

WOLKITE UNIVERSITY
COLLEGE OF MEDICINE AND HEALTH SCIENCES
DEPARTMENT OF PUBLIC HEALTH

KNOWLEDGE, ATTITUDE, AND PRACTICE OF BREAST SELF EXAMINATION AMONG UNDERGRADUATE REGULAR FEMALE STUDENTS IN WOLKITE UNIVERSITY, SNNPR, ETHIOPIA

A RESEARCH REPORT SUBMITTED TO WOLKITE UNIVERSITY COLLEGE OF MEDICINE AND HEALTH SCIENCES, DEPARTMENT OF PUBLIC HEALTH IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR A BACHELOR OF SCIENCE DEGREE IN PUBLIC HEALTH

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ABSTRACT

INTRODUCTION: Breast cancer is preventable if detected early sufficiently. The earlier it is detected, the better the effectiveness of the treatment and the likelihood of survival. Breast cancer screening methods include breast self-examination, clinical breast examination and mammography, and these are usually done in combination. Breast self-examination is the recommended method in developing countries because it is easy, convenient, and self and requires no specific equipment. Its purpose is to make women familiar with both the appearance and feel of their breasts as early as possible, so that they will be able to easily detect changes in their breast.

OBJECTIVE: To assess knowledge, attitude and practice towards breast self-examination among undergraduate regular female students in Wolkite University, 2021.

METHODS: Institution based descriptive cross sectional study design was used to assess the knowledge, attitude and practice toward breast self-examination at Wolkite University among undergraduate regular female students from August 3-28, 2021. Data was collected using semi structured questionnaire through using both open ended and close-ended question. The data was coded and entered, analyzed using the SPSS version 20 and then finally summarized and presented in tables, charts and graphs.

RESULTS: Three hundred sixty undergraduate regular female students of Wolkite University participated in the study with a 96.7% response rate. Out of the 360 participants, 77.5 % of them have heard of breast self-examination and the most knew risk of breast cancer is a family history of breast cancer. 80% of the respondents have a favorable attitude towards breast self-examination. Regarding practice, only 41.4% of the participants had performed breast self-examination. Among those participants who ever performed breast self-examination, only 11.4% of them do breast self-examination appropriately which means in the recommended time (monthly after menstruation) and regularly.

CONCLUSION: The finding showed that the participants had poor knowledge, attitude and practice toward breast self-examination. Even among the students who claimed to know about breast self-examination, the majority of the students are unaware of the benefits, appropriate timing & techniques of doing breast self-examination. Universities and other stakeholders should plan to promote provision of information, education and communication targeting females, and the general community to increase awareness to ward breast self-examination.

Key words: *Attitude, Breast cancer, Breast self-examination, Knowledge, Practice*

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ABBREVIATIONS AND ACRONYMS

BSE: Breast Self-Examination

CA: Cancer

CBE: Clinical Breast Examination

FMOH: Federal Ministry of Health

FNA: Fine Needle Aspiration

IARC: International Agency for Research on Cancer

KAP: Knowledge attitude and practice

OCP: Oral Contraceptive Pills

SNNPR: Southern Nations Nationalities and Peoples Region

SPSS: Statistical Package for Social Sciences

UAE: United Arab Emirates

WHO: World health Organization

WKU: Wolkite University

CHAPTER ONE

INTRODUCTION

1.1. BACKGROUND

Cancer is unabnormal growth of cell that can start from any organ or tissue of the body. Breast cancer is characterized by the uncontrolled growth of abnormal cells in the milk producing glands of the breast or in the passages (ducts) that deliver milk to the nipple. BC screening and timely diagnosis would save a lot of woman's life. Breast self-examination (BSE) is an important potentially lifesaving procedure that allows women to look and feel any chances in the breast by themselves **[1].** Lumps, thickening, spontaneous nipple discharge, skin change and dimpling are some of the changes, which can be detected by BSE **[6].**

Breast cancer screening methods include breast self-examination (BSE), clinical breast examination (CBE) and mammography, and these are usually done in combination **[1].** Among these methods, mammography is the only method that has been proven to be effective, but the method is very costly, and is feasible in countries with good health infrastructure **[1].** BSE is the recommended method in developing countries because it is easy, convenient, private, safe and requires no specific equipment **[3].** Its purpose is to make women familiar with both the appearance and feel of their breasts as early as possible, so that they will be able to easily detect changes in their breast [1].

