure

After checking completeness data was entered using Epi Data version 3.1 and exported to statistical Package for Social Sciences (SPSS) version 20 for analysis. After the data was cleaned and checked for suitability frequencies and percentages was calculated to all variables which are related to the objectives of the study. There were fifty-one questions aimed to assess breast cancer knowledge, and a score 1 was given for correct response and 0 was given for subjects who answered incorrectly or “I don’t know”. Respondents were categorized based on their overall knowledge scores using the percentage. Therefore, the score of greater than 50% of knowledge score was considered as having Good knowledge and score of less than and equal to 50% of the knowledge score was considered as having poor knowledge. Binary Logistic regression analysis was carried out and all variables with p-value less than 0.25 in bi-variate analysis was considered as candidates for multiple logistic regression analysis to identify a variable which have significant association on the basis of OR, with 95%CI and P value of less than 0.05.

4.11 Ethical consideration

Ethical clearance was obtained from Institutional Review board of Jimma University. A formal letter from Institute of health science was submitted to Selected Kebeles and Jimma town municipality to obtain their cooperation. Ethical issues within the study was taken into consideration when carrying out the study at the initial stage of data collection and interview informed consent was taken from respondents and the participants was assured that their participation was recorded anonymously. All the data obtained in due course was kept confidentially.

4.12 Dissemination plan

The results of this study will be presented and submitted to Jimma University, Institute of health, school of Nursing and Midwifery. The finding will be distributed to Jimma town health office and other organizations working on related area. Presentations at professional, local, national and international meetings and publications in national and international journal will be attempted.

CHAPTER FIVE RESULTS

5.1 Socio-demographic characteristics of the respondents

Out of 724 planned, 686 of respondents were gave complete response which provide a response rate of 95%. Regarding respondent characteristics; Majority 496(72.3%) of the respondents were young adult with mean age 31,High percent 307(44.8%) of them had completed secondary school (9-12) and one-tenth of the participants had no formal education, Majority 488(71.1%) of the study participants were married while just about 73(10.6%) were Single. Concerning occupation 50% of the respondents were farmer and house wife. More than half 426(62.1%) of the respondents were earned ≤ 1380 birr while small number 49(7.1%) were earned greater than 2872 birr. More than half 390(56.9%) of the participants belong to Oromo in ethnicity, followed by Amhara 100(14.6%).Only 81(11.8%) study subjects were had positive family of breast cancer among which 29(35.8%)from mother side. Similarly, 75(10.9%) study subjects were had positive Personal History of breast cancer (Table 1).

Table 1 Distribution of respondent's background characteristics on breast cancer among childbearing age group women of Jimma town, Oromia region, southwest Ethiopia, 2018

Variable	Response category	Frequency(N=686)	Percent
Age	15-35	496	72.3
	36-49	190	27.7
Educational status	Secondary education(9-12)	307	44.8
	Primary school(1-8)	169	24.6
	College and above	129	18.8
	No formal Education	81	11.8
Marital status	Married	488	71.1
	Single	73	10.6
	Widowed	62	9.0
	Divorced/separated	63	9.2
Occupation	Employed	318	46.4
	House wife	211	30.8
	Farmer	128	18.7
	Private Business	29	4.2
Religion	Muslim	295	43.0
	Orthodox	223	32.5
	Protestant	127	18.5
	Catholic	22	3.2
	Other*	19	2.8
Ethnicity	Oromo	390	56.9
	Amhara	100	14.6
	Tigre	30	4.4
	Gurage	43	6.3
	Other**	123	17.9
Age of menarche	<=12	94	13.7
	>12	592	86.3
family history of breast cancer	Yes	81	11.8
	No	605	88.2
Family with history of breast cancer	Mother	29	35.8
	Sister	19	23.45
	Grandmother	11	13.6
	Aunt	19	23.4
	None	3	3.7
Personal Hx of breast cancer	Yes	75	10.9
	No	611	89.1
Monthly income	Low income	426	62.1
	Middle income	211	30.8
	High income	49	7.1

Other*; Waqefata, none

Other**; Kefa, Silte, ,Dewuro, Yem

5.2 knowledge of breast cancer

5.2.1 General information of breast cancer

Respondents had different understandings on general information about breast cancer. Concerning the source of information, out of 531 respondents heard about breast cancer majority of them were used television 386(72.69%) and radio 328(61.7%) as a source of information however insignificant number 42(7.9%) of them were heard from Newspaper. Better understanding observed in area of severity, magnitude and treatment of breast cancer. And also 470(68.5%) of the respondents were aware that Breast cancer is non communicable disease. On the other hand, about 55.8% respondents supported that every woman had a chances of getting breast cancer.

Table 2. Distribution of respondent's general information on breast cancer among childbearing age group women of Jimma town, Oromia region, southwest Ethiopia, 2018

Variable		Frequency(N=686)	Percent
Have you ever heard about breast cancer	Yes	531	77.4
	No	155	22.6
From where have you heard			
	Television	386	72.69
	Radio	328	61.7
	Health profession	105	19.7
	Neighbors	54	10
	News paper	42	7.9
Breast cancer is one type of cancer and the commonest type in women.	Yes	539	78.6
	No	147	21.4
Every woman has a chance of acquiring breast cancer	Yes	383	55.8
	No	303	44.2
If detected early, breast cancer is treatable.	Yes	544	79.3
	No	142	20.7
Breast cancer is dangerous and a killer disease	Yes	499	72.7
	No	187	27.3
The cause of breast cancer is evil spirit.	Yes	319	46.5
	No	367	53.5
Breast cancer is communicable disease	Yes	216	31.5
	No	470	68.5

5.2.2 Knowledge of breast cancer risk factors

Regarding respondent's knowledge of breast cancer risk factors, very low (20%) knowledge score was observed however, on the specific area of breast Cancer risk factors like; Alcohol consumption, exposed to high-dose of radiation, and positive personal history were relatively good knowledge were observed.

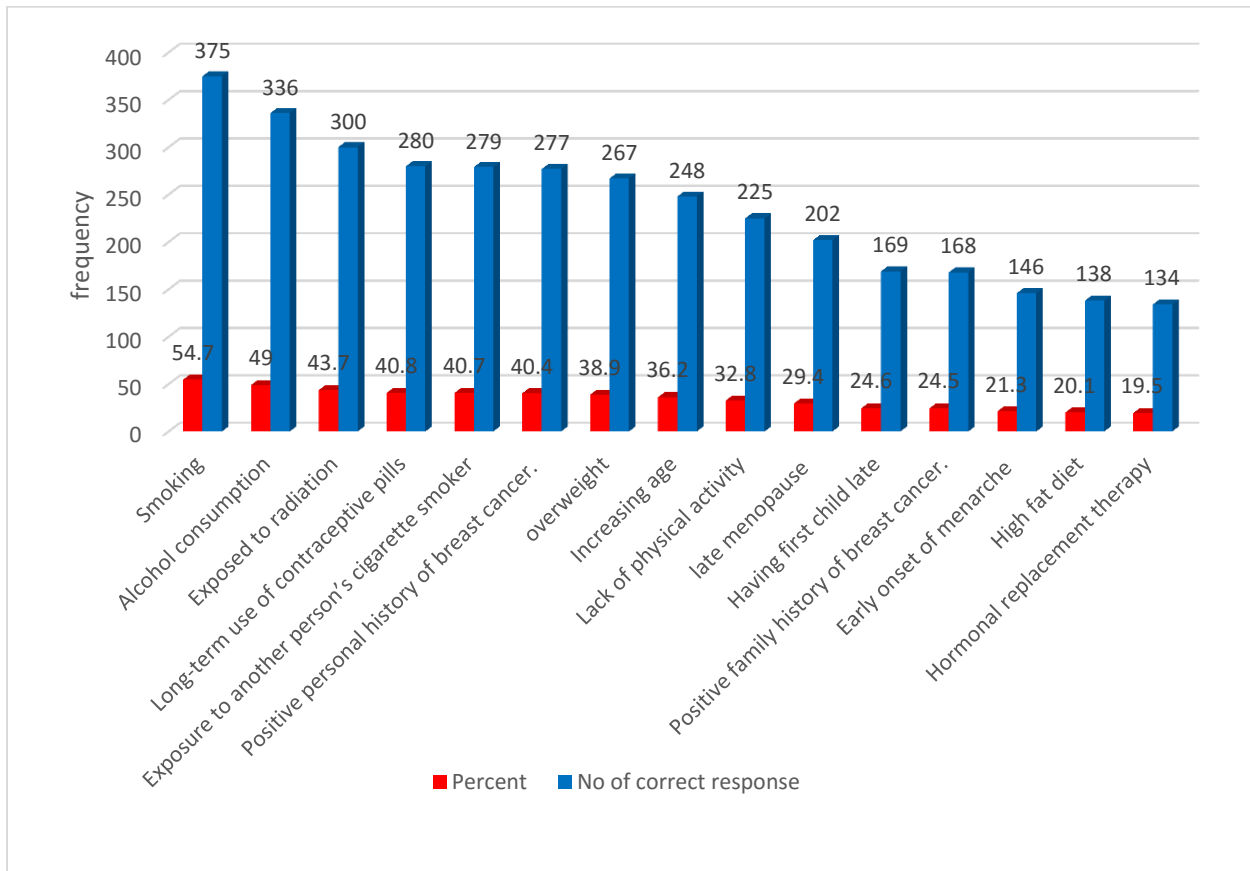


Figure 3 Distribution of respondent's knowledge regarding breast cancer risk factors among childbearing age group women of Jimma town, Oromia region, southwest Ethiopia, 2018. (N=686)

5.2.3 Knowledge of breast cancer sign and symptom

Concerning the overall knowledge of breast cancer sign and symptom 45.0% of the respondents were knowledgeable this indicated that the respondents were relatively had good knowledge score among three dimensions of breast cancer knowledge. More than half the respondents were mentioned; breast swelling, lump under armpit, skin redness, breast wound and Change in the position of breast as a sign and symptom of breast cancer.

