

Breast Self-examination Practice and Associated Factors Among Women of Reproductive Age in Adama Town, Oromia Regional State, Ethiopia

Lemlem Kebede^{1,*}, Meyrema Abdo², Abebe Megerso²

¹Department of HIV/AIDS Prevention and Control Office, Adama Science and Technology University, Adama, Ethiopia

²Departments of Public Health, Adama Hospital Medical College, Adama, Ethiopia

Email address:

lemlemkebe@gmail.com (L. Kebede), meyremaabdo@gmail.com (M. Abdo), abemegerso@gmail.com (A. Megerso)

*Corresponding author

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Abstract: Breast Self-Examination is the process where by a woman examines her own breasts by seeing and feeling with fingers to detect breast lump or swelling. More than 90% cases of breast cancer are detected by women themselves. Poor practice of breast self-examination is usually associated with patient delay. The five-year survival rate for a localized breast cancer is 84%. Community based breast self-examination practice is low in the country specifically in the present study area. Thus this study aimed to assess breast self-examination practice and associated factors among women of reproductive age in Adama Town, Oromia Regional State, Ethiopia in 2017EC. This Community based- cross sectional quantitative study was conducted using a random sample and multistage sampling procedure by administering pretested structured questionnaire to the population of 765 reproductive age women. The collected data were cleaned, coded and entered into Epi-Info version 7 and exported to SPSS version 20 for analysis. Descriptive statistics, bivariate and multivariable logistic regression were computed. Adjusted odds ratio (AOR) with 95% confidence interval (CI) was used to assess the association among study variables. This study indicated that the overall prevalence of breast self-examination practice was 51.4% with 95% CI (48.1, 55.2). Factors associated with breast self-examination practice were above secondary education (AOR, 6.38; 95% CI: 2.87, 14.16), secondary education (AOR, 5.03; 95% CI: 2.24, 11.30), knowing someone suffering from breast cancer (AOR, 1.98, 95% CI: 1.27, 3.09), and fear of breast cancer from family history (AOR, 12.38, 95% CI: 6.36, 24.10) were having statically significant and positive association with breast self-examination practice. This study revealed that breast self-examination practice was high. Oromia Regional Health Bureau, Adama Town Health Office, women's and children's affair offices and other stake holders should disseminate teaching materials that address the benefit of breast self-examination practice. Health professionals should teach the community about the advantage of breast self-examination practice through mass media, awareness raising campaigns, and celebration of breast cancer day.

Keywords: Breast Self-examination Practice, Breast Cancer, Adama, Ethiopia

1. Introduction

Breast Self-Examination (BSE) is a technique in which a woman examines her own breasts by seeing and feeling with fingers to detect breast lump [1]. More than 90% of cases of breast cancer can be detected by women themselves. This reality stresses the importance of breast self-examination (BSE) as the key breast cancer detection mechanism [2]. The

five-year survival rate for a localized breast cancer is 84%, with regional spread of 71% and with distant metastases of only 18% [3]. Between 2005 and 2015 cancer cases increased by 33%. Breast cancer was the leading cause of cancer deaths and DALYs for women (523, 000 deaths and 15.1 million DALYs) [4]. Breast cancer has become the most frequently diagnosed cancer among women in 140 of 184 countries worldwide and it represents one in four of all cancer cases in

women [5].

Cancer has been identified as a major public health problem in both developed and developing nations because of its high incidence-prevalence rate, over-burdening the health system and direct medical expenditure [6]. Asia and Africa have experienced a more rapid rise in the annual incidence rate of breast cancer than that of North America and Europe. About 24% of all BC was diagnosed with in the Asia-Pacific region with the greatest number of those occurring in China 46%, Japan 14%, and Indonesia 12% [7]. Breast cancer incidence in Africa continues to increase and is projected to double by 2050 [8]. The majority of cancer cases in Africa are diagnosed at an advanced stage of the disease because of lack of screening and early detection services as well as limited awareness of early signs and symptoms of cancer [9].

