RESEARCH ARTICLE

ASSESSMENT OF KNOWLEDGE, ATTITUDE AND PRACTICE OF BREAST SELF-EXAMINATION AMONG FEMALE STUDENTS IN WOLAITA SODO UNIVERSITY, ETHIOPIA.

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Manuscript Info

Abstract

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Introduction: Breast cancer is the most prevalent cancer among women globally and the second commonest cancer overall. In Ethiopia it is also an emerging public health problem and top leading causes of cancer mortality and morbidity among women of reproductive age group. The objectives of research is to assess the knowledge, attitude and practice of breast self-examination among women aged 20-49 years in Wolaita Sodo SNNPR, Ethiopia, 2019.
Method: An institution based cross- sectional study was conducted with a sample of 218 women aged 18-49 years in Wolaita Sodo University. One college wasrandomly selected from three each campus and systematic random sampling technique was used to select female students in the selected campus.A-structured questionnaire is used for assessing female student knowledge,attitude and practice of breast self-examination by using an open ended and close ended questionnaire. Data qualities was controlled by designating proper data collection tools.
Result: A total of 218 respondents participated in the study, of these, only 83.4% of them had good knowledge and 95.5% had positive attitude towards BSE.(83.4%) of the respondents had done breast self-examinations, from these only 37.3% of them practiced monthly.
Conclusion: The finding of the research showing that female students have good attitude but they have poor knowledge and practices toward BSE.

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Introduction:-

Cancer is a major public health trouble in many parts of the world. Breast cancer is one type of cancer which is malignant growth that starts in the cells of the breast. It occurs mostly in women, but men can also be affected (1). An expected 231,840 new cases and 40,290 deaths of breast cancer are expected to occur among women in the US during 2015 (2 (3). In 2013, an estimated 232,340 new cases and 39,620 death of breast cancer is expected to happen in woman.

According to Global Burden of Cancer (GLOBOCAN) 2012, an estimated 14.1 million new cancer cases and 8.2 million cancer-related deaths occurred in 2012, compared with new cancer cases and cancer associated deaths in

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2008 which is 12.7 million and 7.6 million, respectively. Among the most commonly diagnosed cancers global breast cancer accounts 10.9% and 11.9% of all cancer cases next to lung cancer in 2008 and 2012 respectively (4,5).In 2011, there were almost 8 million cancer-related deaths. All cancers, taken collectively, are now a leading cause of death worldwide, responsible for 14% of the total of 55 million deaths from all causes (6). It was reported that it is the most commonly diagnosed cancer and the second principal cause of cancer death among women in 2008 in Africa (92,600 cases, 50,000 deaths). It is also estimated the occurrence of breast cancer in women aged 15 and over in sub-Saharan Africa was 23.5 per 100,000 women in 2008[7, 8]. Breast cancer is the second most often occurring cancer next to cervical tumor among women in Ethiopia. It is estimated that about 10,000 Ethiopian women have breast cancer [9].Data from the Addis Ababa population based cancer registry showed that breast and cervical cancers were the leading cause of cancer comprising 22.6% and 10.8% respectively of all cases of cancers in Addis Ababa [10]. As evidences show, reduced awareness of breast cancer symptoms, prevention, risk factors and treatment options have usually been associated with patient impediment in seeking help [11]. The causes of breast cancer are not completely notable. However, researchers have recognized a number of risk factors that increase one's chances of getting breast cancer. These consider; family history of breast cancer, personal history of breast cancer, early menarche, (<12 years), late menopause (>55years), aging, excessive alcohol use, late age at first full-term pregnancy (>30 years), never breast feeding a child, high fat diet, tobacco smoking, post-menopausal obesity, new and long term use of hormone replacement therapy, high-dose radiation to chest and lack of physical exercises [12, 13].Breast self-examination (BSE) is a easy, very low cost, non-invasive screening method used to find early breast cancer which involves the woman herself looking at and feeling for any change in their breast as early as possible, that issue a better survival rate. Breast self-examination should be done for entirely women above the age of 20 years [14]. Breast cancer screening is a means of distinguishing the occurrence of breast cancers at early stages (before it advancement to the progressive stages). Three important tests are used to screen the breast Cancer. These are breast self-examination (BSE), clinical breast examination (CBE) and mammography [15].Breast self-examination is done by a woman herself where she assess her own breasts for lumps, alteration in size or shape of the breast or any other changes in the breast or underarm. It doesn't substitute regular screening mammograms or clinical breast examination. However, regular carrying out of BSE does not mean that the breast cancer is needs self-detected. Although, the American Cancer Society recommended in 2003 that women first in their 20s should be told about the gain and limitations of BSE, this procedure is not reasoned the best method for early detection of breast cancer but is the best alternative for interval screening among women of all ages [16, 17].