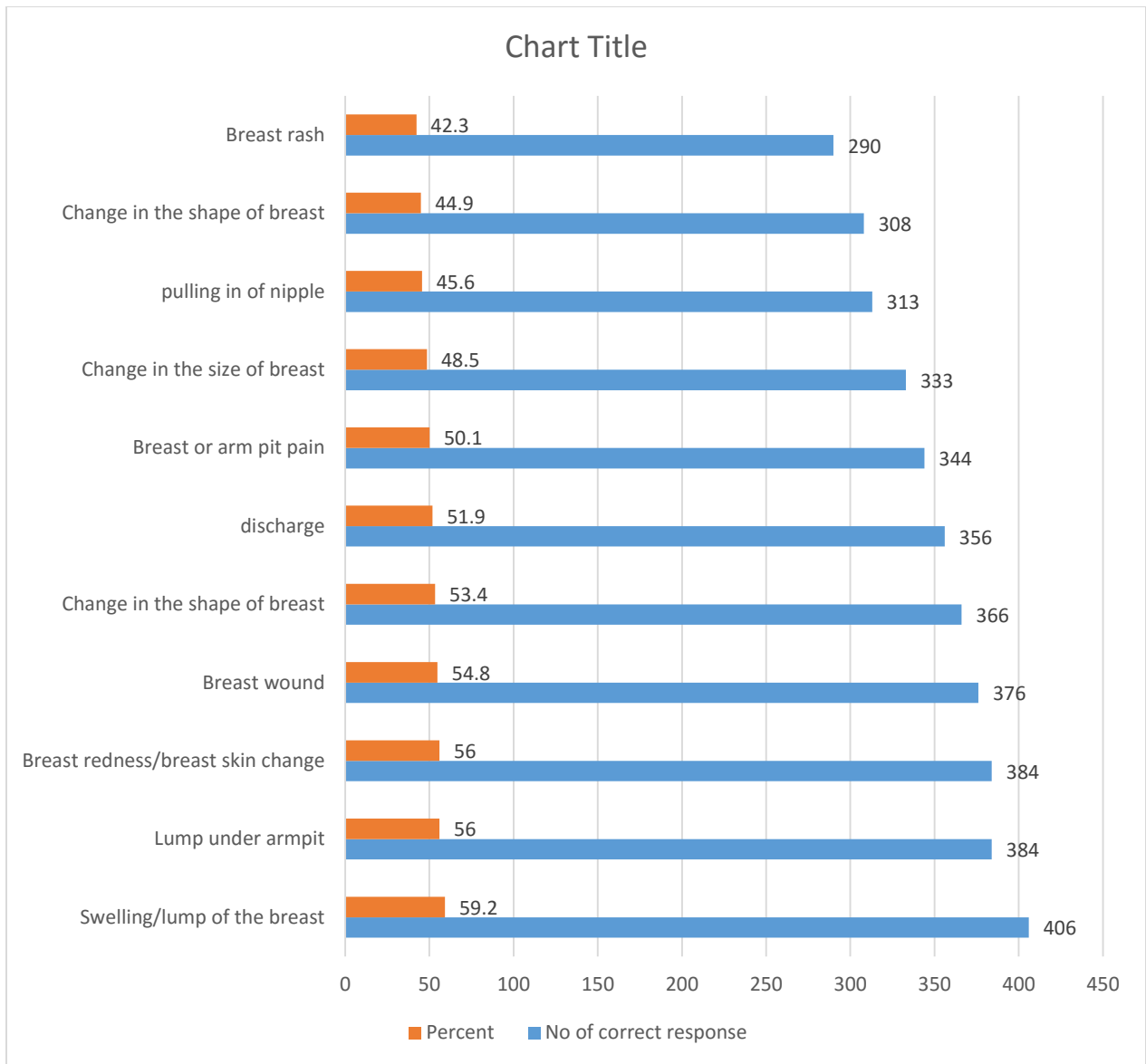


Figure 4 Distribution of respondent's knowledge of breast cancer sign and symptom among childbearing age group women of Jimma town, Oromia region, southwest Ethiopia, 2018 (N=686)

5.2.4 Knowledge of breast cancer screening methods

Regarding knowledge of breast cancer screening methods, the greater proportion of respondents 438(63.8%) knew breast self-examination, and 405(59%) clinical breast examination screening methods however, only one-fifth of respondents 145(20.6%) were knew mammography as screening methods.

Table 3 Distribution of respondent's knowledge of breast cancer screening methods among childbearing age group women of Jimma town, Oromia region, southwest Ethiopia, 2018

<i>Variables</i>		<i>Frequency(N=686)</i>	<i>Percent</i>
<i>Breast self-examination</i>	Yes	438	63.8
	No	248	36.2
<i>Recommended age to start BSE</i>	Yes	323	47.1
	No	363	52.9
<i>Know frequency of BSE</i>	Yes	313	45.6
	No	373	54.4
<i>Clinical Breast Examination</i>	Yes	405	59.0
	No	281	41.0
<i>Mammography</i>	Yes	365	53.2
	No	321	46.8
<i>Know age to start mammography</i>	Yes	145	20.6
	No	545	79.4

5.2.5 Overall Level of Knowledge of Breast Cancer

Only 35% of the respondents were knowledgeable about over all knowledge of breast cancer. Specifically, the respondent's had better knowledge score 45% on signs and symptom of breast cancer; while the lowest score 20% were observed on knowledge of breast cancer risk factors.

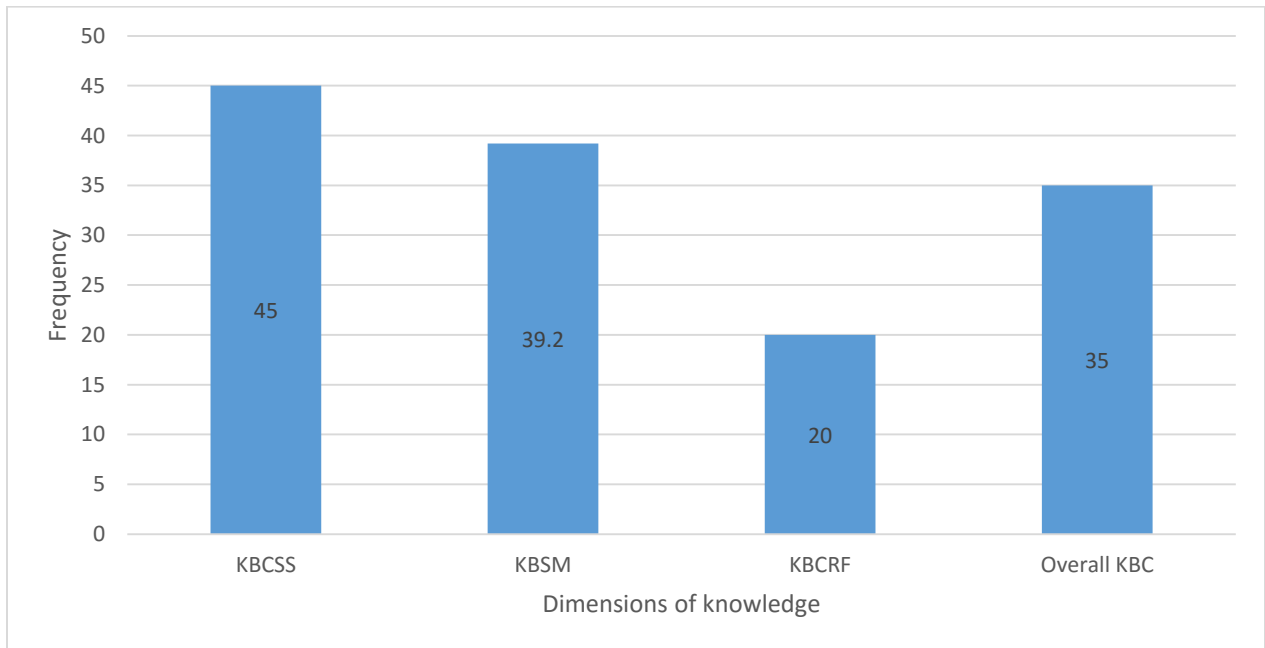


Figure 5 Respondents overall knowledge level of breast cancer on breast risk factors, sign and symptom and screening methods, Jimma town, southwest Ethiopia, 2018

5.3. Factors associated with knowledge of breast cancer

The association of different background factors of the respondents with knowledge of breast cancer was investigated using binary logistic regression analysis. The analysis checked each variable with binary model for all variables with P-value less than 0.25 separately. Variables were Age, educational status, marital status, occupation, age at first menarche, Information of breast cancer, Family history of breast cancer, Personal history of breast cancer, and Monthly income but age at first menarche and personal history of breast cancer were not significant for binary logistic regression model therefore they were not candidate for multivariate logistic regression. Finally, seven variables were candidate for multivariate analysis.