Despite this increasing burden of breast cancer, females are not aware of this easy method of early breast cancer screening technique. In Sweden the ten most common forms of cancer constitute fully 75% of all cancer cases. Breast cancer and prostate cancer are by far the most commonly occurring types of cancer accounting for more than 30% of all cancer cases [10]. Indian National Cancer Registry Programme shows that breast cancer is the leading cancer in women at present in 11 out of 13 population based cancer registries in the country [11]. Studies from Tunisia, Egypt, and Morocco reported that North Africa has a greater proportion of inflammatory breast cancer. In Kenya and Nigeria BC at advanced stage of the disease accounts 89.6% and 72.8% of BC patients respectively [12]. Despite this growing cancer burden in Africa, cancer continues to receive a relatively low public health priority.

It is mainly because of limited resources and other pressing public health problems including communicable diseases such as acquired immunodeficiency syndrome (AIDS)/(HIV) infection, malaria, and tuberculosis [13]. A major worry about breast cancer in Nigeria is the continuous rise in the number of cases and deaths. Breast cancer has been reported to have an early onset among Nigerian women [14, 15]. The 5 years survival rate of breast cancer in Nigeria is less than 10% compared with more than 70% in Western European and North America [16]. Incidence of cancer in developing countries like Ethiopia which are not prepared to control the case is rising at an alarming rate. The worst aspect of the disease in Ethiopia is that there is very little or almost no complete information on any aspect of the problem. In addition there are no control and prevention programmes against the disease [4]. A Study conducted in 2015 In Tikur Anbessa Specialized Hospital oncology center on the pattern of cancer in Ethiopia from 1998 to 2010 shows that breast cancer is found to be the second most common malignancy [17].

Another Study conducted in Gondar Hospital shows that cervical cancer, breast cancer and lymphomas are the commonest cancers in females [18]. Similar Study conducted In Tigray Region shows that breast cancer is the

most common cancer constituting about 32.33% In Patient Department (IPD). Over all cancer trend is increasing with breast cancer as the first leading cause of morbidity and mortality followed by the unspecified malignant neoplasm [19]. A study conducted among Malaysian women shows that only 54% of the study's population had ever practiced breast self-examination [20]. This study reveals that BSE practice is significantly related to race, age, marital status, education, knowledge about BC and its screening program [21]. A survey conducted in Cameroon shows the only 6 in every 10 woman, and 59.17% claimed to know how to practice breast self-examination, Only 35% of them practiced breast self-examination monthly; 40% of the respondents had never practiced breast self-examination at all [22]. In the same manner, a Study conducted in Shah Alam, Malaysia indicates that BSE was more likely to be done among women aged above or equal to 45 years in comparison to those aged 18-29 years [23]. A related study conducted among Saudi women shows that age, educational level, family history of breast cancer and knowledge, was highly significant with BSE [24]. A related study conducted in Ajman reveals that married female had significantly higher frequency of BSE practice than unmarried ones, but has no significant association with breast cancer risk perceptions [25].

Similarly a study conducted among Jordanian women shows that older women with above high school education and those with health insurance practiced breast self-examination significantly more than other women [26]. On the contrary, A study conducted in Angola reveals that the level of education did not influence the knowledge of breast self-examination practice [27]. A Study conducted among Iranian women shows there is significant relationship between breast self-examination practice and job [28]. A study conducted in India reveals that there is a significant positive co-relation among knowledge of breast cancer susceptibility; seriousness and breast self-examination benefit [29]. A Study conducted in Nigeria shows that the attitude of the respondents to health information on breast self-examination was positive with a fairly high degree of acceptability of the idea [30]. A related study conducted among Turkish women shows that women who had a family history of breast cancer are almost 12 times more likely to perform BSE than those who have no such family history [31]. Another Study done in Angola shows women with a family history of breast cancer are more informed and seek more information about breast self-examination practice [27]. A similar study conducted in West Gojjam Zone of Amhara regional state Ethiopia shows that getting information on breast self-examination from health professional, discussion with families on the importance of breast self-examination, and the history of breast examination by health professional were the factors found to be associated with breast self-examination practice [32]. A study conducted in Ondo State Nigeria shows that only 25% of the respondents practiced breast self-examination every month [33]. A study conducted in Kenya reveals that 40.9% of the respondents were practicing breast self-examination monthly [34]. A study

conducted in Kafa Zone, Ethiopia indicated that 73.07% of the respondents ever performed BSE [35]. A related study conducted in Adama Science and Technology University shows that about two fifth (39.4%) of the respondents had practiced BSE, among these only 9.7% of them practiced the BSE on monthly basis [36].

