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KNOWLEDGE, ATTITUDE, AND PRACTICE ON BREAST SELF EXAMINATION AMONG FEMALES IN ADDIS ABABA, ETHIOPIA

Etiyopya, Addis Ababa'da kadınlarda kendi kendine meme muayenesi bilgi, tutum ve davranışlar

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Abstract

Breast self-examination (BSE) is recommended by the World Health Organization for resource-limited countries for the early detection and management of breast cancer. This study will assess the knowledge attitude, and practice of breast self-examination among adult females living in Addis Ababa. A community-based cross-sectional study was conducted in March 2022 among adult females in Addis Ababa. Structured questionnaires were entered into Google form and then shared using different social media, 302 participants were obtained. IBM SPSS version 26 was used for analysis. The total score for knowledge and attitude was 18 and 5 respectively, those who scored above average were considered as having good knowledge and attitude. 60.6%of participants were between the age of twenty and forty, and 62.2% of respondents were graduated from high school or undergraduate level. Knowledge of the respondents about breast cancer was significantly different by religion ($p<0.001$), educational level ($p<0.001$), and profession ($p<0.001$). Those who perform BSE were having good knowledge about breast cancer compared with those who did not perform. Socio-demographic characteristics of participants were not significantly related to the attitude towards breast cancer. BSE showed a significant association with educational level and profession. 22.6% of participants had good knowledge regarding BSE, the majority of respondents had knowledge about signs and symptoms but the least of respondents had knowledge about the risk factor of breast cancer. 69.9% had a good attitude toward BSE, 48.7% of respondents had performed BSE in the previous year and among them, 19.46% practiced monthly, the major reason for not performing BSE was lack of technique to perform.

Keywords: Breast self-examination, breast cancer, knowledge, attitude, practice, Addis Ababa.

Özet

Kendi Kendine Meme Muayenesi (KKMM) meme kanserinin erken teşhisi ve tedavisi için kaynakları kısıtlı ülkelerde dünya sağlık örgütü tarafından önerilmektedir. Bu çalışma, Addis Ababa'da yaşayan yetişkin kadınların bilgi, tutumunu ve kendi kendine meme muayenesi uygulamasını değerlendirecektir. Mart 2022'de Addis Ababa'da yetişkin kadınlar arasında toplum temelli bir kesitsel çalışma yapılmıştır. Yapılandırılmış anketler Google formuna girilmiş ve daha sonra farklı sosyal medya kaynakları kullanılarak paylaşılmıştır ve 302 katılımcıya ulaşılmıştır. Analiz için IBM SPSS sürüm 26 kullanılmıştır. Bilgi ve tutum toplam puanı sırasıyla 18 ve 5 olup ortalamanın üzerinde puan alanlar iyi bilgi ve tutuma sahip olarak kabul edilmiştir. Katılımcıların %60,6'sı yirmi ile kırk yaş arasındaydı, %62,2'si lise veya lisans düzeyini tamamlamıştı. Ankete katılanların meme kanseri hakkındaki bilgileri dine göre önemli ölçüde farklılık göstermiştir. KKMM uygulayanlar uygulamayanlara göre meme kanseri hakkında daha iyi bilgi sahibiydiler. Katılımcıların sosyodemografik özellikleri ile meme kanserine karşı tutum arasında anlamlı bir ilişki bulunmamıştır. KKMM, eğitim düzeyi ve meslek ile önemli bir ilişki göstermiştir. Katılımcıların %22,6'sı KKMM konusunda iyi bilgiye sahipti, yanıt verenlerin çoğunluğu belirti ve semptomlar hakkında bilgi sahibiydi, ancak katılımcılardan çok azının meme kanserinin risk faktörleri hakkında bilgisi vardı. %69.9'u KKMM'ye karşı iyi bir tutuma sahipti, yanıt verenlerin %48.7'si bir önceki yıl KKMM yapmıştı, bunların %19.46'sı KKMM'ni aylık uygulamıştı. KKMM uygulamamanın başlıca nedeni de uygulama tekniğinin bilinmemesiydi.

Anahtar kelimeler: Kendi kendine meme muayenesi, meme kanseri, bilgi, tutum, pratik, Addis Ababa.

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Introduction

Cancer is the leading cause of mortality and a major reason for premature death in almost all countries (1). Globally more than a 19 million new cancer cases and an estimated of 10 million cancer deaths have been registered by 2020, among this 2.3 million was breast cancer which makes it the most cancer to be diagnosed, it is responsible for 1 in 4 cancer cases and 1in 6 cancer deaths among females around the globe (2).