Women who age 35 years and below were 3.6 times (AOR = 3.6 (95% CI: 2.2, 5.9) more likely knowledgeable than women older than 35 years. Similarly, the educational level of participants has significant association with knowledge of breast cancer. Women who complete college and above were 5.6 times (AOR=5.6(95% CI: 2.5, 12.7) more likely knowledgeable than women who had no formal education. In addition, single women were 4.3 times (AOR=4.3(95%CI: 1.7, 11) more likely knowledgeable than divorced/separated women. Employed women were 3.5 times (AOR = 3.5 (95% CI: 1.1, 11.1) more likely knowledgeable than house wife women. Those respondents who heard about breast cancer were 29.7 times (AOR=29.7(95% CI :(11.6, 76.3) more likely knowledgeable than who had no heard any information about BC. Regarding monthly income, women who earned less than 1380(low income) were 67 times (AOR= .3 (95% CI :(0.1,0.7) less likely knowledgeable than women who earned greater than 2872 birr (high income) and women who had positive family history were 2 times (AOR= 2 (95% CI: (1.18,3.6) more likely knowledgeable than those who had no positive family history.

Table 4 the association between socio-demographic and knowledge of breast cancer of respondents among childbearing age group women of Jimma town, southwest Ethiopia, 2018

variables		Knowledge level		COR/95%CI/P-value	AOR/95%CI/P-value
		Not knowle dgeable	know ledge able		
Age	21-35	288	208	.291/.192,.441/.000*	3.66/2.23,5.992/.00**
	36-49	157	33	1.00	.
Educational status	No formal Education	59	22	1.00	1.00
	Primary school	128	41	.859/.470,1.570/.621	1.625/.799,3.306/.18
	Secondary education	170	137	2.16/1.261,3.704/.005*	5.499/2.751,10.989/.00**
	College and above	88	41	1.249/.676,2.309/.477	5.670/2.532,12.701/.00**
Marital status	Divorced/separated	44	19	1.00	1.00
	Single	33	40	2.807/1.382,5.701/.004*	4.336/1.706,11.017/.002* *
	Married	315	173	1.272/.720,2.247/.408	.923/.444,1.918/.83
	Widowed	53	9	.393/.162,.956/.039*	.198/.064,.609/.005**
Occupation	House wife	142	69	1.00	1.00
	Employed	16	13	1.672/.762,3.671/.200*	3.550/1.134,11.118/.03**
	Private Business	197	121	1.264/.877,1.823/.210*	.832/.531,1.305/.424
	Farmer	90	38	.869/.540,1.399/.563	.707/.373,1.342/.289
Heard about breast cancer?	no	149	6	1.00	.1.00
	yes	296	235	19.715/8.564,45.390/.00*	29.784/11.618,76.355/.000**
Age of menarche	<=12	57	37	.810/.518,1.267/.356	
	>12	388	204	1.00	
Family hx of BC	No	404	201	1.00	1.00
	Yes	41	40	1.961/1.229,3.129/.005*	2.073/1.183,3.633/.011**
Personal Hx of BC	No	394	217	1.00	
	Yes	51	24	.854/.512,1.427/.548	
Monthly income	High income	29	20	1.00	
	Middle income	117	94	1.165/.620,2.190/.635	.291/.291,1.390/.256
	Low income	299	127	.616/.336,1.129/.117*	.332/.151,.728/.006**

*significant at p value<0.25.**significant at p value<0.05

CHAPTER SIX DISCUSSION

The findings of this study confirmed that women of child bearing age living in Jimma town had lower (35%) knowledge of breast cancer. However, they have relatively better knowledge score on breast cancer sign and symptom and breast cancer screening methods than breast cancer risk factors. This is important information that indicates knowledge level of community on breast cancer. Furthermore, relatively lower level of knowledge score on breast cancer screening methods reflects unavailability of screening service in the community.

The fact that only 35% of the women had over all knowledge of breast cancer suggests a number of unrecognized breast cancer cases on early stage. This implies a lot of patient with breast cancers are not benefited from the importance of early case detection and treatment. The findings of the current study on the overall knowledge of breast cancer is comparable with the study reported from; Saudi Arabia (35.6%) [36], and Northern Ethiopia (34.7%) [33]. Whereas its lower than study report from China (46.7%)[42], Jordan (51.8%)[27], and Addis Ababa-Ethiopia (57.8%)[34]. These differences can be attributed to types of study participants and set up of the study. For instance, the current study involved all women of child bearing age in the community regardless of their occupation and educational status. However, study in China and Addis Ababa Ethiopia involved only female health Care provider, and study done in Jordan involves students only. Therefore, students and health care professionals have better access to information than women's in the general public.

In the current study, variation on the level breast cancer knowledge observed by source information. among 77.4% of the respondents were heard about breast cancer prior to this study, those who used television (72.69%) and radio (61.7%) had relatively higher score breast cancer knowledge than those who reported neighbor and health care professionals. Similarly, study conducted in Kuwaiti among female school teachers revealed those who used television and radio as source information had better knowledge of breast cancer [37]. However, this finding is slightly lower as compared to other study conducted in Rwanda in which 94.6% respondents were heard about breast cancer and listed media (58.6) and classmates (17.2%) as a major source of information [36]. This may be due to different study subjects and difference on accessibility health related information.

Another important findings of the current study are variations on score of different breast cancer knowledge dimensions; knowledge of breast cancer risk factors (20%), breast cancer sign and symptom (45%), and breast cancer screening methods (39.2%). This variation on score of different breast cancer knowledge dimensions also reported studies from northern Ethiopia [34] and Jordan [27]. This indicates variations on score of different breast cancer dimensions, seems similar between different countries and within the same countries.

More specifically this study found that 20% of respondents were knowledgeable on breast cancer risk factors, Further analysis on specific areas of breast cancer risk factors such as smoking (57%), alcohol consumption (49.0%), high-dose radiation exposure on the chest (43.7%), positive personal history (40.4%) and later age (36.2%) are areas of better knowledge reported by women's regarding to breast cancer risk factors. these area of breast cancer risk factors were also similarly mentioned in other studies in study reported from Jordan[26], china [42], Nigeria [32], Addis Ababa Ethiopia [22]. However, it is contrast with, reports from; Pakistan [29], India [30], Eastern China [31], and South Egypt [33] mentioned other better areas of breast cancer risk factors knowledge such as; heredity, late marriage, early menarche, late menopause, HRT, long term use of contraceptives and consuming high fat diet. The variation may be due to difference in study area, accessibility to information, and socio-cultural factors.

The knowledge of breast cancer sign and symptom in this study is the area where study subjects had better score (45%) of breast cancer knowledge. This implies the information they got from different sources mainly focused on breast cancer sign and symptoms. Apart from this it can be explained by women may easily detect abnormalities in their breast. Similar findings were also reported from studies in Northern Ethiopia [25], south Egypt [33], Pakistan [29], and Kuwaiti [37]. in this aspects breast cancer knowledge, the major areas of similarities lines on; breast swelling, lump under armpit, skin redness, breast wound, Change in the position of breast and discharge from the nipples as a sign and symptom of breast cancer. But contrast with study from Adama Ethiopia [21] revealed Skin irritation or dimpling, Breast or nipple pain, Nipple retraction were better knowledge areas of breast cancer sign and symptom. This discrepancy may be related with that fact that health education about cancer was not uniform in the country and study subjects' status in which students were more knowledgeable than other women of reproductive age because the study conducted in Adama was involved students only.

The knowledge of breast cancer screening method availability enhances health seeking behavior which intern facilitate early case detection breast cancer. Early case detection before it reached advanced stage will prevent distant metastasis of breast cancer if early treatment is initiated.