Similar study conducted in Mekelle Town shows that only 53.6% of the respondents ever practiced breast self-examination [2]. A study conducted in Addis Ababa show that marital status was significantly associated with the practice of breast self-examination [37]. In general, breast cancer is the major public health concern in developed and developing world. Breast cancer is almost the leading cause of death and DALY among female population in the world and in developing countries such as Asia, Africa and Sub-Saharan Africa. The majority of the patients would come to the health facilities in late stage of the disease with no treatment option.

2. Methods and Materials

2.1. Study Area and Period

The study was conducted in Adama town, east shewa zone, Oromia regional state, Ethiopia. Based on the 2007 census conducted by the central statistical agency of Ethiopia the 2017 projected population of the city was 341,796 of which 170,953 were female and 87,476 were found in reproductive age groups. Adama was found in Oromia region; 100 km away from the capital, Addis Ababa, towards the eastern part of the country [38]. The city has 1 government hospital, 7 government health centers, four private hospitals, and 94 private clinics with different levels [14]. The study was conducted between October, 1/2017 and December, 31, 2017.

2.2. Study Design

Community based cross sectional quantitative study design was used.

2.3. Population

2.3.1. Source Population

All Women of reproductive age who live in Adama town

2.3.2. Study Population

Women of reproductive age who were selected in the selected sub cities and Keble households during the time of study and fulfilled the inclusion criteria were involved in the study.

2.4. Inclusion and Exclusion Criteria

2.4.1. Inclusion Criteria

All Women of reproductive age who live more than or equal to 6 months in Adama town and volunteer to participate in the study and present at the time of study period were included in this study.

2.4.2. Exclusion Criteria

Any women of reproductive age who are ill and cannot communicate with the data collector, Women who were diagnosed to have breast cancer, Woman who had mastectomy and those who refused to participate in the study were excluded from the study.

2.5. Sample size Determination and Sampling Procedures

2.5.1. Sample Size Determination

The sample size was determined by using a formula for estimation of a single population proportion. In community based cross sectional studies conducted in Mekelle town, Ethiopia, breast self-examination practice was 29.5% among women of house hold heads. Sample size was computed using a 95% confidence level, 4% precision, 29.5% prevalence of current breast self-examination practice in Mekelle town [4]. 1.5 design effect and 5% of the sample size was added to compensate for non-response rate.

$$n = \frac{(Z\alpha/2)^2 * p(1-p)}{(d)^2}$$

Where:

n=number of reproductive age women to be interviewed

p=proportion of reproductive age women who practice breast self-examination (29.5%)

d=estimated margin of error for the study, 4% and

$Z\alpha/2$ =the standard normal distribution z value of 1.96 (at 95% level of confidence).

$$n = \frac{1.96^2 * 0.295(1-0.295)}{(0.04)^2}$$

$$n=499$$

n=(499) multiplied by 1.5 design effect and 5% non-response rate was added to the sample. Then the optimum sample size required was 786.

2.5.2. Sampling Procedure

A multi-stage sampling technique was used to select the respondents of the study. From six sub cities of Adama town four sub cities were randomly selected. From these four sub cities a total of six kebeles were selected with simple random sampling technique, then each kebele contributed to the sample size proportional to households. The final households with eligible women were selected on systematic random sampling. Woman of reproductive age group from each selected households were interviewed and only one woman was interviewed for households having two or more reproductive age women on random to prevent intra house hold correlation.

2.6. Variables

2.6.1. Dependent Variables

The dependent variable of the study was Breast Self-examination practice.