Breast cancer is also the most common cause of cancer death among women (522,000 deaths in 2012) and the most oftentimes diagnosed cancer among women in 140 of 184 countries worldwide. It is also the leading cause of cancer death in less developed countries of the world. The incidence of breast cancer is higher in matured countries but the mortality is higher in less developed countries due to lack of early find and management service as well as limited awareness of early signs and symptoms of cancer among the public and health care give [4,18].

Unlike early sensing in western world, women in Ethiopia usually present late screening for breast cancer and are expected to have a very limited life span. The Oncologic service in Ethiopia is limited to only one Radiotherapy Center at Black Lion Specialized Hospital [19].

In Ethiopia, It is idea that around 10,000 Ethiopian women have breast cancer with thousands of more cases unreported because the women living in rural areas preferred a treatment from traditional healers. In Ethiopia, Breast cancer become lethal due to late presentation, limited resources, low awareness of breast cancer and its detection, symptoms, prevention and strong traditional beliefs that can delay biomedical care [20].Therefore, many women failure early detection and treatment opportunities due to lack of information, knowledge, and practice of early detection of breast cancer.

In Ethiopia, communicable and chronic diseases have been given a major concern and all the efforts and recourses are involved into them. Government, non-governmental organizations and worldwide partners all focused to these diseases. The detection and management of reproductive organ cancers (ROCs), particularly breast cancer is low. Despite its prevalence ROCs are not treated as a major public health issues at any levels of health care delivery system. Nationally, there is no formed ROC prevention, education, screening or curative care program. Little is known about the scale of the problem, which makes it all the more hard to formulate policies and/or develop practical strategies for dealing with it. It may be one of the reasons for absence of sufficient facilities to fight against breast cancer in this country [20, 21].

Even though women knew about the different breast cancer screening methods, findings from female Medical Students in Haramaya University, Ethiopia, indicated that the practice of BSE while perceived as being essential is not frequently practiced by the students [22]. Prevention remains the base of the fight against breast cancer. In order to prevent or decrease the mortality, morbidity of breast cancer diagnosis of breast cancer during the early stage of the disease play big role and it helps in reducing the cost of management [23].

The screening methods for early detection of this fatal disease are: mammography, clinical breast investigating and breast self-examination. Although some early find methods, may remain inaccessible to women in developing countries due to limited diagnostic and curative facilities. Mammography cannot be routinely applied in countries with limited health service resources [24], since it is expensive it needs technology and skilled professional. CBE also need professional ability and health facility visit to be conducted [23].BSE is still recommend as a general approach to increasing breast health awareness and allows for early detection of any abnormalities. BSE continues to be recommended by health care practitioners because it is free, simple, need low technology and teaching is possible [25]. BSE also recommended in low resource countries like Ethiopia where resources are inadequate (mammography is not available) for early breast cancer detection [22].

Moreover limited studies are conducted about BSE knowledge and activity among student's calls for exploration of knowledge and practice of BSE among female students.