Although some risk reduction might be achieved with the prevention, these strategies cannot eliminate the majority of breast cancers that develop in low and middle-income countries (since their risk is not usually related with lifestyle). Therefore, early detection in order to improve outcome and survival remains the cornerstone of breast cancer control. There are two early detection methods: early diagnosis or awareness of early signs and symptoms, and screening that aims to identify individuals with an abnormality suggestive of cancer. A screening program is far more complex undertaking than an early detection and diagnosis particularly in low income countries where the disease is diagnosed in late stages and resources are very limited. There is some evidence that this strategy can produce "down staging" (increasing in proportion of breast cancer detected at an early stage) of the disease to stages that are more amenable to curative treatment **[2].**

Breast cancer is the most common cancer in women worldwide. There were over 2 million new cases in 2018. Although breast cancer has a markedly higher incidence in developed countries, about 60% of breast cancer deaths occur in the developing world [2]. It is also reported that a significant increase in incidence occurred in most sub-Saharan African countries suggesting an increasing public health problem in the continent [4].

According to world health organization cancer country profile of Ethiopia on 2014, breast cancer constitutes the leading mortality figure (24.4%) among women who died due to cancer [2]. Most breast cancer symptoms are invisible and not noticeable without professional screening, but some symptoms can be caught early just by being proactive about health. Adult women of all ages are encouraged to perform breast self-examination once a month [3]. There is no evidence on the effect of screening through breast self-examination (BSE). However, the practice of BSE has seen empower women, taking responsibility for their own health [4].

Breast cancer typically has no symptoms when the tumor is small and most easily treated, which is why screening is important for early detection. The most common physical sign is a painless lump. Sometimes breast cancer spreads to underarm lymph nodes and causes a lump or swelling, even before the original breast tumor is large enough to be felt. Less common signs and symptoms include breast pain or heaviness; persistent changes, such as swelling, thickening, or redness of the skin; and nipple changes, such as spontaneous discharge (especially if bloody), scaliness, or retraction. Any persistent change in the breast should be evaluated by a physician. [3]

Steps to perform BSE is the following; Stand before a mirror and look at both breasts. Check for anything unusual, such as nipple retraction, redness, puckering, dimpling, or scaling of the skin. Look for nipple discharge. All discharges should be reported to your doctor. Note the color, whether it came from both breasts and whether it came from one or more openings**.** [3]

Next, press your hands firmly on your hips and lean slightly toward your mirror as you pull your shoulders and elbows forward with a squeezing or hugging motion. Look for any change in the normal shape of your breasts. [3]

Looking in the mirror, raise your arms and rest your hands behind your head. This allows you to see the underside of your breasts. [3]

Place your left hand on your waist, roll your shoulder forward, reach into your underarm area, and check for enlarged lymph nodes (small glands that fill with fluid when you have an infection). An enlarged node would feel like a corn kernel or a bean. Also, check the area above and below the collarbone. Repeat on the right side [3]

Raise your left arm. Use the pads of three or four fingers of your right hand to examine your left breast. Use three levels of pressure (light, medium, and firm) while moving in a circular motion. Check your breast area using a set pattern. You can choose (1) lines, (2) circles or (3) wedges.

Lines; beginning at the outer edge of your breast, move your fingers downward using a circular motion until they are below the breast. Then move your fingers slightly toward the middle and slowly move back up.

Circles; Beginning at the outer edge of your breast, use the flat part of your fingers, moving in circles slowly around the breast. Gradually make smaller and smaller circles toward the nipple. Be sure to check behind the nipple.

Wedges; starting at the outer edge of the breast, move your fingers toward the nipple and back to the edge. You should not lift your fingers while feeling the breast. Whatever method you choose, make sure to cover the entire area, including the breastbone, collarbone, upper chest area, and bra line. Pay special attention to the area between the breast and the underarm itself. Feel for any unusual lump, mass, or thickening under the skin. [3]

Lie flat on your back with your left arm over your head and a pillow or folded towel under your left shoulder. This position flattens the breast and makes it easier to examine. Some women like to use body lotion in this step. [3]

Thus, understanding early detection methods of breast cancer and its risk factors is important for the early diagnosis and to decrease mortality & morbidity especially in developing countries like, Ethiopia.