In the current study, the knowledge of breast cancer screening method is one of the areas of knowledge deficit (39.2%) among women of childbearing age of Jimma town. however, the greater proportion of women's had better knowledge of BSE (63.8%) as compared to other breast cancer screening methods (CBE, Mammography). this may be due to unavailability of breast cancer screening center in the area. This finding is consistent with study done in south Egypt [33], in which the respondents had poor knowledge of BCSM. This similarity may be related with the fact that none communicable disease like breast cancer are not getting due attention by stakeholder of health care system and for the reason that there is no active screening program. This study is slightly lower as compared with similar study conducted in Addis Ababa Ethiopia [22], and Mekelle University Ethiopia [20], in which BSE (74.8%), CBE (44%), and mammography (38.5%), and BSE (86.1%), CBE (59.5%), and mammography (39.2%), of the respondents mentioned it as its necessary to detect breast cancer early as possible respectively. This discrepancy may be related with the fact that health care providers and students were more knowledgeable than other classes of women and easily accessible to health information.

The current study also revealed that the educational level, age, marital status, occupation, positive family history, and source of information were significantly associated with knowledge of breast cancer. This means the level of women knowledge of breast cancer varies by women's socio demographic, family history of breast cancer, and source of information. Except for marital status and family history the rest are an indicator for major areas of future interventions to improve women's knowledge on breast cancer. The difference in the score of breast cancer knowledge in current study and the other study may also be attributes to these factors.

In the current study women who complete college and above were 5.6 times more likely knowledgeable than women who had no formal education. The association between women's educational level and better knowledge of breast cancer is also supported by study conducted in Saudi Arabia [24], and eastern china [31].This shows the influence of education in promoting the knowledge level of breast cancer.

This study also showed that single women were 4.3 times more likely knowledgeable than divorced/separated women. This finding is contrast with study conducted in Kuwaiti [37] and Ethiopia [25] showed that married women were more knowledgeable than divorced/widowed women. This difference may due to single women may give attention for their healthy and more access to information than married women because most of the time married women are more focused on the family related issues than their own physical healthy.

Regarding monthly income current study found that women who earned less than 1380(low income) were 67 times less likely knowledgeable than women who earned greater than 2872 birr (high income). This is almost similar with Study conducted in eastern china in which women who had high annual family income were more aware about BC [31]. This implies that income play a major role to increases the women's awareness level. The current study also revealed that employed women were 3.55 times more likely knowledgeable than house wife women. This result is consistent with study done in Pakistan [29] that employed women/working women were more knowledgeable than unemployed women

From this study finding women who had positive family history were 2 times more likely knowledgeable than those who had not positive family history of breast cancer. This almost similar with study done in Ethiopia among Nurses in University Hospitals in Addis Ababa [34] and Adama Ethiopia [21] in which revealed that women who had family history of breast cancer were more knowledgeable than who hadn't family history of breast cancer. This similarity may due to the same socio-economic characteristics. The current study found that respondents, women who heard about breast cancer were 29.784 times more likely knowledgeable than who were not heard any information about BC. This result implies that well-conducted health education programs and mass media are playing a major role to better knowledge of breast cancer and health practices.

The findings of this study can be limited by a number of factors. It is difficult to establish the cause effect relationship and independently identified factors those associated with breast cancer knowledge using cross sectional methods of data collection. Because of this the findings may not be generalized to other areas. Another limitation of this study can be absence of information on attitude of breast cancer, practice of breast cancer screening service utilization, and prior participation on breast cancer awareness program. However, the use of community based knowledge survey with large sample size could be taken as strong side of this study. Finally, the researcher suggests the use of large scale multi center prospective interventional study to establish the cause effect relationship between breast cancer knowledge and potentially explanatory variables.

CHAPTER SEVEN CONCLUSION AND RECOMMENDATION

7.1 CONCLUSION

Even though there is variation in the level of the three dimensions of breast cancer knowledge, the breast cancer knowledge of women of child bearing age of Jimma town is generally low (35%). From this study we can also conclude that; Maternal age, educational status, marital status, occupation, Information of breast cancer, Family history of breast cancer, and Monthly income are significantly associated with the women's knowledge of breast cancer.

7.2 RECOMMENDATION

Based on the findings of the present study, the following recommendations were drawn:

- Even though information on how well federal ministry of health, regional health bureau and the local health office are working on this issue was not explored, this study finding implies absence of public education program on breast cancer. Thus federal ministry of health and regional health bureau should design, develop, and implement public education initiatives to improve women's knowledge on breast cancer. In addition breast cancer screening services center should be established in to the existing health services in the local health facility.
- As those who use mass media as a main source of information had better knowledge of breast cancer, efforts should be made to disseminate information on breast cancer through using air time by relevant stakeholders.
- Finally, we suggest the use of large scale multi center prospective study to establish the cause effect relationship between breast cancer knowledge and potentially explanatory variables and to address the practice level of breast cancer screening.

References

1. World health organization. Breast cancer: prevention and control. 2014. 16 p.
2. Breast cancer A guide for journalists on breast cancer and its treatment. 2014.
3. Facts C. american cancer society ,Cancer Facts & Figures ,atlanta 2017. In: american cancer society. 2017.
4. Obionu CN. Primary health care for developing countries. Enugu: Delta Publishers. In: Primary health care for developing countries. 2001.
5. Parkin, D.M., Whelan, S.I., Ferlay, J. and Storm H. Cancer Incidence in Five Continents. IARC Cancer Base. 2005;Vol I –VII(6).
6. Azage M, Abeje 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*. 2013;6(11).
7. Association american breast cancer. Breast Cancer facts and figures. American Cancer Society, Atlanta, Georgia. 2016.
8. Wonda M. YeEthiopia Cancer Society/MWECS/ World Cancer Day Press Release. In: World Cancer Day Press Release. 2011.
9. Global Cancer facts and figures,3rd edition. In: GLOBOCAN. 2012. p. 37
10. Kгаа M. GLOBAL BURDEN OF CANCER IN WOMEN current status,trends and interventions. 2012;
11. Brito C, Portela MC, Teixeira M, Vasconcellos L De. Adherence to hormone therapy among women with breast cancer. *J Biomed Cent*. 2014;14(397).
12. world health organization cancer country profile, Incidence C. Ethiopia. 2014.
13. Tigeneh W, Molla A, Abreha A. Pattern of Cancer in Tikur Anbessa Specialized Hospital Oncology Center in Ethiopia from. *Int J Cancer Res Mol Mech*. 2015;1(1):1–5.
14. Morhason-bello IO, Odedina F, Rebbeck TR, Harford J, Dangou J, Denny L, et al. Cancer Control in Africa 1 Challenges and opportunities in cancer control in Africa : a perspective from the African Organisation for Research and Training in Cancer. *Lancet Oncol*. 2013;14(4):142–51.
15. Nahid N, Nia MS, Motamedi, Mohammad Hosein Kalantar Akbari ME. A survey of breast cancer knowledge and attitude in Iranian women. *J Cancer Res Ther*. 2017;8(1):8–11.
16. Suh B, Faculty A, Sciences H. Breast Self-Examination and breast cancer awareness in women in developing countries : a survey of women in Buea , Cameroon. *J Biomed Cent*. 2012;5(627).
17. Karayurt Ö, Özmen D, Çetinkaya AÇ. Awareness of breast cancer risk factors and practice of breast self examination among high school students in Turkey. 2008;8:1–8.
18. Smith RA, Caleffi M, Albert U, Chen THH, Duffy SW, Franceschi D. Breast Cancer in Limited-Resource Countries : Early Detection and Access to Care. 2010;
19. Al-azmy SF, Alkhabbaz A, Almutawa HA, Ismaiel AE, Makboul G, El-shazly MK. Practicing breast self-examination among women attending primary health care in Kuwait.