Method:-
Study area and period
Wolaita zone is one of the zones in Southern Nations, Nationalities and Peoples Region (SNNPR). It is bordered on the south by Gamo Gofa, on the west by the Dawro zone which on the northwest by KembataTembaro, on the north by Hadiya, on the northeast by the Oromia Region, on the east by the Bilate River which separates it from Sidama, and on the south east by the Lake Abaya which separates it from Oromia Region. The administrative center of Wolaita Zone is Sodo. Wolaita Sodo University lies at an altitude of 1240 meters above sea level with average temperature of 25°c.   The University has 3 campus (main, Otona, and Tercha campus). It consists faculty of engineering, business and economics, agriculture, medical and health and social science. The data were   collected from March 01-15/2019

Study design
Institutional based cross sectional study was used

Source Population
All female students in Otona campus, Wolaita Sodo University

Sample Size Determination
Estimating the sample size of female students to be interviewed from the total female students in the campus is calculated using standard formula:

N= $\frac{\mathbf{Z^2}\,(1\text{-}\mathbf{P})}{\mathbf{D^2}}$ **where by**

Z =confidence interval of 95% (1.96)

P= confidence interval of 23%) [40]. Breast Cancer Awareness and Practice of Breast Self- Examination among Female Students in Wolaita Sodo University Otona Campus, Wolaita Sodo Ethiopia

1-P = Proportion of negative Character as 35.5%
D² = Allowable error to be considered 5 %
Ni =total sample size
Ni= $\frac{(1.96^2 \times p\,(1\text{-}P)}{(0.05)^2}$
= $\frac{(1.96)^2 \times (0.23)(0.77)}{(0.05)^2}$= 272

Total number of female student in wsu in otona campus is source population 585 which is less than 10,000 by using correction formula the final Sample size was 218.

Sampling Technique
Simple random sampling method was used to select the study subjects. Wolaita Sodo University has three campuses, from the 3 campuses, Otona campus is selected by simple random sampling (lottery) method. Then the list of female students in the selected campus was taken from the registrar of main campus. Finally the participants were selected

from all female in the campus by using simple random sampling from all departments of College of Health Sciences and Medicine.

Data Collection and Analysis
A-structured questionnaire was used for assessing female student knowledge, attitude and practice of breast self-examination by using an open ended and close ended questionnaire. Data was collected by ourselves. The questionnaire is prepared in English, translated into Amharic and then retranslated back in to English to check for consistency. The questionnaire contained four parts, comprising of socio demographic characteristics, Knowledge, practice and attitude about BSE.The data collectors can speak both Amharic and English languages.

 Data qualities were controlled by designating proper data collection tools which was prepared by investigator and data collector under regular supervision and data were cleared and checked in the field. The data was processed and analyzed by scientific calculator.   Locally available materials such as pencil, pen, scientific calculators, ruler were used to analyze data since it is descriptive.

Ethical Consideration
Letter of permission was written from the Wolaita Sodo University submitted to Wolaita Sodo University. The study process has no harm to the study population and confidentiality was kept. The study unit who was not be voluntary to be exclude in the study was not enforce to be included in the study

Result:-
Socio- demographic characteristics of the respondents
A total of 218 students responded the questionnaire (response rate 100%). The mean age of the participants was 23 years and the majority age between 18-22 (51.8%) respondents were less than 22 years old. Fifthly seven percent of respondents were Orthodox in religion and more than 89% of them were single67.8% and 65.6% of respondents' fathers and mothers attended higher education, level respectively.

Table 1:-Socio demographic characteristics of the female study participants in Wolaita Sodo University College of Health Science and Medicine, 2019

Variable	Frequency	Percentage (%)
Sex	218	100%
Age		
18-22	113	51.8%
23-27	101	46.3%
>=28	4	1.83%
Marital status		
Single	195	89.4%
Married	21	9.6%
Widowed	0	
Separated	2	0.9%
Divorced	0	0
Year of study		
1st Year	45	20.7%
2nd Year	35	16.1%
3rd Year	60	27.5%
4th Year	40	18.3%
5TH and above	38	17.4%
Mother's education		
Illiterate	10	4.58%
Read and write	35	16%
Elementary school	30	13.76%
Secondary school and above	143	65.59%
Father's education		
Illiterate	15	6.9%

Read and write	25	11,5%
Elementary school	30	13.76
Secondary school and above	148	67.8%
Religious		
Protestant	70	32.1%
Orthodox	125	57.3%
Muslim	18	8.3%
Other	5	2.3%
Place of birth		
Urban	176	80.7%
Rural	42	19.3%
Department		
Nursing	78	35.7%
Public health	41	18.8%
Laboratory	28	12.8%
Midwife	28	12.8%
Anastasia	6	2.75%
Pharmacy	17	7.7%
Medicine	20	9.17%

