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Knowledge, attitude, practice about breast cancer and its screening among female health professionals working at health care facility in East Gojjam, Ethiopia

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ABSTRACT: Breast cancer is the leading cause of death among reproductive-age women worldwide and the second leading cause of death among women in Ethiopia. Regular breast self-examination is the most cost-effective method for the early detection of breast cancer. Despite this fact, breast self-examination was low among women in the general population and it was not well documented among health care workers. To explore the knowledge, attitude, and practice about breast cancer and its screening among female health professionals working at public health facilities found in Debre Markos administrative town East Gojjam, Ethiopia. An Institutional-based cross-sectional study design was conducted among female health professions working at public health facilities found in Debre Markos administrative town. A systematic random sampling technique was used from different professionals and a separate sample was taken independently from each. A pre-tested structured questioner was constructed and collects data then Descriptive statistics were used to analyze data by using SPSS version 20. A total of 352 female health professions were included in the study with a response rate of 83.4%. The mean (±SD) age of participants was 24.82(±1.5) years. All of the study participants have heard about breast cancer. 186(52.8%) of them had good, 192 (54.5%) had a positive attitude, 183(52%) have good practice of breast cancer and its screening. 195(55.4%) mentioned that they self-examine their breast at least once in their lifetime, 41 (11.6%) said they had undergone breast examination by clinicians and only five (1.4%) mentioned that they had mammographic screening. Even though the study findings revealed that the majority of study participants had good knowledge of breast cancer, there are still some negative attitudes towards the screenings and practices about breast cancer, there is an alarming increase of breast cancer, therefore the study recommends that, the Ministry of Health and Social Services in collaboration with various stakeholders to develop some strategies on how to address the issues of early detection of breast cancer among female health professions.

KEYWORDS: Knowledge, attitude, practice, Brest cancer

INTRODUCTION

Cancer is a group of diseases characterized by the uncontrolled growth and multiply of abnormal cells. Breast cancer is the most frequently diagnosed and common cause of cancer death globally and is currently highly prevalent among women in Ethiopia. Breast cancer is fatal due to late presentation, limited resources, lack of awareness of breast cancer early detection methods. Breast cancer (BC) is an explosion of malignant cells that arises in the breast tissue and the term represents a range of diseases, from non-invasive to invasive carcinoma. The causes of breast cancer are not fully known. However, researchers have identified a number of factors that increase one's chances of getting breast cancer [1]. Risk factors do not cause breast cancer, but can increase the chances of getting breast cancer. Some women may have many risk factors, but never get breast cancer. And, some women have few or no risk factors, but do get the disease. These include; family history of breast cancer, personal history of breast cancer, early menarche, (<12 years), late menopause (>55 years), aging, late age at first full-term pregnancy (>30 years), never breastfeeding a child, high fat diet, tobacco smoking, recent and long term use of hormone replacement therapy, high-dose radiation to chest [2].

The great majority of the burden of BC is expected to fall in low and middle-income countries, where the resources to deal with the current situation, never mind future increases, are absent to a great degree [3]. The widespread belief that the disease is rare in low-income regions such as Africa is a myth. Akaroa-Anthony and colleagues noted that the probability that a woman who lives to age 65 in Uganda would develop cancer is only 20% lower than that of her European contemporary [4]. Risk reduction to breast cancer might be achieved with prevention but these strategies alone cannot eliminate the majority of breast cancers that develop in low and middle-income countries. Therefore, the key strategy in reducing breast cancer-related mortality, improving breast cancer outcome and survival is screening to early detect and manage breast cancer [5]. Breast cancer early detection methods include breast self-examination (BSE), clinical breast examination (CBE), and mammography. The main treatment options may include: surgery, radiation therapy, biological therapy (targeted drug therapy), chemotherapy, and hormone therapy alone or in combination. Many studies have examined the role of female health workers in promoting breast cancer early detection methods [6, 7]. This study aimed to explore the knowledge, attitude, and practice about breast cancer and its screening among female health professionals working at public health facilities found in Debre Markos administrative town East Gojjam, Ethiopia.

MATERIALS AND METHODS

Study design, period, and setting

An institutional-based descriptive cross-sectional study was conducted from June 1-July 30/2021 at public health care facilities found in Debre Markos administrative town East Gojjam, Ethiopia. Debre Markos referral hospital is found in Debre Markos town which is an administrative town of East Gojjam zone and located 300km from Addissa Abeba capital city of Ethiopia and also located 256 kilometers far from Bahirdar the capital city of Amhara Regional State. According to the 2018 Debre Markos town, health statistics report the estimated total population is 83,081 of whom 43,301 are Female and 39,780 are males.