- Alexandria J Med [Internet]. 2013;49(3):281–6.
20. Hailu T, Berhe H, Hailu D, Berhe H. Knowledge of breast cancer and its early detection measures among female students , in Mekelle University , Tigray region , Ethiopia. 2014;3(4):57–64.
 21. Roza t K, Ht W, Mb G, Sa T, Nk S. Breast Cancer Knowledge and Breast Self-examination Practice among Female Students in Rift Valley University , Adama campus, Journal of Women Health Care. 2017;6(5)
 22. Ababa A, 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. Al. MN et. Global burden of cancer 2013. JAMA Oncol. 2013;1(4):233–43
 24. Salih S, Al-madkhali E, Khormi A, Mhzri R. Knowledge , Attitude and Practice Study of Breast Cancer and Breast Self-Examination among Females in Jazan , Saudi Arabia. Int J Sci Basic Appl Res ISSN. 2016;25(2):180–90
 25. Legesse B, Gedif T. Knowledge on breast cancer and its prevention among women household heads in Northern Ethiopia. 2014;4(1):32–40.
 26. Amasha HA. Awareness of Breast Cancer Risk Factors and Practice of Breast Self-Examination among Nurses in Jordan. 2013;81(2):177–83.
 27. Suleiman AK. Awareness and attitudes regarding breast cancer and breast self - examination among female Jordanian students. J Basic Clin Pharm. 2014;5(3):74–8.
 28. Current breast cancer statistics in Australia. Aust cancer Soc. 2016;(90):2020.
 29. Masood I, Saleem A, Hassan A, Sadeeqa S, Akbar J. PUBLIC HEALTH | RESEARCH ARTICLE A quantitative study to assess breast cancer awareness among females in Bahawalpur Pakistan. Cogent Med . 2016;14(1):1–9.
 30. Srivastava K, Jethani S, Kaltha B, Khilnani PS, Bhawalkar JS, Vyas S. Awareness of Breast Cancer Risk Factors and Practice of Breast Self-Examination among Nurses of Tertiary Care Hospital. Indian J Forensic Community Med. 2016;3(June):75–8.
 31. Liu L, Wang F, Yu L, Ma Z, Zhang Q, Gao D, et al. Breast cancer awareness among women in Eastern China : a cross-sectional study. Biomed Cent. 2014;14(104):1–8.
 32. Motilewa OO, Ekanem US, Ihesie CA. Knowledge of breast cancer and practice of self-breast examination among female undergraduates in Uyo , Akwa Ibom State , Nigeria. Int J Community Med Public Heal. 2015;2(4):361–6.
 33. Abou H. Breast Self-Examination (BSE): Knowledge and Practice among Female Faculty of Physical Education in Assuit , South Egypt. J Med Physiol Biophys. 2016;25(2011):1–8
 34. Lemlem SB, Sinishaw W, Hailu M, Abebe M, Aregay A. Assessment of Knowledge of Breast Cancer and Screening Methods among Nurses in University Hospitals in Addis Ababa , Ethiopia , Volume 2013, Article ID 470981, 8 pages.
 35. Erdem Ö, Tokta EG. Knowledge , Attitudes , and Behaviors about Breast Self-Examination and Mammography among Female Primary Healthcare Workers in Diyarbak

- J r , Turkey. *BioMed Res Int*. Volume 2016, Article ID 6490156, 6 pages
36. Ndikubwimana J, Nyandwi JB, Mukanyangezi MF, Kadima JN. Breast Cancer and Breast Self-examination : Awareness and Practice among Secondary School Girls in Nyarugenge District , Rwanda. *International J Trop Dis &health*. 2016;12(2):1–9
 37. 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.
 38. El-nasr EMS. Breast Cancer risk factors and screening practices Among Women Attending Family Health Centers in Cairo Governorate. *J Nurs Heal Sci (IOSR-JNHS)*. 2017;6(3):12–23.
 39. Martha Nyanungo Sambanje BM. Breast cancer knowledge and awareness among university students in Angola Martha. *african Med J*. 2012;1–10
 40. Musallam R, Junaibi A, Khan SA. Knowledge and Awareness of breast cancer among university female students in Muscat , Sultanate of Oman- A pilot study. *J Appl Pharm Sci*. 2011;1(10):146–9.
 41. Dinegde NG, Xuying L. Awareness of Breast Cancer among Female Care Givers in Tertiary Cancer Hospital , China. *Asian Pacific J Cancer Prev*. 2017;18(7):1977–83.
 42. Cancer Research UK, University College London, Kings College London and U of oxyford. Breast Module of the Cancer Awareness Measure. 2008.

Annex I Questionnaire

Jimma University
Institute of health science
School of Nursing and Midwifery

English version Questionnaire

Questionnaire for data collection on Knowledge of breast cancer and associated factors among women of child bearing age group in Jimma town, south west Ethiopia

Informed consent form

Study title: *Assessment of Knowledge of breast cancer and associated factors among women of child bearing age group in Jimma town, south west Ethiopia,2018.*

Hello, good morning/afternoon, my name is _____I am requesting you to participate on the study we are conducting in your area. I would like to ask you questions about *breast cancer*. The aim of this study is to determine the level of cancer Knowledge and identify factors associated of breast cancer knowledge in your town; therefore, your information will play a great role to improve breast cancer awareness level. You understand that your participation or withdraw in this research study is entirely voluntary. you may decide to withdraw from the interview at any time; such a decision will not affect you.

Purpose of the Study

The purposes of this study is to *Assess the level of breast cancer knowledge and associated factors among child bearing age women* and collected information will be used to make the *level of breast cancer knowledge better* by identifying the factor associated it.

Study Procedures and potential advantage and disadvantages

The data will be collected through face to face interview and it will not take more than 30 minutes. No risks to you except some temporary discomfort and spent your time while you will be interviewed. There are no immediate benefits to you from this study. However, I you understand that the results of the study will be used to improve *level of breast cancer knowledge and promoting different* program on Breast cancer which you may be a beneficiary. I want to thank you very much indeed, for the time. There will be no cost or compensation for the study

Confidentiality

Whatever individual information you provide will be kept strictly confidential and will only be used for statistical analysis. A study number, which will be known to authorized study personnel and you, to be used instead of your name. The code will be stored in a safe place. Personal and medical information about you will not be released to any other without your permission and you will not be personally identified in any publication or presentation about this study. If you have any questions at any time about this research study, you may contact Yonas Biratu/principle investigator (tel:+251-913826248) at Jimma university, Institute of health science, dep't of Nursing and midwifery.

Participants Consent

I have been asked to participate in the study and I received information about what is going to be done, the risks, my rights as a volunteer and the benefits involved in this research. I understand that by signing this consent form, I do not waive any of my legal rights nor does it relieve investigators of liability; but merely indicates that I have been informed about the research study in which I am voluntarily agreeing to participate. A copy of this form will be provided to me.

Name of participant_____

Date and signature_____

Study number_____

Part I: Socio-demographic characteristics of the respondents

Ser.No	Question	Coding categories	Skip
101	Age	-----	
102	Educational level	No formal Education ----1 Primary school -----2 Secondary education----3 College and above -----4	
103	Marital status	Single-----1 Married-----2 Widowed-----3 Divorced-----4	
104	Occupation:	Peasant -----1 Private Business -----2 Employed -----3 House wife -----4	
105	What is your religion?	Orthodox-----1 Protestant-----2 Muslim-----3 Catholic-----4 Other-----5	
106	Your ethnicity	Oromo-----1 Amhara-----2 Tigre-----3 Gurage-----4 Other-----5	
107	Age at the first menstruation	_____	
108	Do any of your family members have history of breast cancer?	Yes-----1 No-----2	If no skip to 110
109	Who else in the family has breast cancer?	Mother-----1 Sister(s)-----2 Grandmother-----3 Aunt(s)-----4 None of them-----5	
110	Do you have current or past history of breast related problem?	Yes-----1 No-----2	
111	Monthly income (in Ethiopian birr)	_____	

Part II: Questions to assess general concepts of breast cancer

Ser.No	Question	Coding categories	Skip
201	Have you ever heard about breast cancer?	1. Yes 2. No	If no skip to 203
202.	If yes, from where have you heard about it? (You can choose more than one answer.)	1. Radio 2. Television 3. Newspaper 4. From health professional	

		5.From neighbors 5. Other(mention)	
203.	Breast cancer is one type of cancer and the commonest type in women.	1. Yes 2. No	
204.	Every woman has a chance of acquiring breast cancer	1. Yes 2. No	
205.	If detected early, breast cancer is treatable.	1. Yes 2. No	
206.	Breast cancer is dangerous and a killer disease	1. Yes 2. No	
207.	The cause of breast cancer is evil spirit.	1. Yes 2. No	
208.	Breast cancer is communicable disease.	1. Yes 2. No	

Part III: Questions regarding knowledge of breast cancer risk factors.

Please responded to each question by answering true-1, false-2, I don't know-3, that each of these can increase the chance of getting breast cancer? (**mark X as the respondent replies**). There are no wrong and right answer, we just want to know what you think.

Ser.No	Question	Coding categories		
		1(true)	2(false)	3(I don't know)
301	Being over 70 years old(Old age			
302	Having a past history of breast cancer.			
303	Having a close relative with breast cancer.			
304	Smoking any cigarettes at all			
305	Exposure to another person's cigarette smoke			
306	Eating red or processed meat once a day or more(High fat diet)			
307	Having children later on in life or not at all(First child after the age of 30 yrs.)			
308	Starting your periods at an early age(Before the age of 12 yrs.)			
309	Having a late menopause (after the age of 55 yrs.)			
310	Being overweight (BMI over 25)			
311	Drinking more than 1 unit of alcohol a day alcohol			
312	Being Exposed to Radiation(High radiations to the chest)			
313	Long-term use of contraceptive pills			
314	Using HRT (Hormone Replacement Therapy)			
315	Not Doing of moderate physical activity 3 times a week for a less than 30 minutes			

Part IV: Questions regarding knowledge of breast cancer sign and symptom.