By 2015 national cancer control plan was established in Ethiopia with the objective of prevention and early detection, treatment along with palliative care of cancer (3). Approximately 6% of national death is caused by cancer (3). For the adult society of Ethiopia, breast cancer and cervical cancer are the leading cause of death (4) based on the report of the Addis Ababa cancer registry breast cancer accounts for more than one-third of female cancer diagnoses (5). Majority of breast cancer occurs in developed countries but unfortunately more than 50% of mortalities occur in developing countries (6), as an illustration in Ethiopia, lack of resources for early diagnosis and treatment, low awareness of signs and symptoms, and negative social attitude towards medical treatment can be mentioned as the basic barriers for early detection which result in high mortality comparing to developed countries (7).

The reason for the high cost treatment and mortality in developing countries is mainly due to late stage diagnosis, however early detection doesn't decrease the incidence rate but will have significant role in good prognosis, low cost treatment and decreasing mortality rate (8). Breast Self-Examination (BSE) is one of the best breast cancer detection methods in the developing countries in which accessing other screening methods like mammography, ultrasonography and clinical breast examination are less accessible and unaffordable by the majority, BSE is simple to perform, self-administered and free of charge owing to this it is the first preferable in the resource limited areas. Additionally, it will inspire women to take primary responsibility for their own health (9, 10).

Since breast self-exam is the unique effective screening method for the Ethiopian society due to limited diagnostic centers and treatment options, assessing the knowledge, attitude and practice of breast self-examination among females living in the capital of Ethiopia is very crucial in which it will help to generalize gaps to overall regions of Ethiopia, as those who are residing in the capital are expected to have better level of awareness and practice. The study will be base for further detailed studies, in addition it will help policy makers to take different national intervention for early diagnosis and treatment of breast cancer, therefore the aim of the study is to assess the knowledge attitude and practice of breast self-examination among females in Addis Ababa.

Material and Method

Study design and sample

A community-based cross-sectional study was conducted from first to eighth of March 2022 among females older than 20 years residing in the capital city of Ethiopia, Addis Ababa. Sample size was calculated using single population proportion formula assuming level of significance 0.05, power of 95% and population proportion was 34% (11) from a similar study conducted in Ethiopia. Finally, a total sample size of 340 was obtained. The study participants were selected conveniently until the target population was obtained in the data collection period.

Study questionnaire and data collection

Structured questionnaire was

obtained from the study (10) which was English origin translated back to the local language of Addis Ababa Amharic and translated back into English by professionals to check the consistency of the meaning. Then entered into the Google form and pilot study was conducted among 34 respondents, which is 10% of target population to check the clarity and consistency of the questions. Then it was shared with participants using social media via telegram, WhatsApp, Facebook and E-mail. The questionnaire has 4 parts, about socio demographic characteristics of respondents, knowledge about breast cancer, attitude and practice towards breast self-examination.

The knowledge section consists of sign and symptoms, protective factors and risk factors of breast cancer. It was scored out of 18 each correct answering "yes" scored 1point and no and I don't know scored 0 point, those who scored above average was classified as good knowledge and less than average was considered as poor knowledge. The attitude was assessed by asking question about if they have future plan to perform mammography or clinical breast examination test or not and what would be their attitude if they find lump in breast, whether they will go to prayer house, traditional medication or consult medical specialist and if they will agree to undergo mastectomy if required. Totally was scored out of 5 and those who scored more than average was considered as having good attitude.

Data analysis

Data was analyzed using IBM SPSS version 26, descriptive statistics was used to describe all variables and study participants. For the association of categorical variables Chi-Square test was used. For the determining difference between groups of practical categories and knowledge score of signs and symptoms of breast cancer, risk factor, and protective factor Mann-Whitney test was used. P< 0.05 was set on as statistical significance of this study.

Ethical clearance

Ethical approval was obtained from the Ethical committee of Ankara Yıldırım Beyazıt University (2022-676).

Results

A total of 302 respondents participated in the study majority of them (60.6%) was between the age of twenty and forty,68.9% were single while 31.1% were married, more than two-thirds of participants were Muslims, regarding the educational level of participants 62.6% were graduated from high school or undergraduate level and about 30.5% of participants were health care providers. Only 18.2% of participants had a family history of breast cancer and the majority of participants heard the breast cancer information from TV and radio programs as shown in (Table 1).