Source of Population and study population

The source population was all female health professionals working at health care facilities. The study populations were all Female health professionals who were above 20 years and who were working at public health facilities found in Debre Markos administrative town during the study period. Study participants who were involuntary, sick, annual, and maternal leave at the time of data collection were excluded.

Data collection tool and procedure

The data collection tool for the assessment of the knowledge, attitude and practice towards prevention and early detection of breast cancer and screening was based on the questions adopted from questionnaires used in a similar study. The questionnaire was divided into 4 portions: the first portion deals with socio-demographic characteristics; the remaining three portions contain questions on the assessment of participants' knowledge, attitudes, and practices of the female health care workers. Each response was scored as "1" for the correct/positive response and "0" for the incorrect/ negative response. Knowledge, attitude, and practice scores (mean) of individuals were calculated to give the total knowledge, attitude, and practice score. A pilot study was done on 18 female health professions and the reliability of the questionnaire was assessed. A revised version of the questionnaire was developed based on the feedback from face validation. Finally, the questionnaire was modified and reevaluated to fit the study population based on feedback from the pilot study. The data generated from the pilot study and incomplete responses were excluded from the final analysis.

Statistical analysis

The cleaned data were analyzed by using Statistical Package for Social Science (SPSS) version 20 software. Descriptive statistics were used and numerical data were summarized as means, standard deviations, categorical variables were summarized in frequency and percentage and the result was presented by using tables and graphs. The knowledge, attitude, and practice scores were calculated to give the overall knowledge, attitude, and practice score.

RESULTS

Socio-demographic characteristics of the study population

A total of 354 female health professions were included in this study, with a response rate of 83.4%. The minimum age of the study participants was 20 and the maximum age was 50 with the mean (±SD) age of

24.82(±1.5) years. Among study participants, 144 (40.9%) were living together and 119(33.8%) were married. 97 (27.6%) of the study participants were first-degree holders. Of the total study participants, 139 (39.5% were nurses, 61 (17.3%) were clinicians, and 83(23.6%) were midwives, and the remaining 69 (19.6%) were other health workers. Two hundred forty-eight (70.5%) of the study participants had worked for less than five years, eighty-three (23.5%) of the study participants had worked for six to ten years and twenty-one (6%) of the study participants had worked for more than eleven years, respectively. Seven (1.7%) study participants reported that they have a family history of breast cancer while twelve (2.6%) of them mentioned they have a history of a breast problem. All of the study participants (352) have heard about breast cancer. Of those who had heard about breast cancer, the most frequent source of information 341(96.87%) was educational institutes followed by television and radio 268 (76.1%), and the least source of information was family 7 (1.98%) (Table 1).

Participants' knowledge on breast cancer and its screening

Out of the total study participants, only 186(52.8%) have good knowledge of breast cancer and breast cancer screening. Three hundred forty (96.6%) of the study participants mentioned race or ethnicity as a risk factor for breast cancer, 144 (40.9%) mentioned smoking, 89(25.3%) increasing age, and 102(28.97%) alcohol consumption as a risk factor of breast cancer. The most commonly mentioned sign and symptom of breast cancer was a lump in the breast 306 (86.9%), discharge 39 (11.1%), pain in breast 82(23.3%) 23, and change in the size of breast 207 (8.8%). The majority of study participants, 291(82.7%) knew the curable stage of breast cancer. Out of total study participants only 268(76.1%) surgery 119(33.8%) Chemotherapy, 58(16.4%) Radiation therapy, and 32(9.1%) mention hormonal therapy as a breast cancer treatment option (Table 2). Out of the total study participants, 220(62.5%) knew BSE as a screening method. 154 (43.8%) of the respondent, knows mammography as a screening method, 86 (24.4%) of respondents know CBE as a means of screening method and 3 of the respondents (0.9%) don't know breast cancer screening methods. From the total study participant 230(65.3%) mentioned BSE should be started after menarche, 82(23.3%) mentioned Mammography, 202(57.4%) of the respondents knew that BSE should be done every three months, 192(54.5%) knew CBE should be done yearly for women older than forty. More than half of the study participants 236(67%) knew that mammography is used for both diagnostic and screening purposes (Table 3).