Please responded to each question by answering true-1, false-2, I don't know-3. There are no wrong and right answer, we just want to know what you think.

Ser.No	Question	Coding categories
--------	----------	-------------------

		1(true)	2(false)	3(I don't know)
401	Is pain in one of your breasts or armpit could be a sign of breast cancer? pain			
402	Do you think a change in the position of your nipple could be a sign of breast cancer? position			
403	Do you think changes in the size of your breast or nipple could be signs of breast cancer? size			
404	Do you think redness of your breast skin could be a sign of breast cancer? redness			
405	Do you think Wound on the breast could be a sign of breast cancer?			
406	Do you think discharge or bleeding from your nipple could be a sign of breast cancer? discharge			
407	Do you think changes in the shape of your breast or nipple could be signs of breast cancer? shape			
408	Do you think pulling in of your nipple could be a sign of breast cancer?			
409	Do you think a lump or thickening under your armpit could be a sign of breast cancer?			
410	Do you think a lump or thickening in your breast could be a sign of breast cancer? lump			
411	Do you think a nipple rash could be a sign of breast cancer? rash			

Part V: Questions regarding knowledge of breast cancer early detection methods.

Please responded to each question by answering true-1, false-2, I don't know-3. There are no wrong and right answer, we just want to know what you think about the methods of breast cancer early detection methods.

Ser.No	Question	Coding categories		
		1(true)	2(false)	3(I don't know)
501	Do you know that BSE is a useful tool for early detection of breast cancer			
502	Do you know that BSE should BSE be started at the age of 20 years?			
503	Do you know that BSE should be done monthly			
504	Do you know that CBE performed by HCP is a useful tool for detection of breast cancer?			
505	Is mammography a useful tool for the early detection of breast cancer?			
506	Do you think that mammography should be started at the age of 40 years?			

Qorannoo pirojektii kanaa irratti akka hirmaataniif gaafachu.

“hubannoo kansarii harmaa fi wantoota isaan wal qabatan”

Seensaa fi kaayyoo qorannichaa

Haloo/jarri! Akamm bultan/ooltan! Maqaan koo: _____, qo’annoo projektii digrii lammaffaa waa’ee **hubannoo kansarii harmaa fi wantoota isaan wal qabatan** irratti akka hirmaataniif isin gaafadha. Qo’annoo kana irratti akka hirmataniif filatamtaniittu kanaaf odeeffannoo waa’ee kansarii harmaa irratti qabdan akka nuu kennitan isin gaafanna.

Xiyyeeffannoo qorannichaa

Qo’annaa kana keessatti kaayyoon keenya beekumsa yookiin hubannoo dhibee kansarii harmaa irratti dubartootni umuriin isaanii sadarkaa da’uu danda’anii keessa jiran kan jimmaa magaalaa keessatti argaman sadarkaan hubannoo isaanii hagam akka ta’ee ilaaluu dha. Kan ati akka irratti hirmaattuuf gaafatamteef waan jiraataa magaalaa Jimma taateefi dha. Pirojektichi kan geggeffamu ganda magaalaa Jimmaa keessatti argamu shan keessatti. Odeeffannoon kan funaanamu afgaffii fuulaa fuulatiini dha.

Bu’aa fi miidhaa Qorannichaa ijoo

Akka hirmaataatti qorannoo kana keessatti carraa garee qorannoo kana geggeessuu waliin dhimma kansarii harmaa irratti dubbachuu ni argattu. Yeroo gaaffii fi deebiin afgaafataa waliin geggeeffamuun alatti rakkoon ykn haalli sitti hin tole qorannoo kanaan kan walqabatu kan simudatu hin jiru. Tarii yoo haalli isinitti hin tole isin mudate nu beeksisaa.

Dhimma odeeffannoo ati nuuf kennitu ilaalchisee

Akkuma armaan olitti ibsame Odeeffannoon ati nuuf kennitu dhimma qoraniichaaf qofa kan itti fayyadamnu ta’a. Odeeffannoo mara kan itti fayyadamnu utuu kallattiidhaan gosa odeeffannicha adda hin baasini. Bu’aan qorannoo kanaa yeroo maxxanfamu ykn ibsamu eenyummaan kee hin ibsamu. Odeeffannoon marti haga gurraandhala 25, 2022 tti eenyumman iccitiin eegama.

Hirmaannaa fedhiitiinii

Qorannoo kana keessaatti kan hirmaattan fedhiitiin dhaa. Hirmaannaa keessaan addaan kutuu yoo barbaaddaan yeroo barbaaddaniifi halduree tokko maleedha. Yoo irratti hirmaachuu barbaaddan unka waadaa walii galtee armaan gadii isin gaafanna. Yoo amma irratti hirmaachuuf walii galte yeroo boodaa hirmaannaa kee addan kutu dandeessa osoo yaalii siif godhamu irratti karaa kamiinu dhiibbaa hin uumin.

Gaaffii dhimma qorannichaa ilaalchisee yoo qaabattan, Yoonaas birraatuu qunnamuu dandeessu.

Bilbila :+251913826248 .email: yonibirre@gmail.com.

Waliigaltee qorannicha irratti hirmaachuuf

Qorannoo hubannoo kansarii harmaa fi isaan wal qabatan jedhu irratti akkan hirmadhuuf gaafatameera. Odeeffannoo ga’aa waa’ee qorannichhaa, bu’aafi miidhaa isaa argadheera. akkasumas maqaa nama qorannichaa geggeessuu ,bakka inni itti argamuufi rakkoo salphaa kamiifu haala salphaan argamuu danda’u isaa odeeffannoo argadheera. Odeeffanno armaan olii dubbiseera ykn naaf dubbifameera. Qorannoo kana irratti hirmachuuf fedhii kootiin ta’u itti waliigaleera.

Maqaa nama irratti hirmaatuu: _____

Mallattoo: _____

Guyyaa (g/ji’a /bara): _____

Galgalchi unka walii galtee hirmaataa dhaaf ni kennama

Kutaa I: gaaffiiwwan haali-hawaasummaa gaafatamaa.

T/lak	gaaffiiwwan	Qoodinsa mallattoo waliin	darbiinsa
101	Umurii	-----	
102	Sadarkaa barnootaa	1.Mana barumsa kan hi galle 2.Sadarkaa tokkoffaa 3.Sadarkaa lammaffaa 4.kolleejjiiifi isaa ol	
103	Haala ga'eelaa	1.Kan hin heerumne 2. Kan heerumte 3.Kan abbaan manaa irraa du'e 4.kan wal hiikan	
104	Gosa hojii	1.Qotee bulaa 2. Hojii dhunfaa 3. Hojjetaa mootummaa 4. Haadha manaa	
105	Gosa amantaa kam hordofta?	1.Ortoodoksii 2. Piroteestaantii 3. Musliimaa 4. Kaatoolikii 5. kan biroo	
106	Gosa/qomoo kee	1. Oromoo 2. Amaaraa 3. Tigree 4. Guraage 5. kan biroo	
107	Umurii laguun/xuriin kee inni jalqabaa sitti dhufe	_____	
108	Maatii kee keessaa dhibee kansarii harmaa kan qabu jiraa?	Eeyyee-----1 Miti -----2	Yoo miti jette gara 110
109	Eenyuuti maatii keessaa qaba ture?	1. Haadha koo 2. Obolaa koo 3. Akkoo koo 4. Adaadaa koo 5. Isaan kanaan ala	
110	Ammas ta'e kanaan dura rakkoo dhibee harmaatiin wal qabate qabda	eeyye-----1 miti-----2	
111	Galiin kee ji'aan meeqa (birr)	_____	

Part II: gaaffiiwwan walii galaa bekumsa kansarii harmaa ittiin adda baasan

T/lakk	Gaaffiiwwan	Qoodinsa mallattoo waliin	darbiinsa
201	Waa'ee kansarii harmaa dhageessee beektaa?	1. eeyyee 2. miti	gara 203
202.	Yoo eeyye jette eessa dhageesse(deebii tokko olii filachuu ni danda'aama)	1. Raadiyoo 2. Televiyiizooni 3. waraqaa oduu 4. ooggeessota fayyaa 5. oollaa irraa 5. kan biroo	
203.	Kansariin harmaa gosa kansarii keessa isa tokkoo fi baayee beekame dubartootaati.	1. eeyyee 2. miti	
204.	Dubartiin kami iyyuu carraa kansarii harmaatiin qabamu qabdi	1. eeyyee 2. miti	
205.	Yoo dafee adda baafame kansarii harmaa irraa fayyuun ni danda'aama	1. eeyyee 2. miti	
206.	Kansariin harmaa baayee hamaa kan ta'eefi dhibee nama ajjeesuu danda'u dha	1. eeyyee 2. miti	