Table 1: Socio-demographic characteristics of respondents (n=302).

Variables	Categories	Frequency	Percentage(%)
Age Group	20-40	183	60.6
	>40	119	39.4
Marital Status	Single	208	68.9
	Married	94	31.1
Religion	Muslim	235	77.8
	Christian	67	22.2

Educational level	Primary school	79	26.2
	high school and undergraduate level	189	62.6
	Above	34	11.2
Profession	Health care provider	92	30.5
	Other	210	69.5
Family History of Breast Cancer	Yes	92	18.2
	No	210	81.8
Source Of Breast Cancer Information	Family, friends, neighbors	76	25.2
	Brochures, postures, and printed materials	25	8.3
	Radio and TV	137	45.4
	Health workers	20	6.6
	Teacher	44	14.5

The knowledge of the respondents about breast cancer was significantly related to religion (p<0.001), educational level (p<0.001), and profession (p<0.001), among those who are Muslims, only 22.6% had good knowledge while approximately half of the Christian respondents had good knowledge. Breast cancer knowledge was increased with educational level from 7.6% in primary school to 31.75% among high school and undergraduate level and 58.8% among those who attended masters and PhDs. And as expected health care providers had good knowledge about breast cancer (67.3%) than the general female population of Ethiopia (11.4%). Overall, 71.5% of respondents had poor knowledge while only 28.5% had good knowledge about breast cancer signs and symptoms, risk factors, and protective factors (Table 2).

Table 2: Relationship between knowledge and socio-demographic characteristics of the respondents (n=302).

Variables	Categories	Good N (%)	Poor N (%)	p-value
Age Group	20-40	56 (30.6)	127 (69.4)	0.310
	>40	86 (25.2)	216 (74.8)	
Marital status	Single	59 (28.4)	149 (71.6)	0.95
	Married	27 (28.7)	67 (71.3)	
Religion	Muslim	53 (22.6)	182 (77.4)	<0.001
	Christian	33 (49.3)	34 (50.7)	
Educational level	Primary	6 (7.6)	73 (92.4)	<0.001
	High school and undergraduate level	60 (31.75)	129 (68.25)	
	Above	20 (58.8)	14 (41.2)	
Profession	Health care provider	62 (67.4)	30 (32.6)	<0.001
	Other	24 (11.4)	186 (88.6)	
Family history of breast cancer	Yes	18 (32.7)	37 (67.3)	0.54
	No	68 (27.5)	179 (72.5)	

The highest knowledge score was on the sign and symptoms of breast cancer while the lowest score was on the risk factors of breast cancer, knowledge on the sign and symptoms of breast cancer about 67.5% recognized painless lump in the breast, 56.6% pitting in the areola, 54.3% considered lump in arm and change in breast size as the sign and symptoms for breast cancer. About the risk factors of breast cancer majority of participants (57.9%) consider having a positive family history of breast cancer, the first child in the old age 30%, and only 21.9%, 23.8%, 28.5% considered respectively using the contraceptive pill, irregular menstrual cycle and late marriage as the risk factor of breast cancer. Regarding the protective factors of breast cancer 74.2% of participants considered good nutrition and adequate physical exercise as a factor to protect from breast cancer and about three forth mentioned breastfeeding as the protective factor, only 11.3% of participants knew that late menstruation can reduce the risk of breast cancer. Mann-Whitney test was used to compare the mean knowledge of respondents with those who are performing BSE or not performing and showed significant association those who have good knowledge tend to practice BSE (Table 3).

Table 3: Comparison of the mean knowledge of breast cancer, BSE score for those who performed and those did not.

Scores	Performing BSE (n=147) mean (SD) median (min-max)	Not performing BSE (n=155) mean (SD) median (min-max)	p-value*
Signs of breast cancer	3.72 (1.58) 4.00 (0.00-6.00)	2.60 (1.77) 2 (0.00-6.00)	**<0.001**
About risk factor	2.36 (1.96) 2 (0.00-6.00)	1.38 (1.78) 1 (0.00-6.00)	**<0.001**
About protective factor	2.54 (1.52) 2 (0.00-6.00)	1.72 (1.25) 2 (0.00-6.00)	**<0.001**
Overall knowledge	8.63 (4.25) 8 (0.00-18.00)	5.7 (3.99) 5 (0.00-16.00)	**<0.001**
Overall attitude	4.46 (0.90) 5 (1.00-5.00)	3.94 (1.19) 4 (1.00-5.00)	**<0.001**

Overall, the majority of respondents have a positive attitude towards breast cancer (69.9%) while 30.1% had a negative attitude about breast cancer. Age group, educational level, religion, profession, and family history of breast cancer were not significantly related to the attitude towards breast cancer (Table 4). 67.5% and 74.2% of participants were willing to perform mammograms and breast examinations by a specialist respectively in the future, about 90% of respondents were willing to consult with a medical specialist if they found a lump, among them more than three forth of participants (76.5%) stated they will consult medical specialist in the first week if they found a lump on their breast.