1.2 STATEMENT OF THE PROBLEM

Breast cancer is one of the manageable cancers if once detected early but in developing countries breast cancer is diagnosed at a more advanced stage than in developed countries and these results in a greater fatality rate. Although there are some early detection methods in health facilities of developing countries, they remain inaccessible to women due to limited diagnostic and curative facilities **[2].**

Mammography cannot be routinely applied in countries with limited health service resources since it is expensive it needs technology and trained professional. As massive screening is very costly, the most favorable methods of early detection are clinical breast examination (CBE) and breast self-examination (BSE). Clinical Breast Examination (CBE) also needs professional skills and health facility visits to be conducted **[4].**

Being one of the poorest states of the world and considering the fact that health care costs associated with the treatment of cancer are unaffordable, our country got prevention and early detection as an imperative option in order to minimize the casualties of advanced-stage disease. It made this research well timed as breast cancer incidence has increased by more than 20%, while mortality has increased by 14% since 2008 **[12].**

In order to make early detection possible, awareness of early signs and symptoms of breast cancer and BSE are very important. Although BSE is a simple, quick and cost-free procedure, it appears that many women perform it either incorrectly or not at all. BSE is simple, can be done at home, and better as it is private **[3].**

Despite the fact that BSE can be done by every woman, the awareness and practice is very low. There are not much published reports concerning breast cancer knowledge, attitude & practice especially in the study area.

In Ethiopia, breast cancer is the second most frequent occurring cancer among women. Current breast cancer rates in Ethiopia are high. However, there is probably very substantive under reporting in rural women seek help from traditional healers before seeking help from the government system. Many are never diagnosed and will be reported **[6].**

Early identification of breast cancer through breast self-examination and diagnosis plays an important role in reducing its morbidity and mortality. But most of women do not perform breast self-examination in low-income countries because of lack of awareness and lack of knowledge of breast self-examination. The incidence of breast cancer has been increasing in different regions of the world. The expected incidence rate of breast cancer is similar in different countries. However, breast cancer mortality rate is much higher in low-income countries than well-developed countries due to lack of early screening methods and treatment of breast cancer.

Worldwide, breast cancer is the second common cancer next to lung cancer and the fifth cause of cancer mortality. The incidence rate of breast cancer in North Africa and Sub-Saharan Africa (SSA) was 29.3 per 100,000 and 22.4 per 100,000 respectively **[2].**

This incidence rate also indicated that breast cancer was increased between 2000 to 2015. According to breast cancer estimate in 2018, about 626,679 of women died from breast cancer **[5].**

Cancer in the world, which accounted a crude mortality rate of 13 per 100.000 women. But all the other activities of our research work were accomplished through the effort of investigators as part of free community service of the university. We would also like to inform you that we did not have grant number. Competing interests: The authors have declared that no competing interests exist. About 10,000 Ethiopian women have already faced breast cancer and thousands of more patients are unreported as most women living in rural areas seek treatment from traditional healers before getting support from health facility **[13].**

Female health facility workers should be role model and they should educate the community to create awareness of early detection of signs and symptoms of breast cancer using breast self-examination. But health workers have not considered breast self- examination as a support for standard breast cancer screening method. Moreover, they had low practice of breast self-examination.

5.4. Practice of BSE

The collected data revealed that 149 (41.4%) of the respondents have practiced BSE, and the rest 211(58.6%) have never practiced BSE. (Figure 5)