207.	Dhibee kansarii harmaa kan namatti fidu hafuura hamaa dha.	1. eeyyee 2. miti	
208.	Kansariin harmaa dhibee daddarbaa dha	1. eeyyee 2. miti	

Part III: Gaaffiiwwan beekumsa sababaa ka'umsa kansarii harmaa waliin wal qabatan

Amma gaaffiiwwan beekumsa sababaa/carraa kansarii harmaa qabaachuu dabalaniin waliin wal qabatanisin gaafadha. akkuma ani gaaffii tokko tokkoon si gaaffadhuati immoo yoo gaaffichi sirrii dha ta'e eeyyee jettee deebista yoo sirrii miti jetta ta'e immoo miti jettee fi yoo hib beektu ta'e immo hin beeku jechuun naaf deebista

T/lak	Gaaffiiwwan	Qoodinsa mallattoo waliin		
		1(eeyyee)	2(miti)	3(hin beeku)
301	Umurii jaaruu/dulloomu(waggaa 70 ol)			
302	Kanaan dura dhibee kansarii harmaa qabaachuu			
303	Fira dhihoo dhibee kansarii qabu qabaachuu			
304	Sigaaraa/tamboo gosa kamiinuu xuuxuu			
305	Nama tamboo xuuxu waliin ooluu			
306	Foon diimaa fi faatii/cooma qaban guyyaatti si'a tokkoo fi isaa ol nyaachuu			
307	Waggaa 30n booda mucaa jalqabaa godhachuu ykn guutummaatti godhachuu dhiisuu			
308	Marsaan lagu/dhiigaa dafee namatti dhufuu (waggaa 12 dura)			
309	Marsaan dhiigaa dafee dhaabbachuu diduu (waggaa 55 booda)			
310	Furdina(BMI greater than 25)			
311	Dhugaatii alkoolii guyyaatti buxxullee tokkoon ol dhuguu			
312	Cararaa aduu ykn immoo cararaa raajii qoomaaf saatilamuu			
313	Qoricha da'umsa ittisan yeroo dheeraaf fuudhachuu			
314	Yaalii hormonii qaamaa jijjiirrachuu			
315	Sochii qaamaa madaalawwaa daqiiqaa 30 gadi ta'e torbanitti guyyaa 3 gadiif hojjechuu dhiisuu			

Part IV: Gaaffiiwwan beekumsa mallattoo fi agarsiistuu kansarii harmaa waliin wal qabatan

Amma gaaffiiwwan beekumsa mallattoo fi agarsiistuu kansarii harmaa qabaachuu dabalaniin waliin wal qabatanisin gaafadha. akkuma ani gaaffii tokko tokkoon si gaaffadhuati immoo yoo gaaffichi sirrii dha ta'e eeyyee jettee deebista yoo sirrii miti jetta ta'e immoo miti jettee fi yoo hib beektu ta'e immo hin beeku jechuun naaf deebista.

T/lak	Gaaffiiwwan	Qoodinsa mallattoo waliin		
		1(eeyyee)	2(miti)	3(hin beeku)
401	Dhukkubbiin harmaa ykn bobaa jalaa mallattoo kabsarii ta'uu ni dnda'aa?			

402	Ta'uumsi ykn bakki harmaa jijjiiramuun mallattoo kabsarii ta'uu ni dnda'aa?			
403	Guddinni ykn hammi harmaa jijjiramuun mallattoo kabsarii ta'uu ni dnda'aa?			
404	Halluun harmaa geeddaramuu mallattoo kabsarii ta'uu ni dnda'aa?			
405	Harmi mada'uun mallattoo kabsarii ta'uu ni dnda'aa?			
406	Dhangala'aan harmaa keessaa ba'uun mallattoo kabsarii ta'uu ni dnda'aa?			
407	Boci harmaa jijjiiramuun mallattoo kabsarii ta'uu ni dnda'aa?			
408	Fiixeen harmaa keessatti galagaluun mallattoo kabsarii ta'uu ni dnda'aa?			
409	Xannachootni naannoo harmaatti argaman guddachuu(kessuma xannacha bobaa jalaa)			
411	Harma irratti wanti akka cittoo ba'uun mallattoo kabsarii ta'uu ni dnda'aa?			

Part V Gaaffilee waa'ee beekumsaa sakkatta'iinsa duraa kansarii harmaa waliin wal qabatan. Amma gaaffiiwwan beekumsa mallattoo fi agarsiistuu kansarii harmaa qabaachuu dabalanin waliin wal qabatan isin gaafadha. akkuma ani gaaffii tokko tokkoon si gaaffadhu ati immoo yoo gaaffichi sirrii dha ta'e eeyyee jettee deebista yoo sirrii miti jetta ta'e immoo miti jettee fi yoo hib beektu ta'e immo hin beeku jechuun naaf deebista.

T/lak	Gaaffiiwwan	Qoodinsa mallattoo waliin		
		1(eeyyee)	2(miti)	3(hin beeku)
501	Qorannoo harmaa ofii ofiin gochuun maloota ittiin kansarii harmaa dafanii adda ittiin baasan keessa isa tokko jettee yaadda?			
502	Qorannoon harmaa ofii ofiinii kan godhamu waggaa 20 irraa jalqaba jettee yaadda?			
503	Qorannoon harmaa ofii ofiinii ji'a ji'aan kan godhamuu qaba jettee yaadda?			
504	Qorannoon harmaa mallattoo ogeessa fayyaan godhamu maloota ittiin kansarii harmaa dafanii adda ittiin baasan keessa isa tokko jettee yaadda?			
505	Raajii(X-ray)harmaa ka'uun maloota ittiin kansarii harmaa dafanii adda ittiin baasan keessa isa tokko jettee yaadda?			
506	Raajii harmaa ka'uun waggaa 40 booda jalqabamuu qaba jettee yaadda?			

GALATOOMAA

Amharic Version

የመረጃ እና የበጎፍቃደኝነት ቅጽ

ሴቶች በጡት ካንሰር ዙሪያ ያላቸውን እውቀት ለማጥናት የተዘጋጀ መጠይቅ

መግቢያ፡ጤና ይስጥልኝ ስሜ _____ ይባላል። በጅምባራ፣ የጤና ሳይንስ ፋኩልቲ፣ የነርቲካን እና ሜዲዌራል ትምህርት ክፍል ድጋፍ ሴቶች በጡት ካንሰር እውቀት ዙሪያ ጥናት እየሰራው እገኛለው። ጥናቱ ማቴርኒት ሀዘዚ ነርቲካን ማስተርስ ዲግሪ መስፈርት ሚሚያ የሚደረግ ነው።

የጥናቱ ዋና ዓላማ ሴቶች በጡት ካንሰር እና ተያያዥ ምክንያቶች ዙሪያ ያላቸውን ለመዳሰስ ነው።

የመረጃ አወሳሰድ ሂደት ስለ ማህበራዊ እና ተያያዥ መለያዎች እንዲሁም ስለጡት ካንሰር የተመለከቱ ጥያቄዎች እንጠይቃለን። ይህን መጠይቅ ለመመለስ ቢባዛ 30 ደቂቃ ይወስዳል። ትክክለኛ አልያም የተሳሳተ ምላሽ የለም።

በጥናቱ የመሳተፍ ጉዳት እና ጥቅም በጥናቱ በመሳተፎ በቀጥታ የሚያገኙት ጥቅም ወይም ክፍያ አይኖርም። ሆኖም ስለጡት ከነስረ እና ስለተያያዥ ምክንያቶች ያለንን መረዳት ይጨምራልናል። የጥናቱ ውጤት በጡት ካንሰር የሚከሰተውን ህመምና ሞት በመቀነስ የሴቶችን ጤና ለማሻሻል ጠቃሚ ግብዓት እንደሚሆን ተስፋ እናደርጋለን። የሚሰጡት መልስ በአለትተ እለት ስራዎችም ሆነ ሌሎች የግል ጉዳዮች ላይ የሚፈጥረው ችግር አይኖርም። ሚስጥራዊነት መልስዎ ለጥናቱ ከመዋሉና ለትምህርታዊ አገልግሎት ከመሆኑ ባሻገር ለማንም አልፎ እንደ ማይሠጥ ቃል እየገባን ለዚህ ተግባር ሲባል ስመዎን በመጠየቁ ላይ መጻፍ እንደሚያስፈልግ እንገልጻለን።

መብት በዚህ ጥናት የሚያደርጉት ተሳትፎ በበጎ ፍቃደኝነቱ ላይ የተመሰረተ ነው። በማንኛውም ጊዜ ራስዎን ከጥናቱ ማግለል እና ለመመለስ ያልፈለጉትን ጥያቄ ማለፍ ይችላሉ። ተጨማሪ መረጃ ከፈለጉ ከዚህ በታች ያለውን አድራሻ መጠቀም ይችላሉ፡ (ስልክ +251 913826248)