2.6.2. Independent Variables

The independent variables of the study were:

- 1) Socio demographic factors: Age, educational status of the respondents, marital status, occupation, monthly income.
- 2) Health related factors: Family history of breast cancer, knowing someone suffering from breast cancer, previous history of breast disease.
- 3) Attitude: about breast self-examination practice, benefit and believes about breast self-examination, future intention in practicing breast self-examination and respondents feeling toward practice of breast self-examination.
- 4) Knowledge on: Advantage of regular breast self-examination, age at which breast self-examination has to be begun, when should a woman do breast self-examination, what to look during breast self-examination.

2.7. Data Collection Procedures

A pretested structured questionnaire was used according to the objectives of the study and the local situation of the study area. The data were collected by female nurses and supervised by health officers. Face to face interview was the technique of data collection. Questionnaires were adapted after reviewing different literature of similar studies to collect the data. The questionnaire was prepared in English, and translated in to Amharic and Afaan Oromo language and the final version of the questionnaire was used for data pretest for reliability. Finally the data were collected after obtaining informed consent from the respondents by interviewers.

2.8. Data Quality Assurance

Training was given for both data collectors and supervisors for two days including pre-test finding discussion and correction of data collection tools. Pre-test of the questioner was done in non-selected kebeles of Adama town. The questionnaires were examined by experts to the area of study for content validity. The supervisors and principal investigator have closely supervised the performance of the data collectors on a daily basis and the completeness of the questionnaires were thoroughly scrutinized every day at the end of data collection session and any inconsistencies were amended on time.

2.9. Data Processing and Analysis

The data were entered to Epi-Info version 7 and exported to SPSS version 20 for data cleaning, recoding and analysis. During the analysis, the responses of 'strongly agree' and 'agree' were classified as agree; responses of 'undecided' was classified as neutral, and responses of 'strongly disagree' and 'disagree' were classified as disagree. The overall agreement level was calculated and individuals with the mean and above the mean score were categorized under "agreement" and others as "disagreement". The analysis employed both descriptive and inferential statistics. Bivariate and multivariable logistic regression analyses were done to

determine the preliminary relationship between the independent and dependent variables. Multi co linearity test was carried out to see the correlation between each independent variable, using Variance Inflation Factor (VIF) and tolerance test. Hosmer-Lemeshow goodness-of-fit test was used to assess whether the necessary assumptions for the application of binary logistic regression was fulfilled. Factors associated with breast self-examination practice on bivariate analysis were identified and the variables with p-value of < 0.25 on bivariate analyses were entered to multivariable logistic regression to identify the independent predictors of breast self-examination practice. Back ward illumination logistic regression method was used. Finally, 95% confidence interval not including one with its corresponding p-value less than 0.05 was considered statistically significant. To indicate strength of association, odds ratio was used as a measure of effect and results from the multivariable logistic regression were reported in the form of Adjusted Odds Ratios (AORs).

2.10. Ethical Considerations

Ethical clearance was obtained from Institutional Review Board (IRB) of Adama Hospital Medical College. Before commencing data collection, legal permission with letter of support was obtained from Adama town health office. All the study participants were informed about the purpose of the study and their right to refuse. Verbal informed consent was obtained from every respondent and strict confidentiality was also maintained at all level. After completion of the interview health education was given for those who have no information about breast self-examination practice and those who never practiced at all.

3. Results

3.1. Socio-demographic Characteristics

A total of 786 participants were planned to participate in the study, out of which 765 respondents had responded making the response rate of 97%. The median age of the respondents was 28 years (ranged from 23-34 years). Out of 765 respondents, 477 (62.4%) of the respondents were married, 355 (46.4%) had above secondary education, 449 (58.7%) were orthodox Christians in religion, 330 (43.1%) of them were housewives and 159 (20.8%) of the respondents were unemployed. Average monthly income of the respondents' was 2818.47 Birr.

Table 1. Socio-Demographic characteristics of respondents on Breast Self-Examination Practice and Associated Factors among Women of Reproductive Age in Adama Town, Oromia Regional State, Ethiopia March, 2018.