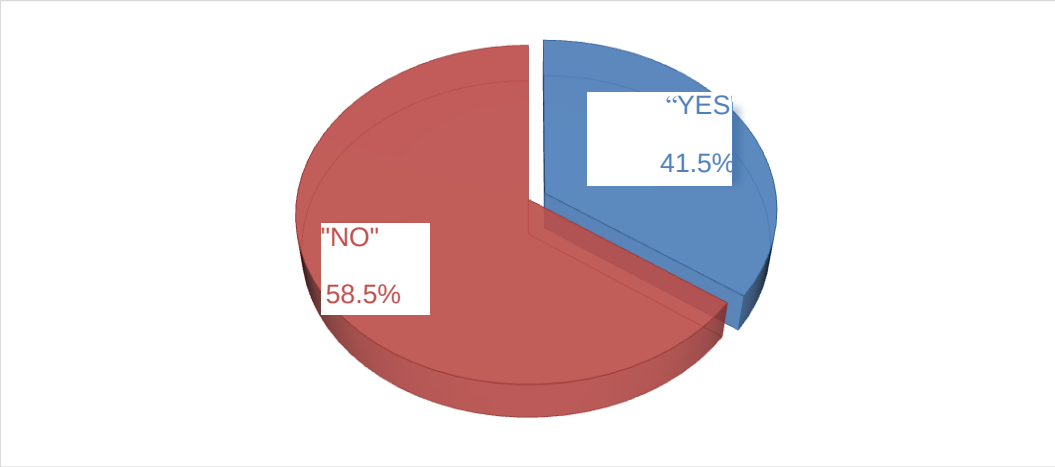


Figure 5: Frequency distribution of BSE practice among undergraduate regular female students at wolkite University, 20121(n=360)

Regarding the appropriateness of the practice out of the 149 respondents that ever practiced BSE, maximum of the respondents 65 (43.6%) perform BSE Occasionally or once a year, and the least 8(5.4%) perform BSE every three months (Figure 6).

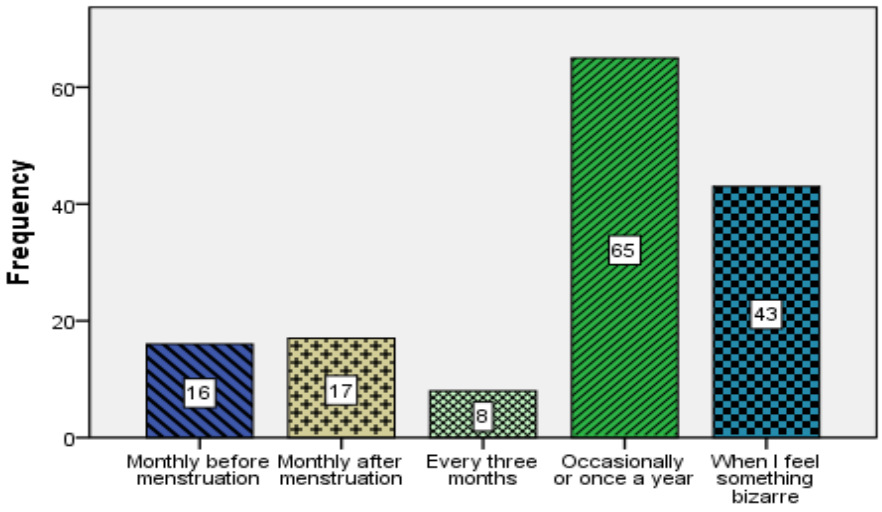


Figure 6: Frequency distribution of respondents for the appropriateness of the practice among regular female students at wolkite university, 2021(n=360)

Among the 149 respondents who practiced BSE 34(22.8%) used vertical strip technique, 68(45.6%) used circular technique, 37 (24.8%) used edge technique, and the rest 10(6.7%) performed BSE by squeezing to look for discharge. (Figure 7)

