

## **Attitude and Practices of Breast Self-Examination among Women of Reproductive Age in Imenti North of Meru County; Kenya**

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### **ABSTRACT**

**Background information:** Breast self-examination is a tool recommended for early detection of breast cancer/abnormality. According to a study by Kenya National Bureau of statistics 2014, only one quarter of women of reproductive age practice BSE in Kenya. During the period between the years 2010 to 2015 approximately 62 cases of breast cancer were diagnosed in Meru teaching and referral hospital with 60 of the cases being diagnosed in late stages.

**Objective:** To assess the attitude and practices of breast self-examination among women of reproductive age in Imenti North Sub County.

**Design:** Cross sectional study.

**Setting:** Imenti North Sub County, Meru County Kenya.

**Subjects:** Three hundred and eighty four women of reproductive age were enrolled in the study

**Results:** The respondents attitude towards BSE was favorable as demonstrated by 273(94.1%) of the respondents. However, 168(57.9%) of the respondents did not practice BSE since they did not know its importance. Sixty nine (56.6%) of the respondents were not systematic in performing BSE hence difficult in detecting any abnormality in their breast.

**Conclusion:** In spite of favorable attitude towards BSE, the practice remains low due to lack of understanding on its importance and systematic way of carrying out the examination.

**Recommendations:** Creating awareness, educating women on the benefits and systematic way of performing BSE in order to increase its uptake and early detection of breast abnormality since the favorable attitude will promotes good environment to carry out the health promotion intervention.

**Keywords:** breast self-examination, attitude, practice, reproductive age, early detection, breast cancer/abnormality

## **1 BACKGROUND**

Breast self-examination is a systemic check-up that a woman does by herself on her breast at home to look for any changes or problems affecting the breast tissue hence, early detection of any breast anomalies.(Oladimeji, Tsoka-gwegweni, & Igbodekwe, 2015). The concept of breast self-examination (BSE) was introduced in 1950s by Cushman Haagensen, a breast surgeon from the United States of America when mammography had not been developed and many women were diagnosed with breast tumor when it had become large and inoperable(Thornton & Ram, 2008).

According to (Maya.Y , Ruth, Joann G.Elmore, Yi-frazier, Ph, D Reisch, & Ph, D Al, 2011),a large percentage of breast abnormalities are detected by the patients themselves as they perform the BSE. In most of the developing nations breast cancer is diagnosed at advanced stages due to lack of early detection strategies in comparison to developed nations leading to a poor outcome and high fatality rate (Saurabh. S., 2013).

In Kenya, breast cancer is the most commonly diagnosed cancer in women with the highest cumulative frequency among other cancers(Korir, Okerosi, & Parkin, 2014).Eighty percent of the breast cancer cases are detected at advanced stages when little can be done in term of treatment(MOH, 2015). Breast is quite accessible because of its anatomical location on the external surface of the chest making it easy to detect changes early through simple observation and manual self-breast examination. In addition, it is in -expensive, easy to perform and quite effective means of detecting breast lumps early in absence of mammogram(Otieno, Micheni, Kimende, & Mutai, 2010).

Based on WHO and several authors (Mesfin Tata Segni,Dagne Mulu Tadesse, 2016) ,performing BSE once a month enables a woman to assess the normality of her breast as part of overall health promotion concept.

In Kenya, only one –quarter of women of reproductive ages between 15-49 years perform a breast-self-examination and only 14% have had a doctor or health care provider perform an examination for breast cancer assessment(Kenya National Bureau of statistics, 2014).

During the period from 2010 to 2015, in Meru Teaching and Referral Hospital, approximately 62 breast cancer cases were diagnosed. From this figure, only 2 cases had been diagnosed at an early stage (MTRH, 2015) and the remaining 60 cases reported to the hospital at advanced stage of the disease. This advanced stage diagnosis of the disease can be an indication that majority of these women did not practice BSE and even those who practiced BSE did it wrongly hence difficult to detect any abnormality. Therefore, the aim of this study was to assess the attitudes and practices of breast self- examination among women of reproductive age in Imenti North Sub County, Kenya.

## **2 METHODS AND MATERIALS**

This was a community based cross sectional descriptive study carried out in rural households in Imenti North Sub County. It targeted women of reproductive age 15 to 49 years. Ethical approval was sought from Meru University of Science and Technology Institutional Research Ethics Review Committee (MIRERC).Permission was sought from the County Government of Meru Department of Public Health.

The area Sub Chief assisted in the identification of the regions and households.