The result didn't show any significant association between age group, marital status, education level, religion, and family history of breast cancer with breast self-examination practice, but has a significant association with educational level and profession. 70.7% of health care providers had practice breast self-examination in the last years while only 39% of the non-health professional female population practiced breast self-examination, and approximately three fourth of females with the educational level of primary

Table 4: Relationship between attitude and socio-demographic characteristics of the respondents (n=302).

Variables	Categories	Negative attitude (No%)	Positive attitude (No%)	p-value
Age Group	20-40	55 (30.1)	128 (69.9)	0.97
	>40	36 (30.3)	83 (69.7)	
Marital status	Single	21 (22.3)	73 (77.7)	0.047
	Married	70 (33.7)	138 (66.3)	
Education level	Primary school	26 (32.9)	53 (67.1)	0.573
	High school and undergraduate level	53 (28.0)	136 (72.0)	
	Above	12 (35.3)	22 (64.7)	
Religion	Muslim	67 (28.5)	168 (71.5)	0.318
	Christian	24 (35.8)	43 (64.2)	
Profession	Health care provider	21 (22.8)	71 (77.2)	0.067
	Other	70 (33.3)	140 (66.7)	
Family history of breast cancer	Yes	15 (27.3)	40 (72.7)	0.727
	No	76 (30.8)	171 (69.2)	

school didn't practice breast self-examination in the last year (Table 5). Overall, 48.7% of respondents practiced breast self-examination in the past year, among those who practice BSE, most of them practiced in irregular intervals (74.49%), (19.46%) practice every month, and (2%) practice every three months. The commonest reason mentioned not to practice BSE was not knowing the technique how to perform it (70.73%), the rest either did not trust their examination or didn't think it is important to perform BSE.

Table 5: Relationship between breast self-examination practice and socio-demographic characteristics of the respondents (n=302).

Variables	Categories	Practice		p-value
		Yes n(%)	No n(%)	
Age Group	20-40	84 (45.9)	99 (54.1)	0.232
	>40	63 (52.9)	56 (47.1)	
Marital status	Single	92 (44.2)	116 (55.8)	0.122
	Married	55 (58.5)	39 (41.5)	
Education level	Primary school	22 (27.8)	57 (72.2)	**<0.001**
	High school and undergraduate level	109 (57.7)	80 (42.3)	
	Above	16 (47.1)	18 (52.9)	
Religion	Muslim	108 (46.0)	127 (54.0)	0.077
	Christian	39 (58.2)	28 (41.8)	
Profession	Health care provider	65 (70.7)	27 (29.3)	**<0.001**
	Other	82 (39.0)	128 (61.0)	
Family history of breast cancer	Yes	32 (58.2)	23 (41.8)	0.119
	No	115 (46.6)	132 (53.4)	

Discussion

For fighting and control of breast cancer, prevention and reducing the risk is the best way, then after early diagnosis and screening which will help for better prognosis outcome and control of disease. BSE is screening method which is self-performed and free of charge due to this preferable to the resource poor settings where us clinical breast examination and mammography diagnostic centers are limited (12).

Findings show that less than one-third of the respondents (28.5%) have good knowledge about signs and symptoms, risk factors, and protective factors of breast cancer, among them health care providers 67.4% have good knowledge while only 11.4% of the female population (non-health care provider) of Addis Ababa have good knowledge related to breast cancer, contrasting with the result of a study finding by N.Mehmet et al(2020) conducted in Iran among health science students in which 50% had good knowledge about breast cancer (13) and the results of another study conducted among teachers in turkey by N.Nur et al (2010) more than half of participants had good knowledge (52.4%) of breast cancer (14) a study conducted by N. et al. (2010) among women in Malaysia 38.4% had good knowledge about breast cancer (15). On the other hand, the finding of the study conducted by R. Siddharth et al(2016) about the knowledge of breast cancer among outpatients in teaching hospitals of India which found a total awareness of 18.89% (16) again from the study conducted by S. Azubuike et al(2013) Knowledge, attitude and practices of women towards breast cancer in Benin City, Nigeria and study conducted by Gueye et al. (2009) on the knowledge and the practice of the BSE by female population in Senegal in which 49.7% and 42.7% of respondents respectively had good knowledge (17, 18). It seems health science students, teachers, and Asian women have good awareness about breast cancer than Ethiopian females and also females of Nigeria and Senegal have better knowledge of breast cancer than Ethiopian females.