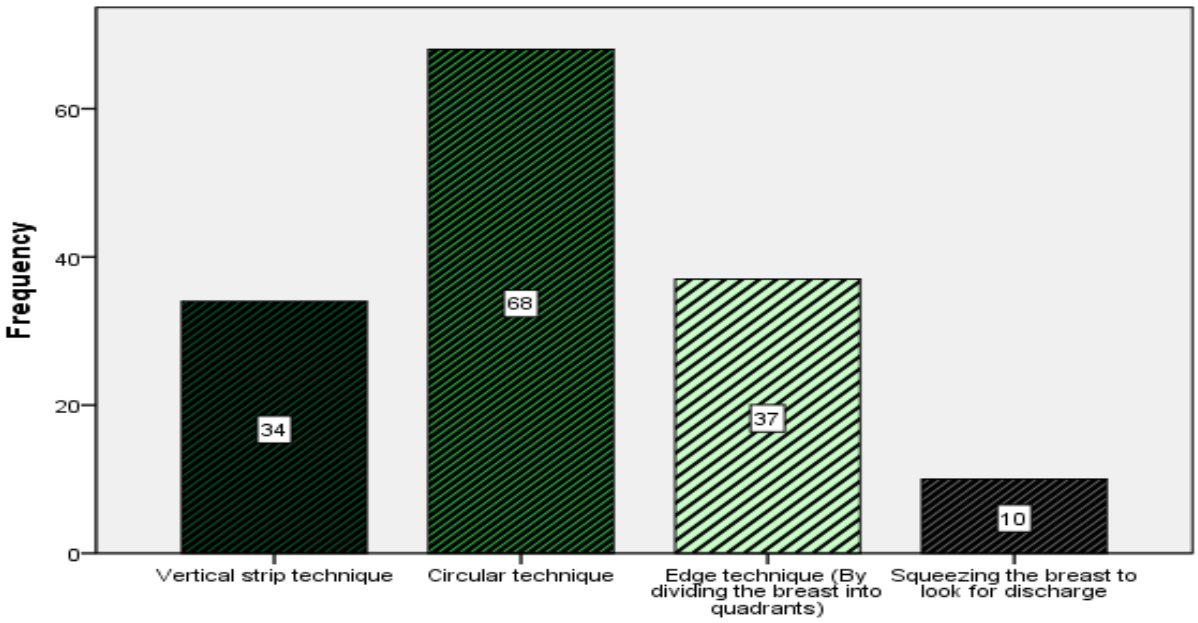


Figure 7: Frequency distribution of BSE techniques used by the respondents who practiced among undergraduate regular female students at wolkite university, 2021(n=360)

On what to look for on performing BSE the participants responded 82(55%) of them looked fora lump, 22(11.7%) looked for skin or appearance changes, 45(30.2%) looked for nipple discharge.

The reasons mentioned by the 211 respondents who never practiced BSE were; not knowing how to perform 114 (56.4%), negligence or forgetfulness 70(33.2%), and fear of detecting abnormality 27 (12.8%).

Respondents were also asked for their immediate reaction if they ever detect any abnormalities; the data collected showed that 264(73.3%) of the respondents choose to contact a physician right away, 74(20.6%) choose to counsel their relatives, 10(2.8%) of them choose to go to traditional healer, and 12 of them (3.3%) choose to do nothing.

6. DISCUSSION

Breast cancer incidence has been increasing in most countries of the world, but there are huge inequalities between rich and poor countries. Incidence rates remain highest in more developed regions, but due to lack of early detection and access to treatment facilities, mortality is much higher in less developed countries [5].

Regular breast self-examination is one of the most cost-effective methods for early detection of breast cancer in asymptomatic women. Despite this fact, breast self-examination practice remains low in Ethiopia.

This study performed among undergraduate regular female students in Wolkite University aimed at assessing their knowledge, attitude and practice of BSE.

The research revealed that 77.5 % of the respondents had heard of BSE which is higher than that of the research in Debrebirhan University which claimed 64% of its respondents heard of BSE and lower than the result found in another similar research done in Ibadan University of Nigeria, to assess knowledge attitude and practice of BSE among female students of the University which is 98.7% this discrepancy may be the result of the rising awareness about cancer due to alarmingly rising incidence, the inclusiveness of this research may also resulted a higher figure since health science students take information about the issue from their courses. The higher figure may be the result of better work done to sensitize people about breast cancer or the education policy involved more about this problem in Nigeria [11, 13].

Among the 77.5 %, respondents who had heard of BSE 53.4% of them knew about BSE again this figure is comparable with the result of the research in Debrebrhan University, which is 35.8% and lower than that of Ibadan University in Nigeria. The reason behind might be as mentioned earlier [13].

The main source of information for the respondents who heard about BSE was mass media (42.6%) followed by school education (22.9%) and health professionals (28.8%) and (7.5%) other sources.

this result is adjacent with the other researches that this research used as a reference. In all the studies massmedia being the main source of information including television, radio, social media and brochures.

As for the results of this research under risk perception, 29.4% of the respondents don't know any risks of breast cancer, 28.6% of the respondents knew radiation exposure is a risk for breast cancer, 51.9% of them knew that genetic exposure is a risk for cancer, 19.7 of them perceived old age, 23.6%of them perceived null parity and OCP use are risks and 23.6% of them perceived thatearly menarche and late menopause are risks for breast cancer.