Sample representative for the population was determined using the formula by Fishers et al, (1998). The desired degree of precision/accuracy which was set at 5% (0.05). A sample of 384 women of reproductive age was used for the study. Probability sampling method was utilized, where a multistage cluster sampling method was employed with proportionate allocation of the sample size to the 3 randomly selected sub-location. Systematic random sampling was used in selection of the households from each of the three sub locations selected. Using each of these regions as the sampling frame, a household was randomly selected as a starting point and every 4<sup>th</sup> household was assigned for the interview. The participation in the study was voluntary.

Inclusion criteria included women of reproductive age 15 to 49 years, who were residents and had been living in Imenti North Sub County for more than six months, and consented to participate in the study. Those women below 18 years and assented to participate in the study and their guardians consequently gave consent for their participation. Eligible women who did not consent to participate in the study, women below 18 years whom their guardian declined to give consent for their dependents to participate in the study, women below 15 years and above 49 years, women who were not residents of the study area or women who had not resided in the study area for more than six month and women of unsound mind were excluded from the study.

A questionnaire and an observation guide were utilized in data collection. The questionnaires was self-administered. However, interviews were conducted for those who could not read or write. An observation guide was used to assess the participant's skill in performing BSE. The participants were well addressed on the concept to ensure query while filling the questionnaire and dealt with one participant at a time. On average each participant took 10 min to fill the questionnaire and be assessed on BSE performance.

Data was analyzed using statistical package for social sciences (SPSS) version 23 software. A likerts scale of 1-4 was used to indicate the extent of agreement with the statements assessing attitude where: 1 "strongly disagree or more unfavorable", 2 "disagree or unfavorable", 3 "agree or favorable", 4 strongly agree or more favorable attitude. A likerts scale of 1-8 was used for in assessing BSE performance where; 0-4 indicated "below average", 4 "average".>4" above average", and 8 "excellent in performing BSE.

### 3 : RESULTS

#### 3.1 Social demographic characteristics of the respondents

*Table 1: Social demographic characteristics of the respondents*

Variable	Frequency(n=384)	Percentage (%)
<b>Age</b>		
19 and below	48	12.5
20-29	149	38.8
30-39	113	29.4
40-49	74	19.3
<b>Marital Status (N=384)</b>		
Married	223	58.1
Separated	35	9.1
Single	112	29.2
Windowed	14	3.6
<b>Education level (N=384)</b>		
College	226	58.9
Secondary	100	26.0
Primary	48	12.5
No Formal Education	10	2.6
<b>Religion of Respondents N=384</b>		
Protestant	240	62.5
Catholic	107	27.9
Muslim	32	8.3
Atheists	5	1.3
<b>Occupation of Respondents N=384</b>		
Formal employment	131	34.1
Informal employment	172	44.8
students	30	7.8
Housewives	51	13.3

From the table 1, about 48(12.5%) of the respondents were aged below 19 years, 149(38.8%) between 20-29 years, 113(29.4%) between 30-39 years while 74(19.3%) were aged between 40- 49 years. The study showed that the highest proportion of respondents 149(38.8%) were found to be in the age group 20-29 years. In regard to marital status, the findings showed that 223(58.1%) of the respondents were married, 35(9.1%) were separated, 112(29.2%) were single women while 14(3.78%) were windowed. The findings revealed that majority of the respondent were married. On Education level, the study revealed that 226(58.9%) had reached college level, 100(26%) had completed form four certificates, 48(12.5%) had completed Kenya certificate of primary education while 10(2.6%) had not undergone any formal education. The results showed that majority

240(62.5%) of the respondents were protestants, 107(27.9%) were Roman Catholic, 32(8.3%) were Muslims while 5(1.3%) were atheists. Pertaining the occupation of respondents, about 131(34.1%) of the respondents had formal employment 172(44.8%) informal employment, 51(13.3%) housewives while 30(7.8%) of the respondents were students. This revealed that majority of the respondents were in informal employment.

### 3.2 Attitude of the respondents towards BSE

Nine items were used to measure the attitude of women towards BSE. In measuring these items, a 4-point Likerts-type scale indicating the extent of agreement or disagreement with a given statement was used; 1 “strongly disagree”, 2 “Disagree”, 3 “Agree”, and, 4 “strongly agree”. This was adapted from (Ayed & Hajar, 2015).