Table 1. Socio-Demographic Characteristics of female health professionals at public health care facility found at Debre markos administrative town East Gojjam, Ethiopia, July 2021 (N=354)

Socio demographic variables		Frequency	Percent (%)
Age	20–25	42	11.9
	26–30	250	71
	31–35	39	11.1
	>=36	21	6
Marital status?	Single	119	33.8
	Currently married	41	11.6
	Living together	144	40.9
	Separated	12	3.4
	Divorced	34	9.7
	Widowed	2	0.6
Profession	Midwives	83	23.6
	Medical laboratory	23	6.5
	Pharmacist	34	9.7
	Clinicians	61	17.3
	Nurses	139	39.5
	Other health worker	12	3.4
Qualification	Diploma	246	69.8
	Degree	97	27.6
	Master	9	2.6
Work experience	<=5	248	70.5
	6-10	83	23.5
	>=11	21	6.0
Source of information	Family	7	1.98
	Educational institution	341	96.87
	Television/radio	268	76.1

Attitude towards breast cancer and breast cancer screening

One hundred ninety-two (54.5%) of the participants had a positive attitude towards breast cancer and breast cancer screening. All of the participants agree that early detection of breast cancer can help in survival and among all of the respondents, 151 (42.9%) believe they are at risk of breast cancer. 280(79.5%) of the participants agree professionals at the primary health care level can diagnose breast cancer (Table 4).

Practice of breast cancer screening

Out of the total participants 183(52%) had good practice of breast self-examination. 195 (55.4%) mentioned that they self-examine their breast at least once in lifetime, 41 (11.6%) said they had undergone breast examination by clinicians and only Five (1.4%) mentioned that they had mammographic screening. Among those who practiced BSE at least once in life time, only 24(6.9%) practiced monthly. The commonly mentioned reason for not practicing BSE was forgetfulness 80(22.7%). From those who practiced CBE only four participants practiced yearly. The commonly mentioned reason for not practicing CBE was not having symptom 347(82.8%). While 324(77.3%) performed CBE and 78(18.6%) ordered mammography to their clients with breast problem. The commonest reason for not ordering mammography to clients was not having history of breast cancer 172 (41.1%) (Table 5).

Table 2. Knowledge items towards breast cancer among female health professions (N=354).

Variables (Risk factors)	Frequency	Percent %
Increasing age	89	25.3
High-fat diet	76	21.6
Smoking	144	40.9
Race/Ethnicity	340	96.6
Alcohol consumption	102	28.97
First child at late age	86	24.4
Late menopause	46	13.1
Having large breast	111	31.5
Chemicals	209	59.4
Radiation	308	87.5
Unknown	93	26.4
Other	71	20.2
I don't know	64	18.2
Sign and symptom		
Lump in the breast	306	86.9
Discharge	39	11.1
Pain in the breast	82	23.3
Change in size of the breast	207	58.8
Dimpling of the breast	66	18.8
Ulceration of the breast	97	27.6
Changes in shape of the breast	201	57.1
Swelling of the breast	321	91.2
Other	78	22.2
I don't know	43	12.2
Curable stages		
Stage of 0 and I	31	8.8
Stage 0, I and II	291	82.7
Not curable	21	5.96
I don't know	9	2.6
Treatment option		
Surgery	268	76.1
Chemotherapy	119	33.8
Radiation	58	16.4
Hormonal treatment	32	9.1

Table 3. Knowledge items towards breast cancer screening methods among female health professions at public health facility found Debremarkose administrative town (N=354).

Variable	Frequency	Percent %
Recommended age to start breast self-examination		
13 years	10	2.8
15 years	14	4.0
18 years	4	1.1
20 years	7	2.0
40 years	12	3.4
After menarche	230	65.3
After menopause	3	0.9
Other	64	18.2
I don't know	8	2.3
Frequency of breast self-examination		
Daily	14	4.0
Weekly	8	2.3
Monthly	123	34.9
Every three months	202	57.4
Every six months	112	31.8
Yearly	3	0.9
Other	4	1.1
I don't know	7	2.0
Appropriate time to perform BSE during menses		
1-7 days before menses	21	6.0
1-7 days after menses	62	17.6
at any time	178	50.6
Other	82	23.3
I don't know	9	2.5
Frequency of CBE for women older than forty		
Monthly	42	11.9
Every three months	72	20.5
Every six months	23	6. 5
Yearly	192	54. 5
Every three years	12	3.4
Other	7	2.1
I don't know	4	1.1
Age to start mammography		
14 years	21	6.0
15 years	32	9.1
16 years	82	23.3
18 years	56	15.9
20 years	12	3.4
25 years	9	2.60
30 years	28	7.9
35 years	7	2.0
40 years	71	20.2
45 years	20	5.6
Other	6	1.7
I don't know	8	2.3