Regarding attitude towards BSE our research considered positive attitude as its importance for early detection of breast cancer and 82.2% of the respondents believed that it is important,1.7% of the respondents believed that it is not, and 16.1% of them are not sure whether it is important or not.

This figure is lower than that of a research done in the University of Buea, Cameroon which approved 88.6% of its respondents believed that BSE is useful in early detection of breast ca. The other research done in Debrebrhan University also claimed that almost all of its respondents believed that BSE is important and useful for early detection of breast cancer. This discrepancy might be the result of the information gap in this sector and the demerit of the source of information that the respondents got the information from which failed to emphasize the importance of BSE [10, 13].

On the other hand 78.1% of the respondents believed that early detection of breast cancer is important in preventing the progress of the disease to a deadly stage and 4.2% of the respondents disagreed with the idea this figure is still low when compared with the research in Debrebrhan university (89.9%).

Only 41.4% of participants of this study ever performed BSE. Indeed this figure is higher than some researches such as the research done in Debrebrhan University had only 28.6% of its respondents who perform BSE in the year prior to the study, another research done on female students of Addis Ababa University to assess BSE practice and its associated factors found only 21.4% of its participants practiced BSE [13].

This discrepancy may be the result of the inclusiveness of this research. Since health science, students are expected to have better knowledge that can influence them to perform BSE. On the contrary, the other researchers excluded health, science students. Generally, all the figures are low considering the level of education of the study participants in those researches. Higher figures also exist in researches done in the University of malaysia (48%) and 45% in research done in Iran. This may be a result of better facilities for creating awareness in those countries [10, 17].

78% of the participants were not aware of the appropriate time to do BSE, while 22% of the students responded BSE should be done monthly in relation to their menstrual cycle. This shows that the overall awareness & knowledge of BSE in these study participants was low when compared to different similar studies. The difference might be for the same reason as mentioned above.

Among the participants who ever performed BSE, only 11.4% of them do BSE appropriately whichmeans in the recommended time (monthly after menstruation) and regularly.

The mostly used methods are circular technique and Edge technique (By dividing the breast into quadrants). More than half (55%) of the respondents (among those who practiced BSE) look for a lump while performing BSE.

Lack of knowledge on how to perform BSE is the main reason mentioned by the respondents who never performed BSE. This is similar with all the other researches that this research referred which signifies creating awareness is needed to facilitate early detection of breast cancer to intervene the rising morbidity and mortality due to this disease.

7. CONCLUSION AND RECOMMENDATION

The results of this research showed that the level of awareness among the students including those who are in health Science College is not high. The finding showed that the participants had poor KAP toward breast self-examination. Even among the students who claimed to know about BSE, the majority are unaware of the benefits, appropriate timing & techniques of doing BSE. Mass media is the main source of information for the participants who had heard of BSE. But there is still a gap of information influencing the attitude and the practice of the target.

Positive attitude towards BSE is reflected by most of the study participants even though there still are some respondents who think BSE can cause harm on their health which can affect the practice in great deal.

Although more than half of the respondents are claimed to be knowledgeable, the practice of BSE is very low. Even among those who practiced, the appropriateness of the practice is poor, since only few of them are practicing regularly and in the recommended time. The results are generally unsatisfactory; therefore, sensitization campaigns using the audiovisual media and other programs designed to create awareness about BSE should be intensified in order to change the status of young women in the study area especially towards the attitude and practice of BSE.

RECOMMENDATION

Universities and other stakeholders should plan to promote provision of information, education and communication targeting females, and the general community to increase awareness to ward breast self-examination, and prepare the stage for health education by working with health professionals working at Wolkite specialized hospital. The university should facilitate educational sessions to aware female students about BSE and its benefits through forums, concerned clubs, and displaying postures and brochures around the clinic to sensitize the students. Participate different volunteer clubs, mini media and student unions in preparing different opportunities to an exposure about the issue. Prepare posture, videos, fliers and other method to make female to be alarmed.

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9. ANNEX

Questionnaire

WOLKITE UNIVERSITY

COLLAGE OF PUBLIC HEALTH AND MEDICAL SCIENCE

DEPARTMENT OF PUBLIC HEALTH

QUESTIONER DESIGNED TO ASSESS KNOWLEDGE, ATTITUDE AND PRACTICE, ABOUT BREAST SELF EXAMINATION AMONG REGULAR FEMALE STUDENTS 2013 EC.