**Table 2: Attitude of respondents towards BSE**

**N=290**

#	Question	Strongly agree	Agree	Disagree	Strongly disagree
1	It is comfortable performing BSE	115(39.7%)	131(45.2%)	36(12.4%)	8(2.8%)
2	All women of reproductive age should perform BSE every month	128(44.2%)	145(50.0%)	14(4.8%)	3(1.0%)
3	Performing BSE is time wasting	8(2.8%)	24(8.3%)	107(36.9%)	151(52.1%)
4	I would recommend BSE to other women	155(53.4%)	119(36.9%)	8(2.8%)	8(2.8%)
5	Performing BSE is not difficult	91(31.4%)	144(49.7%)	52(17.9%)	3(1.0%)
6	Breast cancer always kill	50(17.2%)	34(11.7%)	177(61.0%)	29(10.1%)
7	BSE is intended only to married women	7(2.4%)	33(11.4%)	135(46.6%)	115(39.7%)
8	Cultural values restrict one from exploring her breast	12(4.1%)	20(6.9%)	143(49.3%)	115(39.7%)
9	Performing BSE require a lot of training.	13(4.5%)	64(22.1%)	141(48.6%)	72(24.8%)

According to Table 2: 246(83.1%) of the women of reproductive age in Ntima West Ward are comfortable with performing BSE while 44(15.2%) did not agree with the statement. 273(94.1%) of the respondents were in agreement with the assertions that all women of reproductive age should perform self-breast examination every month. In regards to whether performing BSE is a waste of time, 258(89%) of the respondents denied that assertion which led the researcher to establish that majority had a positive attitude. It was found that 274(94.4%) of the respondents were of the opinion that BSE should be recommended to all women of reproductive age unlike the 16 (5.6%) who were for a different opinion. Further findings from 235(81.1%) of the respondents revealed that performing BSE was not difficult. Two hundred and six (71%) of the respondents believed that BSE don't always kill. Concerning whether BSE was only for married women, it was found that 250(86.3%) of the respondents denied that assertion implying that majority of women had positive

attitude towards BSE regardless of their marital status. In regard to cultural values not allowing one to explore her breast, majority of the respondents 258(89%) were not in agreement with the statement. Lastly, 77(26.7%) of the respondents felt BSE require a lot of training while 213(73.4%) felt BSE do not require a lot of training.

### 3.3 Overall level of Attitude towards BSE

The overall Attitude of the respondents regarding BSE was established by finding the median of the respondents on each particular statement. For the negative statements reverse recoding was done to fit the computation and the findings were as shown in Table: 3.

**Table 3: Distribution of women as per their overall attitude towards BSE**

Attitude	Attitude score	Frequency	Percent%
unfavorable attitude	1	0	0
less favorable attitude	2	17	5.9
favorable attitude	3	180	62.1
more favorable attitude	4	93	32.1
Total		290	100.0

Minimum score: 2, Maximum score: 4 Range: 2

**From table 3**, none of the respondents had unfavorable attitude towards BSE, however 17(5.9%) of the respondents had a less favorable attitude. Majority of the respondents 180 (62.1%) had a favorable attitude and 93(32 %) had a more favorable attitude towards BSE.

### 3.4 Practice of breast self-examination among respondents

#### 3.4.1 Respondent Practising BSE

Out of the 290 respondents who were aware of BSE, only 122 (42.1%) of them performed BSE while 268(57.9%) did not perform BSE at any time in their life.