Frequency of mammography	Percentage	Yearly	Every 6 month	Every 2 Year	Every 3 Year	Other	I don't know
	Frequency %	211(59.9%)	50(14.2%)	12(3.4%)	64(18.2%)	8(2.3%)	7(2%)

Use of mammography	Frequency	Percentage (%)
For screening purpose	28	8%
For diagnostic purpose	87	24.7%
For both	234	67%

Table 4. Attitude items towards breast cancer and its screening among female health professions at Public health care facility found in Debre Markos administrative town East Gojjam, Ethiopia July 2021 (N=354).

Variable	Frequency	Percent (%)
Breast cancer is a curable disease		
Agree	303	86.1
Neutral	20	5.7
Disagree	29	8.2
I am at risk of developing breast cancer		
Agree	151	42.9
Neutral	84	23.9
Disagree	117	33.2
Early detection of breast cancer can helps in survival		
Agree	352	100
Breast cancer can be diagnosed by health professional at primary health care level		
Agree	280	79.5
Neutral	43	12.2
Disagree	29	8.3
Availability of screening methods are basic for early detection of breast cancer		
Agree	332	94.3
Neutral	8	2.3
Disagree	12	3.4
I would consult a doctor if I have breast lump		
Agree	338	96.0
Disagree	14	4.0
I would allow male doctor to examine my breast		
Agree	342	97.2
Neutral	2	0.6
Disagree	8	2.2

Table 5. Practice of breast cancer screening among female health professions (N=354).

Variable	Frequency	Percent
Frequency of practicing breast self-examination		
Daily	48	13.6
Weekly	111	31. 5
Monthly	24	6.9
Occasionally	12	3.4
Reason for not practicing BSE		
It is not important	2	0.6
Don't have any symptom	67	19.0
Forget to do it	80	22.7
Fear of detecting some abnormality	1	0.3
Don't know how to do it	7	2.0
How often do you practice CBE		
Only once	22	6.3
Yearly	4	1.1
Reason for not practicing CBE		
It is not important	1	0.3
Don't have any symptoms	255	72.3
Forget to do it	67	19.0
Fear of detecting some abnormality	2	0.6
It's not available	1	0.3
Performed CBE for a client		
Yes	302	85.8
No	50	14.2
Reason for not performing CBE for client		
Clients didn't request	9	2.6
Clients didn't have history of BC	18	5.1
I forget to do it	6	1.6
I don't have training	13	3.7
Service is not available	2	0.6
Other	2	0.6
Ordered mammography for a client		
Yes	42	11.9
No	310	88.1

DISCUSSION

Breast cancer is the leading cause of death among reproductive-age women worldwide and the second leading cause of death among women in Ethiopia. Breast self-examination is one of the vital screening techniques for early detection of breast lumps, especially cancer of the breast. In this study, almost all study participants 83.4 (352) have heard about breast cancer. Out of the total study participants, 341(96.87%) were from educational institutes followed by television and radio 268 (76.1%), and family 7 (1. 98%) was used as a source of information. This finding was consistent with the study conducted among women in a rural area of western turkey their information source was mass media programs were identified as the main source [8]. Out of the total study participants, 220(62.5%) knew BSE as a screening method, 154 (43.8%) of the respondent Knows mammography as a screening method, 86 (24.4%) of respondents know CBE as a means of the screening method. However, Research done in government hospitals of Addis Ababa shows that among female health professionals 77.6% of respondents were aware of BSE as a screening method.

Mammography was mentioned as a screening method by 81.4% and the least mentioned screening method by the participants was CBE which was known by 71.4% of study participants. This difference in the result could be attributed to the fact that professionals working in hospitals have more exposure to breast cancer screening methods as cases are referred to hospitals for further diagnosis and treatment and also experts that have more experience and knowledge are available for consultation. This study has revealed that 186(52.8%) of the study participants are knowledgeable which is less than the study done to assess knowledge of breast cancer and screening methods among nurses in university hospitals in Addis Ababa 58% of the participants were knowledgeable about breast cancer and breast cancer screening [9]. The majority of respondents mentioned signs and symptoms of breast cancer were a lump in the breast 306 (86.9%), discharge 39 (11.1%), pain in breast 82(23.3%), and change in the size of breast 207 (8.8%). This finding is different from the research finding in Nigeria where breast lump was mentioned by 94.6%, discharge from nipple 89.2% [10]. This could be attributed to the socioeconomic difference that may result in increased knowledge about breast cancer signs and symptoms due to a higher level of education.