የስምምነት ቅጽ ከላይ የተገለጸውን መረጃ አንብቢያለው ወይም ተነቦልኛል። ጥያቄዎችን የመጠየቅ አጋጣሚው ተመቻችቶልኛል የጠየቅኳቸው ጥያቄዎች በሙሉ በበቂሁኔታ ተመልሶልኛል። በዚህ ጥናት ለመሳተፍ በበጎ ፍቃዴ ተስማምቻለው። በማንኛውም ሰዐት ከጥናቱ አቋርጦ የመውጣት መብት እንዳለኝ ተገልጿል።

የተሳታፊ ፊርማ _____ ቀን _____

የመረጃ ሰብሳቢ ፊርማ _____ ቀን _____

Annex IV. Amharic Version Questionnaire

ክፍል 1 ማህበራዊና ሌሎች ተያያዥ ሁኔታዎች

ተ.ቁ	ጥያቄ	መልስ	አለፍ
101	እድሜሽ ስንት ነው?		
102	የትምህርት ደረጃ ?	1. መደበኛ ትምህርት የለም 2. የመጀመሪያ ደረጃ 3. 2ኛደረጃ 4. ዲፕሎማ እና ከዛባላይ	
103	የጋብቻሽ ሁኔታ ?	1. አላገባሁም 2. አግብቻለሁ 3. ሞቶብኛል 4. ተፋትቻለሁ	
104	የስራሽ ሁኔታ	1. ገበሬ 2. የግልንግድ 3. ተቀጣሪ 4. የቤትአመቤት	
105	የየትኛው ሀይማኖት ተከታይ ነሽ?	1. ኦርቶዶክስ 2. እስልምና 3. ፕሮቴስታንት 4. ካቶልክ 5. ሌላ (ይጥቀስ)	
106	ብሄርሽ ምንድ ነው?	1. ኦሮሞ 2. አማራ 3. ትግራይ 4. ጉራጌ 5. ሌላ(ጥቀሽ)	
107	በመጀመሪያ የወር አበባ ሰትይ እድሜሽ ስንት ነበር	_____	
108	በጡት ካንሰር የታመመ ዘመድ አለሽ?	1. አዎን 2. የለም	
109	ለጥያቄቁጥር 108 መልስሽ አዎን ከሆነ ማንወ. የጡት ካንሰር የአለው?	እናት -----1 እህት (ዎች)---2 ሴትአያት----3 አክሰት-4, ልላ---5	
110	የጡት ህመም አለብሽ ወይኖርብሽ ያውቃል	1. አዎን 2. የለም	
111	ወርሃዊ ገቢሽ ስንት ነው?	በ ቁጥር ጻፌ _____	

ክፍል 2 የሴቶች ስለጡት ካንሰር አጠቃላይ ጽንሰ-ሐሳቦች ለማጥናት የተዘጋጀ ጥያቄዎች::

ተ.ቁ	ጥያቄ	መልስ	ኤለፍ
201	ስለ ጡት ካንሰር ሠምተሽ ታውቂያለሽ ?	1. አዎን 2. ሠምቼ አላውቅም	2 ከሆነ → 203)
202	ለጥያቄ ቁጥር 201 መልስሽ አዎን ከሆነ ስለጡት ካንሰር የሠማሽው ክየት ነበር? (ከአንድ በላይ መልስ መምረጥ ይቻላል)	1. ክሬድዮ 2. ከቴሌቪዥን 3. መፅሔት/ክጋዜጣ 4. ከጤናዓለሙያ 5. ከጎረቤት 6. ከሌላ(ይጥቀሱ)	
203	የጡት ካንሰር በሴቶች ላይ ከሚከሰቱ የካንሰር አይነቶች አንዱና በጣም የተለመደው ነው::	1. እውነት 2. ሀሰት	
204	ማንኛውም ሴት በጡት ካንሰር የመያዝ ዕድል አላት::	1. አዎነት 2. ሀሰት	
205	ቶሎ ከታወቀ የጡት ካንሰር ታክም ይድናል::	1. እውነት 1. ሀሰት	
206	የጡት ካንሰር አደገኛና ለሞት ሊዳርግ የምይችል በሽታ ነው::	1. እውነት 2. ሀሰት	
207	የጡት ካንሰር በሽታ መንስኤው ርኩስ መንፈስ ነው::	1. እውነት 2. ሀሰት	
208	የጡት ካንሰር ተላላፊበሽታ ነው::	1. እውነት 2. ሀሰት	

ክፍል 3 ሴቶች ለጡት ካንሰር የሚያጋልጡ ነገሮች ላይያላቸው ንግንዛቤ ለማጥናት የተዘጋጀ መጠይቅ

ተ.ቁ	ጥያቄ	መልስ			
	ለጡት ካንሰር የመጋለጥ እድልን ይጨምራል? (እውነት፣ ሀሰት	እውነት	ሀሰት	አላው	

	ወይም አላውቅም በማለት መልሽ)			ቅም
301	የእድሜ መጨመር(ከ 70 በላይ)			
302	የጡት ካንሰር ያለፈ ታሪክ መኖር			
303	በጡት ካንሰር የታመመ ዘመድ መኖር			
304	ማጨስ			
305	ለሌላ ሰው የሲጋራ ጭስ መጋለጥ			
306	ቀይ ወይም የተስተካከለ ስጋ በቀን አንድ ጊዜ ወይም ከዚያ በላይ መብላት (ቅባት የበዛበት ምግብ መመገብ)			
307	ዘግይቶ መውለድ(ከ 30 አመት በኋላ)			
308	የወር አበባ ቀደም ብሎ መምጣት(ከ 12 አመት በታች)			
309	ዘግይቶ ማረጋገጫ/ደምመቁረጥ(menopause)(ከ 55 አመት በላይ)			
310	ከልክያለፈው ፍረት(BMI greater than 25)			
311	ብዙ አልኮል መጠጣት			
312	ለጨረር መጋለጥ			
313	ለረጅም ጊዜ የወሊድ መከላከያ ክኒን መጠቀምን			
314	የሆርሞንም ትክክል ክምናን መጠቀም			
315	መካከለኛ የአካል እንቅስቃሴ በሳምንት ሦስት ጊዜ ለ 30 ደቂቃዎች ያህል ያለመሰራት			

ክፍል 4 ሴቶች ለጡት ካንሰር የጡት ካንሰር ምልክቶች ላይ ያላቸውን ግንዛቤ ለማጥናት የተዘጋጀ መጠይቅ

ተ.ቁ	ጥያቄ	መልስ		
		እውነት	ሀሰት	አላውቅም
401	በጡት ወይም በንፍላቱ ላይ የሆነ ህመም የጡት ካንሰር ምልክት ሊሆን ይችላል?			
402	በጡት ጫፍዎ ቦታ ላይ የሚደረግ ለውጥ የጡት ካንሰር ምልክት ሊሆን ይችላል?			
403	በጡትዎ ወይም በጡት ጫፍዎ መጠን የሚደረጉ ለውጦች የጡት ካንሰር ምልክቶች ሊሆኑ ይችላሉ ብለው ያስባሉ?			
404	የጡትዎ ቆዳ መቅላት የጡት ካንሰር ምልክት ሊሆን ይችላል ብለው ያስባሉ?			
405	የጡት ቁስለት			
406	ከጡት ጫፍ የሚወጣ ፈሳሽ መኖር			
407	የጡት ቅርፅ መለወጥ			
408	የጡት ጫፍ ወደ ውስጥ መግባት			
409	የጡት እብጠት መኖር			
410	በብብት ውስጥ እብጠት መኖር			
411	የጡት ሽፍታ መኖር			

ክፍል 5 ስለ የጡት ካንሰር ቅድመ ምርመራ ዘዴዎች የተመለከቱ ጥያቄዎች

ተ.ቁ	ጥያቄ	መልስ		
		እውነት	ሀሰት	አላውቅም
501	የ ራስን ጡት በራስ ምርመራ ለጡት ካንሰር ቅድመ-ምርመራ ለማካሄድ ጠቃሚ መሣሪያ ነው ብለው ያስባሉ?			

502	የራስን ጡት በራስ ምርመራክ 20 ዓመት እድሜ ጀምሮ ሊጀምር እንደሚገባ ያውቃሉ?			
503	የራስን ጡት በራስ ምርመራ በየወሩ ሊከናወን እገባል ብለው ያስባሉ?			
504	በጤና ባለሙያ የሚሰራ የክሊኒካል የጡት ምርመራ የጡት ካንሰርን ለመለየት ጠቃሚ መሣሪያ ነው ብለው ያስባሉ?			
505	የጡት x ሬይ ምርመራ የጡት ካንሰርን ለመለየት ጠቃሚ መሣሪያ ነው ብለው ያስባሉ?			
506	የጡት x-ሬይ ምርመራ ከ 40 ዓመት እድሜ ጀምሮ ሊጀምር እገባል ብለው ያስባሉ?			

ለትብብርዎ እናመሰግናለን