**Figure 1: Respondent Practicing BSE**

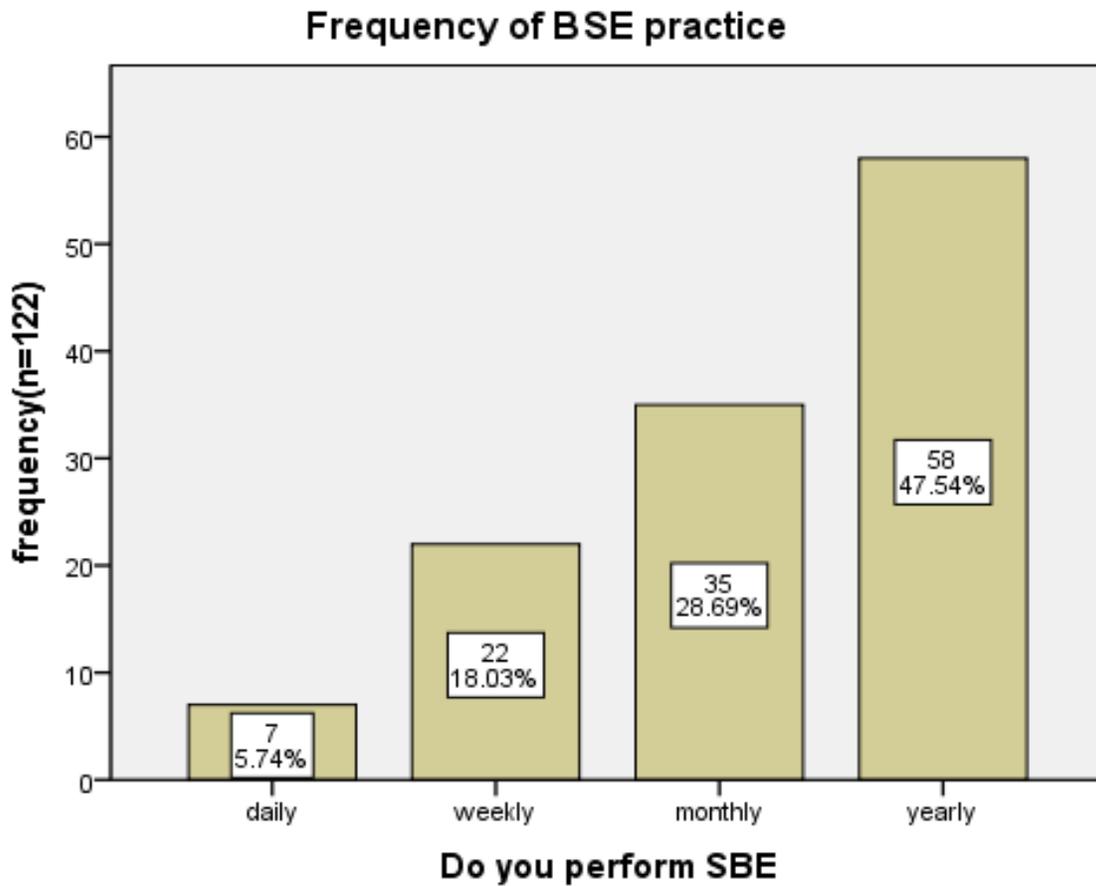
#### 3.4.2 Advice giver of BSE

**Table 4: Advice giver of BSE practice**

Advice-Giver	Frequency	Percent
Health care	66	54.1
Friends	18	14.8
Media	11	9.0
Spouse	10	8.2
Teacher	17	13.9
<b>Total</b>	<b>122</b>	<b>100.0</b>

The highest number of the respondent 66 (54.1%) got the advice from Health Care Providers, 18(14.8%) of the respondents got advice from Friends, 11(9%) of respondents were influenced through the media. Ten (8.2%) got advice from the spouses while 17 (13.9%) of the respondent got advice from teachers. This revealed that, Health Care Providers played a big role in disseminating BSE information to women.

### 3.4.3 Frequency of BSE practice



*Figure 2: Frequency of BSE practice*

From Figure 2, it was observed that for the 122 respondents who practice BSE, 35(28.69%) performed BSE on monthly basis, 22(18.03%) weekly, 7(5.74%) performed BSE on daily basis while majority of the respondents 58 (47.54) examined their breast yearly.

### 3.4.4 Reasons for Non-Practice of BSE

**Table 5: Reason for non-practice of BSE**

Reason	Frequency(n=168)	Percent
I don't have any problem in my breast, so there is no reason to examine my breast	38	22.6
I am afraid of discovering lumps	34	20.1
BSE is difficult and time consuming	9	5.3
BSE is troublesome	16	9.5
If i examine my breast myself i could not detect any abnormalities	16	9.5
I am very busy	8	4.7
I don't know the benefit of BSE	22	13.0
BSE is embarrassing	13	7.7
my religion do not allow BSE	9	5.3
I don't know how to perform BSE	3	1.8
Total	168	100.0

From Table5, majority of the respondents38 (22.6%) did not perform BSE because they felt that, they had no problem in their breast, so found no reason to do the examination. Majority others of the respondents 34(20.1. %) were in fear to discover lumps in their breast and so this prevented them from carrying out breast examination. Twenty two (13%) of the respondents did said they did not know the benefit of BSE hence found no need to carry out. Sixteen (9.5%% of the respondent gave the reasons as being BSE was troublesome and the same percentage also said that performing BSE they could not detect anything hence opted not to perform BSE. Thirteen(7.7%) of the respondents said performing BSE was embarrassing and this led to non-practice while 9(5.3%) felt BSE was difficult to perform. Religious prohibition accounted to the same percentage with the later. Eight (4.7%) said they were too busy and so did not have time to perform BSE while 3(1.8%) of the respondents said they don't know how to perform BSE.

### 3.4.5 BSE assessed Practice using observation guide.

This was achieved by the use of an observational guide where the respondents who practiced BSE were asked to describe step by step how they perform BSE. Eight steps were described in the observation guide from which the respondents were scored depending on description they gave. Systematically described step was awarded one mark while non-systematic description was not awarded any mark (0). A total score of eight was an excellent score while that less than 4 meant below average. 4 was an average score while greater than 4 and less than 8 was above average score, 8 was an excellent performance.