Knowledge of breast self-examination

Majority of theme 95. % of the respondents had good knowledge and the rest 10 (4.6%) have poor knowledge regarding breast cancer. Almost all of the respondents heard about breast cancer. Mass media was the main primary source of information followed by health workers

Table 2:-Knowledge score and knowledge on information of Breast cancer among the study participants in Wolaita Sodo University College of   Health Science and Medicine, 2019

Variable	Frequency AND PERCENT (%)
Knowledge score	
Good	208(95%)
Poor	10(4%)
Do you know about breast cancer	
Yes	208(95.4%)
No	10(4.6%)
Is breast cancer transmittable?	
Yes	20 (9.2%)
No	198 (90.8%)
Do you know risk factor.	
Gender	168(77%)
Aging	53(24.3%
Family history	102(46.78%)
Smoking	21(9.63)
Early menarche	5(2.2)
Late menopause	3(1.37%)
Other	2(0.9%)
Symptom of breast ca.	
Breast pain	50(22.9%)
Painless and hard mass	60 (27.5%)
Breast discharge other than milk	55 25.2%)
Redness of nipple	53 (24.3%)
Early detection	
Yes	178(81.7%)
No	40(18.3%)

Know types of breast ca screening	
Yes	195 (89.4%)
No	23(10.6%)
Know kinds of screening method	
BSE by themselves.	63(32.3%)
By health professionals	60(30.8%)
Mammography	70(35.8%)
Other	2 (1.%)
Heard about BSE	
Yes	150(68.8%)
No	68(31%)
Source of information BSE	
Health profession	43(28.7%)
Friends	34(22.7%)
Mass media	73(48.7%)
Age BSE began	
<20	63(42%)
>20	84(56%)
Any time	3(2%)
BSE performing time	
Daily	17(11.3%)
Weekly	31(20.6%)
Monthly	56(37.3%)
Yearly	46(30.6%)

Attitude of breast self-examination
Attitude towards breast self-examination Most (83.5%) of the participants agree that breast self-examination has benefit and majority (65.1%) were early screening of breast self-examination was highly desirable. Majority of the participants (78.4%) reported that they would disagree wasting time of BSE.

Table 5:-Assessment on attitudeof female students towards BSE in Wolaita Sodo University College of   Health Science and Medicine , 2019.
Practice of breast self-examination

Questions	Options	Frequency (%)
Attitude		
Breast cancer is preventable and treatable disease if detected early	Agree	125(57.4%)
	Disagree	93(42.3)
Screening is necessary for early detection and prevention of breast cancer.	Agree	140(64.2%)
	Disagree	75 (34.4%)
Early breast screening procedure is effective in detecting breast cancer.	Agree	160 (73.3%)
	Disagree	58(26.6%)
Early breast detection can improve chance of survivals	Agree	100 (45.8%)
	Disagree	118 (54.1)
Screening is cost effective	Agree	160 (73.4%)
	Disagree	58(26.6%)
You are interested to do breast self-examination	Agree	90(41.2%)
	Disagree	128(58.7%)
Doing BSE is wasting time	Agree	47(21.5%)
	Disagree	171(78.4%)

Practice breast self-examination Students were asked if they practice early detection measures i.e. BSE as a means of diagnosis of breast cancer; majority of the participants 182(83.4%) replied they practice BSE. Only 36(16.5%) participants did not practiced BSE. Of the participants who practiced BSE, 46(25.2%) practiced BSE monthly,

47(25.8%) were practiced once every three month, 24(13.1%) and 41(22.5%) were practiced once in a six months and in a once yearly respectively.