Variables (n=765)	Category	Frequency (%)
Age distribution (years)	< 20	118 (15.4)
	20-24	122 (15.9)
	25-29	211 (27.6)
	30-34	127 (16.6)
	> 35	187 (24.4)

Variables (n=765)	Category	Frequency (%)
Ethnicity	Oromo	349 (45.6)
	Amhara	255 (33.3)
	Gurage	93 (12.2)
	Other*	68 (8.9)
Religion	Orthodox	449 (58.7)
	Protestant	164 (21.4)
	Muslim	143 (18.7)
	Other**	9 (1.2)
Marital status	Single	192 (25.1)
	Married	477 (62.4)
	Divorced	44 (5.8)
	Widowed	52 (6.8)
Occupation	Employee	212 (27.7)
	Housewife	330 (43.1)
	Daily Laborer	64 (8.4)
	Unemployed	159 (20.8)
Educational status	No formal education	77 (10.1)
	Primary education	93 (12.2)
	Secondary education	240 (31.4)
	Above secondary education	355 (46.4)

NB. Others include: * Silte, Wolaeyeta, Argoba, ** Wake feta, Jehovah witness

3.2. Knowledge of the Respondents

More than half 440 (57.5%) of respondents' ever heard of breast self-examination practice. Only 152 (19.9%) knew how frequent breast self-examination practiced. Out of 765 respondents 403 (52.7%) of them did not know the right time of breast self-examination practice. Only 98 (12.8%) of the respondents mentioned a week after menses was the right time of breast self-examination practice.

From the above mentioned knowledge status of the respondents, only 17 (2.2%) of the respondents had good knowledge; 167 (21.8%) of the respondents had satisfactory knowledge, and 581 (75.9%) of the respondents had poor knowledge.

Table 2. Knowledge of the respondents on Breast Self-Examination Practice and Associated Factors among Women of Reproductive Age in Adama Town, Oromia Regional State, Ethiopia March, 2018.

Characteristics (n=765)	Frequency (%)
Heard of breast self-examination	
NO	325 (42.5)
YES	440 (57.5)
Early detection of breast cancer improve chance of survival	
NO	119 (15.6)
YES	646 (84.4)
How frequent is BSE done?	
Correct response (monthly)	152 (19.9)
Incorrect response (weekly, once in three month, once in six month)	232 (30.3)
I don't know	381 (49.8)
Appropriate time to practice BSE	
Correct response (awake after menses)	98 (12.8)
Incorrect response (before menses, during menses)	264 (34.5)

Characteristics (n=765)	Frequency (%)
I don't know	403 (52.7)
Who should perform BSE?	
< 20 years	156 (20.4)
> 20 years	312 (40.8)
I don't know	297 (38.8)
Breast cancer can cure in its early stage of disease	
NO	116 (15.2)
YES	649 (84.8)
presence of breast cancer screening methods	
NO	321 (42%)
YES	444 (58%)
position of breast self-examination practice	
NO	586 (76.6)
YES	179 (23.4)
Over all knowledge of the respondents	
Good knowledge	17 (2.2)
Satisfactory knowledge	167 (21.8)
Poor knowledge	581 (75.9)

3.3. Attitude of the Respondents

Regarding the attitude of the respondents toward breast self-examination practice, 583 (76.2%) of the respondents had positive attitude and the rest 182 (23.8%) had non-supportive attitude towards breast self-examination practice.

Table 3. Attitude of the respondents on Breast Self-Examination Practice and Associated Factors among Women of Reproductive Age in Adama Town, Oromia Regional State, Ethiopia March, 2018.