**Table 6: Distribution of women on BSE Assessed Practice**

BSE assessment rating		Range of assessment score	Frequency	Percent (%)
	Below average	<4	69	56.6
	Average	4	26	21.3
	Above average	>4<8	16	13.1
	Excellent	=8	11	9.0
	Total		122	100.0

From **table 6**; among the 122 respondents who practiced BSE 69(56.6%) of the respondent's performance was below average, 26(21.3%) of the respondents had average performance, 16(13.1%) above average and only 11(9%) of the respondents were systematic in the breast examination hence an excellent performance

## 4 DISCUSSION

The respondent's general attitude towards BSE was favorable. This was revealed by majority of the respondents 273(94.1%) showing a favorable attitude towards BSE which concurs with other studies by (Nemenqani, Abdelmaqsoud, Al-Malki, Orajja, & Al-Otaibi, 2014) and (Fon Peter Nde, Jules Clement Nguedia Assob, Tebit Emmanuel Kwenti, Anna Longdoh Njunda, 2015) where majority of respondents had positive attitude towards BSE which was considered a good environment to correct knowledge and improve practice. From Figure 1, less than half 122(42%) of the respondents practice BSE despite their high awareness level, this concurs with a study finding by (Muhammad Sohel Mia, 2007) which revealed that more than half of the respondents did not practice BSE despite the awareness. The findings also concur with a study by (Pravin N Yepude & Keerti S Jogdand, 2013) in a rural area of India where only 22.6% of respondents had ever done BSE despite the awareness. Reasons for BSE non practice revealed from this study finding demonstrated that, the respondents don't attach more importance to BSE and also are afraid of discovering anything that would cause trouble in life or they feel no need since they have no problem in their breast. From table 4 findings, majority of the respondents started performing BSE after getting advice from healthcare providers while in a study findings by (Kifle et al., 2016) revealed media was the main source of information for the respondents.

Regarding the frequency of performing BSE, less than half of the respondents 35(28.7%) reported that they performed BSE on monthly basis, these findings differ with other studies by (Sharaa, 2013) and (Nemenqani et al., 2014) which revealed only 7% and 17% of the respondents performed BSE on monthly basis respectively. According to (Susan Komen, 2007), BSE is performed once a month on the last day of monthly period, for those on hormonal pill it is done at the start of the new pills and those in menopause it is done at the start of every calendar. This study by (Nemenqani et al., 2014) revealed majority of the respondent found no problem with their breast hence found no need to perform BSE which was likewise with this study finding where 38(22.6%) of the respondents found no need for BSE since their breast had no problem they did not know BSE is a precautionary measure. A study by Nde, Assob, Kwentu, Njunda, (2015) discovered only 34% of the respondents performed BSE on monthly basis which is in line with was corroborated with this study findings while majority of the respondent from this study examined their breast on yearly basis which could cause delay in early detection of breast abnormality.

Breast self-examination involves a systematic involving palpation and inspection technique, this study findings revealed majority of the respondents 69(56.6%) were not systematic and did not follow any technique when examining their breasts which could hinder them from discovering any breast abnormality. This finding was consistent with a study by (Nwaneri et al., 2016) which revealed a significant proportion of women did not follow any procedural steps when performing BSE which hindered them from discovering abnormalities. In a cross sectional descriptive study by (Kifle et al., 2016), the finding agreed with this study findings where only 12% of the respondents who said they knew steps of BSE and wrote them correctly, majority wrote wrong steps or could not write any. Therefore healthcare workers need to give more health education and demonstration to women on how to perform BSE systematically. From the findings, there was a high probability that women may embrace BSE since majority had favorable attitude towards BSE which creates positive environment for its practice. The importance, frequency of BSE practice, systematic way of performing BSE was not well known to the respondents which could have affected the BSE practice and the ability to detect any abnormality.

## **5 CONCLUSION**

Overall there was favorable attitude towards BSE however the uptake remains low due to lack of understanding on its importance and systematic way of carrying out the examination. Therefore, it is important for women to know BSE is not necessarily for those women with breast problem but it is rather a precautionary measure for all women regardless of their health status. Thus, it is important for Meru County director of public health to organize forums where healthcare workers have an opportunity to interact with women in the community and educate women on breast cancer/abnormalities and the use of BSE as a tool to guide them in early detection of any abnormality in their breast. Besides, women will have a chance to understand the benefits of BSE and learn correct techniques and skills of BSE right from age of adolescence in form of formal education as well as informal education using planned programs

## **6 COMPETING INTERESTS**

The author declare there is no competing interest regarding the publication of this paper and this research was not funded.

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