We are Regular Public health department graduating class students in Wolkite University, are conducting a research for the partial fulfillment of our bachelor degree. Our research is on Knowledge Attitude and Practice of breast self-examination (BSE) among regular female students of Wolkite University. Breast cancer is the second commonest cancer of women in our country with alarmingly rising incidence. It is very important for women to be cautious of their own health to prevent such problems and or to minimize the morbid effects as possible. BSE is one of the early screening methods of breast cancer which can be done by every women at home requiring no cost or equipment! Despite of being the most easy, private and safe method, BSE is not well practiced by women in our setting. Our research is aimed at assessing the level of awareness, practice and attitude towards BSE. In order to achieve this research we need your willingness to give the important information, therefore we ask politely if you please answer the questions on this questionnaire genuinely. We assure you that the confidentiality of any of your information is kept throughout this research and your name is not needed at all, the information you give will be coded only in letters and numbers. You can skip questions that you are not comfortable to answer and you can also refuse to participate any time. We also want to inform you that there is no payment given in return for filling this questionnaire.

If you agree to participate, please sign on the format below to proceed with the research. I read the above information and I understand all about it, I am volunteer to participate in this research, so I put my sign below.

Sign _____

Please circle the alternatives that consists an opinion you agree with.

I. Socio-demographic characteristics.

1. Age _____

2. Marital status A. Married B. Single

3. Department (college) _____

4. Year of study A, first year B, second C, third D, fourth E, fifth

5. Residence A. Rural B. Urban

Part II: - knowledge towards Breast Self-Examination (BSE)

1. Have you ever heard about BSE?

A. Yes, I have heard and I know about it.

B. I have heard but I don't know what it is.

C. No I never had.

If your answer is yes for Q no 1, please answer following questions.

2. Where have you got the information?

A. School or through education

B. From health professionals

C. Mass media

D. Others (specify) _____

3. When should BSE be performed?

A. Each month

B. Every three months

C. Once or twice a year

D. When symptoms are suspected

4. What positions do you know for performing BSE?

You can circle more than one alternative

A. Standing up in front of a mirror with two hands up

B. Lying down, one hand against the head and the other hand examining

C. Standing up with one hand suspended in the air and the other examining

D. I don't know about the positioning

5. What risk factors do you know for breast cancer? You can circle more than one alternative for this question

A. Genetic exposure or family history of breast cancer

B. Old age

C. Early menarche and late menopause

D. Radiation therapy or exposure

E. Use of contraceptive pills and null parity

F. I don't know

Part III, Attitude towards BSE

6. Do you think BSE is important for early detection of breast cancer?

A. Yes

B. No

C. Not sure

7. Do you think early detection (with BSE or other screening methods) helps for prevention of breast cancer?

A. Yes

B. No

C. Not sure

8. Who do you think should perform BSE?

A. Women in reproductive age group

B. Women with risk exposure

C. All women without a specification

D. Women who are recommended by health professionals to perform BSE

9. BSE causes no harm, do you agree with this idea

A. Agree

B. Disagree

C. Not sure

10. If you disagree with the above idea please specify your reason

_____

_____

Part IV, Practice of BSE

11. Have you ever performed BSE?

A. Yes

B. No

If your answer is yes for the above question please answer the following, if No just answer Q15.
12. How often do you perform BSE?

A. Monthly before menstruation

B. Monthly after menstruation

C. Every three months

D. Occasionally or once a year

E. “When I feel something bizarre”

13. What techniques do you use to perform BSE?

A. Vertical strip technique

B. Circular technique

C. Edge technique (By dividing the breast into quadrants)

D. Squeezing the breast to look for discharge

14. What do you look for on performing BSE?

A. Lump

B. Skin or appearance changes

C. Nipple discharge on squeezing

D. Any other abnormalities (specify)

15. If you ever find any abnormality what is/was your immediate reaction

A. Contact a physician right away

B. Consulting relatives

C. Go to a traditional healer

D. Nothing E. Others (specify) _____

16. If your answer was No for question number 11, what was your possible reason

A. Fear of detecting abnormalities

B. Negligence or forgetfulness

C. “I don’t know how to perform”

D. “I feel shy”

E. Others (specify) _____