Questions	Options	Frequency (%)
Attitude	Positive	583 (76.2)
	Negative	182 (23.8)
1. Every women should perform BSE	Agree	568 (74.2)
	Neutral	52 (6.8)
	Disagree	145 (19)
	Agree	556 (72.7)
2. The thought of breast cancer scares me	Neutral	25 (3.3)
	Disagree	184 (24)
	Agree	602 (78.7)
	Neutral	45 (5.9)
3. BSE should be done every month	Disagree	118 (15.4)
	Agree	576 (75.3)
	Neutral	39 (5.1)
	Disagree	150 (19.6)
4. Women alone capable of doing BSE	Agree	582 (76.1)
	Neutral	55 (7.2)
	Disagree	128 (16.7)
	Disagree	128 (16.7)

3.4. Practice of the Respondents

The respondents were asked if they practiced breast self-examination as a means of early detection measures of diagnosis of breast cancer. Majority of the respondents 393 (51.4%) replied that they practiced BSE. About 372 (48.6%) of the respondents did not practice BSE at all. Among the respondents who practiced BSE, 90 (22.9%) of them practiced BSE monthly. The most common reason for not practicing BSE mentioned by the respondents was not having breast problem 203 (54.6%) followed by not knowing how to

do BSE 144 (38.7%).

Table 4. Practice of the respondents on Breast Self-Examination Practice and Associated Factors among Women of Reproductive Age in Adama Town, Oromia Regional State, Ethiopia March, 2018.

Variables	Frequency (%)
BSE practice (n=765)	
NO	372 (48.6)
YES	393 (51.4)
Frequency of BSE (n=393)	
A week after menses (correct response)	90 (22.9)
When it comes to my mind	173 (44)
Any time during the month	130 (33.1)
Barriers to perform BSE a week after menses (n=303)	
Forget fullness	181 (59.7)
Too busy/not having enough time	30 (9.9)
I don't think it is important	92 (30.4)
Reason for not practicing BSE (n=372)	
Do not have breast problem	203 (54.6)
Fear of diagnosed with breast cancer	25 (6.7)
Lack of knowledge how to practice (BSE)	144 (38.7)

3.5. Factors Associated with Breast Self-examination Practice

Bivariate and multi variable logistic regression analysis

Table 5. Factors associated with Breast Self-Examination Practice and Associated Factors among Women of Reproductive Age in Adama Town, Oromia Regional State, Ethiopia March, 2018.

Characteristics	BSE practice		Odds Ratio	
	NO (%)	YES (%)	COR (95% CI)	AOR (95% CI)
Educational status of respondents				
No formal education	66 (85.7)	11 (14.3)	1: 00	1: 00
Primary education	70 (75.3)	23 (24.7)	1.97 (0.89, 4.31)	2.24 (0.89, 5.67)
Secondary education	101 (42.1)	139 (57.9)	8.26 (4.15, 16.43)	5.03 (2.24, 11.31)**
Above secondary education	135 (38)	220 (62)	9.78 (4.99, 19.17)	6.38 (2.88, 14.17)**
Know someone with BC				
NO	326 (56.1)	255 (43.9)	1: 00	1: 00
YES	46 (25)	138 (75)	3.84 (2.65, 5.56)	1.98 (1.28, 3.09)*
Fear of BC from family history				
NO	352 (58.7)	248 (41.3)	1: 00	1:00
YES	20 (12.1)	145 (87.9)	10.29 (6.27, 16.88)	12.38 (6.36, 24.11)**

*Statistical significance, NB: *p-value < 0.05, and **p-value < 0.001, 1: Reference

Note:-variables not entered in the model because they were not found significant in bivariate analysis.

4. Discussion

This community based cross-sectional quantitative study attempted to explore breast self-examination practice and associated factors among reproductive age women in Adama town. Community represents a significant resource for facilitating positive changes in early breast cancer prevention strategies. It is very crucial that women should know how their breasts normally look and feel. Early detection which remains the surest means of breast cancer prevention can be achieved through Breast Self-Examination (BSE). The value of breast self-examination practice in the early diagnosis of breast cancer has been emphasized by several authors [2, 3, 14, 34].