Table 6:-Assessment on BSEpractices of Female studentsin Wolaita Sodo University College of Health Scienceand Medicine, 2019

Variables	Frequency (%)
Have you ever performed Breast self-examination?	
Yes	182(83.4%)
No	36(16.5%)
How often you practice Breast self-examination?	
A. Once in a week	21(11.5%)
B. Once in a month	46(25.2%)
C. Once in 3month	47(25.8%)
D. . Once in 6month	24(13.1%)
E. Once in a year	41(22.5%)
F. Other specify	3(1.6%)
Why do/did you perform breast Self- examination?	
A. Fear of breast cancer from family history	7(3.8%)
B. Recommended by Health professional	33(18.1%)
C. For early detection and treatment	71(39.0%)
E. Fear of developing breast cancer	39(21.4%)
F. Other, specify	32(17.6%)
Age that you started practicing breast self- examination?	
A. Less than 20 years of age	78(42.9%)
B. Between 25 and 30 years of age	104(57.1%)
When do you perform Breast self-examination	
A. 2 to 3 days after session of menstruation	23(12.6%)
B. When it comes to mind	71(39%)
C. A regular days of each month	6(3.3%)
D. few days before menses	15(8.2%)
E. any time during the month	67(36.8%)
If you don't practice breast self-examination, what are your reasons?	
A. I don't have a breast problem	17(47.2%)
B. Would not gain benefit from practicing it	5(13.8%)
C. It's not comfortable	2(5.6%)
D. Fear of detecting abnormalities	12(33.3%)

Discussion:-
From this study, almost majority of the respondents have heard about cancer, which is higher than the study in Iraq, where about 95% of the respondents heard about breast cancer [45]. Media was most the source of information about breast cancer for first time. A similar finding was reported in Ethiopia and other different studies like in Iraq 2011, Nigeria, Ghana [44,46,-47]. This indicates that media is playing major role in creating awareness about female cancer in most of the world and there is a need of health professionals' involvement creating awareness through health educations.

This study showed that, majority of the respondents had knowledge of breast cancer but few of them (10%) have poor knowledge level. A study done in Iraq 2011 and 2012, Saudi Arabia 2013, Pakistan in 2010, in Nigeria 2008, Ghana, Ethiopia [45,46,47-50] reported low knowledge score among majority of the respondents. But in a study done in Nigeria in 2008 a better breast cancer knowledge level was obtained. This is expected considering the fact that they are health science students and must have acquired this knowledge during their education. Previous studies have reported the roles played by formal and non-formal education in health related issues.

Concerning their knowledge on the frequency BSE, 182 (83.5%) of the respondents correctly reported that BSE should be done monthly. This finding is significantly lower than by half from a study done in Saudi Arabia in 201, where, 89.2% of the participants knew that BSE is recommended to be done monthly [48].

Nearly 20.6% of the respondents reported that BSE should be performed a week after menses. Similar findings of Saudi Arabia less than half (46.8%) of the respondents aware that should be performed A week after menses BSE [48] and a study in Ghana, 62% stated some days after menstruation [47]. In this study, about 83% of the respondents had a positive attitude toward BSE. A study done in Saudi Arabia more than two third of the respondents had positive attitude toward BSE [48] While a study conducted in, Iraq 89.7% of the female had positive attitude toward learning the correct procedure of BSE with an intention to instruct others on the technique [45] and Nigeria in 2008 showed that from 100 health workers, [92%] positive attitude [50]. This difference may be due to the level of knowledge between Nigerian health workers and health students in our case and in other way the sample size taken Nigeria was small compared to our study.

In our study the knowledge score was associated with the practice of BSE. In contrast to this studies like, in Iraq in 2012 an Ethiopia in 2014 the knowledge score of the respondents was associated with practice of BSE [44,45]. The reason could be in our setting, the study was conducted among health professional's students, so there might not be such significant difference of knowledge score was not noted about BSE. In addition the educational level of the respondents show association with practice toward BSE. In contradictions in a study done Ghana level of education is factor associated with practice toward BSE [47].

Conclusion:-
The finding of this research showing that female student have good attitude BSE. Even though they have good attitude toward BSE, their practice and knowledge toward the BSE is very poor. Therefore, qualitative research is recommended to be conducted to identify the factors that affect the practices and knowledge toward BSE of females.

Declaration:
this article is our original work. It is not directly copied from any other research. All articles used for preparation of the manuscript were cited properly.

Acknowledgement:-

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