The highest knowledge score was on the sign and symptoms of breast cancer about 67.5% recognized painless lump in the breast, 56.6% pitting in the areola, 54.3% considered lump in arm and change in breast size as the sign and symptoms for breast cancer which lies with the finding of the study conducted by N. Mehmet et al. (2020) on the knowledge attitude and practice of breast cancer screening among health since students in Sharekord city, Iran in which the highest result of the respondents was on the sign and symptoms of breast cancer 76.3% considered pitting of the areola,71.3% bloody nipple discharge,70.7% breast lump and 62.6% mentioned as the sign and symptoms of breast cancer (13), also another study conducted on the awareness of breast cancer warning signs and screening methods in Nepal by B. Sathian et al. (2014), most of the participants indicated breast lump, armpit lump, and bloody discharge from the nipple as the sign and symptoms of breast cancer (19). About the risk factors of breast cancer majority of participants (57.9) consider having a positive family history of breast cancer, the first child in the old age (30%), and only 21.9%, 23.8%, 28.5% considered respectively using the contraceptive pill, irregular menstrual cycle and late marriage as the risk factor of breast cancer also in the Iranian study most of participants 93.1% considered positive family history of breast cancer, using of infertility drug and 53.3% and 51.2% having the first child at older age mentioned as the basic risk factors of breast cancer (13).The study conducted by Santhanakrishnan et al. (2016) among nurses in south India also revealed having positive family history as a major risk of breast cancer on other side mentioned radiation exposure, genetic factor and inadequate breast feeding as the major risk factors which doesn't lie with our study findings (20).

48.7% of participants had BSE in the previous year among them the majority (74.49%) practiced in irregular intervals,

19.46% practice every month, and 2% practice every three months, where us the study in Iran 35.6% of participants performed BSE among them 27.8% performed daily,6.6% one in three months,3.9% performed more than once in three month (13) in addition the study conducted among woman in north Iran conducted by K. Hajian Tilaki et al. (2015) showed 46% of participants perform BSE among them only 14.3% practice once in a month (21) and also the study conducted by Samina et al. (2018) among university students of Pakistan showed 23% practiced BSE (22). The study conducted in Eretria by A. K. Andegiorgish et al. (2018) among nurses revealed that three fourth of respondents 75% practiced BSE among them 60% practiced monthly, 7.2% every three months, 14.5% once in a year (23). The commonest reason mentioned not to practice BSE was due lack of technique how to perform breast self-examination (70.73%), the rest 18.4% either did not trust their examination or didn't think it is important to perform BSE which is similar with finding of the study conducted in Iran in which the commonest reason for not performing BSE was due to lack of knowledge how to do it and fear of finding lump (13) again the study conducted among woman in afghan by Mohammed jawad et al. (2020) mentions the reason not to perform breast self-examination was due to lack of knowledge how to perform it (24) Also study conducted by Kudzawu et al (2016) in Ghana only 27% of participants perform BSE due to lack of technique how to perform it (25). 4.6% and 17.4% of respondents had done mammogram and clinical breast examination respectively which is different from the finding of Iranian study (13) and in the study conducted in Uganda (26) in which none of the respondents had done any mammogram or clinical breast examination before.

The study revealed less than quarter of participants (22.6%) had good knowledge regarding BSE, majority of them had knowledge about sign and symptoms but least of respondents had knowledge about the risk factor of breast cancer. Overall more than two third of respondents (69.9%) had good attitude towards BSE, about 48.7% of respondents had performed BSE in the previous year among them only 19.46% practice monthly and the major reason mention not to perform BSE was lack of technique how to perform BSE.

Intensive intervention is needed to create adequate awareness about breast cancer and how to perform BSE for Addis Ababa females also in all regions of Ethiopia, since majority of them have very poor knowledge and practice regarding breast cancer and breast self-examination.

Limitation of the study

The response rate was 88% unwillingness of respondents to participate in line with this the study and the findings may not be representative to all females living in Addis Ababa.

Conflict of interest

There is no conflict of interest.

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