In this study the overall prevalence of breast self-examination practice was 51.4% with 95% CI (48.1, 55.2). This finding is similar with study conducted in Malaysia 54%,

were done to assess the determinants of breast self-examination practice. Variables in bivariate analysis with p value <0.25 were entered to multi variable logistic regression model for analysis. Multivariable logistic regression analysis result showed that Educational status, Fear of breast cancer from family history and knowing someone suffering from breast cancer had shown positive significant association with breast self-examination practice with p value < 0.05.

Among socio demographic variables, Educational status of the respondents were statically significant in explaining breast self-examination performance. Above secondary education was positively associated with breast self-examination practice (AOR, 6.38; 95% CI: 2.87, 14.16).

This result also shows secondary education was positively associated with breast self-examination practice (AOR, 5.03; 95% CI: 2.24, 11.31). The current study shows knowledge of someone suffering from breast cancer was positively associated with breast self-examination practice (AOR, 1.98; 95% CI: 1.28, 3.09). Fear of breast cancer from family history positively associated with breast self-examination practice (AOR, 12.38; 95% CI: 6.36, 24.11).

and Mekelle town Ethiopia 53.6% [4, 20]. It is lower than the finding of the study conducted at kefa zone, Ethiopia 73.07% and higher than the finding of the study conducted in Nigeria 25%, Kenya 40.9%, [33, 35, 36]. These differences might be due to differences in the study participants, differences in study period, study area and variation in method of analysis like in case of Kefa zone [35].

As educational level of the respondents increases the odds of performing breast self-examination practice also increases. Those who had above secondary education were more likely (about six times) to practice breast self-examination than those who had no formal education. This study also showed that individuals who had secondary education were more likely to practice breast self-examination (about five times) than those who had no formal education. This study is similar with studies from Iranian house wives, Jordanian women, and Ethiopia Mekelle town [4, 26, 28].

This result is incomparable with the studies from Angola.

The differences between the current study and other studies may be due to differences in study area and study population like the study of Angola where the study population were above 40 years old [27]. The current study indicates as educational levels of the women increase the rates of practice of breast self-examination also increase. The likely hood of performing breast self-examination practice increased by more than 12 times for respondents who have fear of breast cancer from family history from those who have no family history of breast cancer This finding is in line with the findings from Iranian house wives women and the study from Angola [26-28]. This result is incomparable from studies in Ajman [25].

The differences observed between this study and other studies might be due to differences in study population and study area For respondents who know someone suffering from breast cancer the odds of performing breast self-examination increased by about two times which is higher than their counter parts. This finding is consistent with the findings of the cross sectional study conducted on Jordanian women [26]. Discussion with the community on the issue of breast self-examination practice may have influence on the early diagnosis of breast cancer among child bearing age women.

5. Strength and Limitation

5.1. Strength

Community based data collection and probability simple random sampling method were used that can represent the community. And the method of data collection and type of data were that increases the study validity and reliability.

5.2. Limitation of the Study

Cross-sectional study design has a disadvantage of detecting causal and temporal relationship; there may be social desirability bias by respondents to address all relevant variables. Besides, since the study was conducted in urban area; it may not represent rural community.

6. Conclusion and Recommendation

6.1. Conclusion

This study showed that the prevalence of breast self-examination practice was high (51.4%). In the current study factors associated with breast self-examination practice were educational status, fear of breast cancer from family history and knowing someone suffering from breast cancer. From the indicators, educational status and fear of breast cancer from family history had strong positive association with breast self-examination practice.

6.2. Recommendations

- 1) Adama Town Health Office, Education Office, Women's And Child Affair Office and regional health

bureau shall provide awareness creation on breast self-examination practice to the women.

- 2) The cancer associations at regional health bureau shall prepare effective health education programs through mass media like, Television, community Radios/FM radios, awareness campaigns, events like breast cancer days, to elucidate awareness and practice of breast self-examination.
- 3) Health care providers shall educate the communities to increase their awareness about BSE.
- 4) The community and the community leaders shall give serious attention the practice of breast self-examination as early breast cancer screening methods so as to prevent late diagnosis and other complications.
- 5) Further researches that look into managers' and staff's opinion regarding breast self-examination practice with the emphasis of quantitative study should be conducted taking this study as reference.

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