In this study the major risk factor reported for breast cancer were race or ethnicity with 340 (96.6%) of the study participants, 144 (40.9%) mentioned smoking, 89(2.3%) increasing age, and 102(28.97%) alcohol consumption. This finding is similar to researches conducted in Saudi Arabia and Pakistan, increasing age, positive family history of breast problems, smoking were reported as risk factors for developing breast cancer [11].

Out of the total, 192 (54.5%) study participants had a positive attitude towards breast cancer and breast cancer screening. 280(79.5%) of the participants agree professionals at the primary health care level can diagnose breast cancer. This finding less than from a study was conducted in Riyadh, where about 85% believe that BC can be diagnosed by primary health care physicians. This could be attributed to the fact that in Riyadh primary health care facilities could have more access and equipment to diagnose and treat breast cancer at the primary health care level [7]. out of the total study participants 230(65.3%) mentioned BSE should be started after menarche, 82(23.3%) mentioned Mammography should be started at sixteen years. 202(57.4%) of the respondents knew that BSE should be done every three months, 192(54.5%) knew CBE should be done yearly for women older than forty, 211 (59.9%) mammography yearly. 178(50.6%) of the respondents answered that the appropriate time to perform BSE is one to seven days after menses. Most of the respondents 236 (67%) knew that mammography is used for both diagnostic and screening purposes. From all of the study participants, 195(55.4%) mentioned that they self-examine their breast at least once, in their lifetime, 41 (11.6%) said they had undergone breast examination by clinicians and only Five (1.4%) mentioned that they had mammographic screening. Among those who practiced BSE at least once in their lifetime, only 24(6.9%) practiced monthly. The commonly mentioned reason for not practicing BSE was forgetfulness 80(22.7%). From those who practiced CBE, only four participants practiced yearly. This finding was less than the study was conducted in Turkey, where 81.3 % of the group reported performing BSE, but only 27.3 % reported doing so monthly or once per menstrual cycle. The most common reasons for not doing BSE were the belief that it was not necessary and neglect (45.8 %), an idea of not having cancer in themselves (15.7%), and fear

(13.3%). The rate of having mammography at least once was 10.1% and the rate of having a CBE among the health professionals was 24.8 %. The difference could be attributed due to economic; differences and the study in Turkey could have more education and experience on the case [12].

CONCLUSIONS AND RECOMMENDATIONS

Even though the study findings revealed that the majority of study participants had good knowledge of breast cancer, there are still some negative attitudes towards the screenings and practices about breast cancer, there is an alarming increase of breast cancer, therefore the study recommends that, the Ministry of Health and Social Services in collaboration with various stakeholders to develop some strategies on how to address the issues of early detection of breast cancer among female health professions. Secondly, all health facilities should have updated guidelines in use and the guidelines should be published at regular intervals to ensure continuous availability. Quality management and staff development should be ensured, through training and education, recruitment, and retention of qualified staff, as it will maximize the benefit of early detection among women in their reproductive age groups. Finally , research is required to change the attitudes of women toward breast cancer and to investigate the various health belief models, as there are still women who believe in the traditional and spiritual dimensions of health and delay seeking help by going to a 'special doctor' as they do not understand the concept of specialty in the field of medicine.

DECLARATIONS

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Ethics approval and consent to participate

Ethical clearance was obtained from the Debre Tabor University College of health science Community Based Education coordinator Office, the Department of medical laboratory science, and from the research committee. All eligible study participants were informed about the purpose of the study, and interviews were held only with those who agreed to give written consent to participate.

Availability of data and materials

Most of the data generated or analyzed during this study are included in this article and additional data will be made available upon request to the primary/ corresponding author.

Competing interests

Authors declare that they have no competing interests.

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Authors' contributions

Debaka Belete The conception of the research idea. M.Tilahun, D.Belete, Z.Biyazn, and W.Damite: Study design, supervision, data entry, analysis, interpretation, and the drafting of the manuscript. All authors read and approved the final manuscript.

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