Review Article,

Influence of Knowledge, Attitudes and Practices on Breast Cancer Early Detection

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Abstract:

Breast cancer has been diagnosed in majority of women worldwide over the years. It is a universal disease affecting people regardless of race, socio-economic status or culture. Delayed screening, examination and diagnosis can affect the impact of treatment and diagnosis. The objective of the study was to determine the influence of knowledge, attitudes and practices on adoption of early screening of breast cancer among women. The study employed cross-sectional and descriptive research design. A sample size of 384 households was used to obtain data from the households. The study targeted women aged 18-65 years. Sampling technique comprised of multistage sampling for the household, Quota sampling for the Focus Group Discussions and purposive sampling for the Key Informants. Primary data was gathered by use of questionnaires, Key Informant Interview guides, observation and Focus Group Discussions while secondary data was acquired through publications, journals, and internet access. All quantitative data were analysed using Microsoft excel, and Statistical package for Social Scientist (SPSS) version 20.0. The results from a Pearson chi square analysis with $P>0.05$ showed that knowledge on various risks to breast cancer significantly influenced the need for early adoption of screening; attitudes like curability of BCA, willingness to undertake BCA and if early detection of BCA is helpful were statistically insignificant in influencing BCA screening uptake with $P>0.05$, While findings indicate that there was no statistical significance between various practices and adoption of early detection of BCA in Homa Bay County. This indicated that most of the decisions to undertake early screening of breast cancer among women was less informed by their attitudes; while Practices among women indicated no statistical significance to adoption of early detection of BCA at a $p>0.05$. There is need for concerted public health awareness campaign on breast cancer early detection advantages in the community and by the Community Health Volunteers to encourage majority into the practice.

Introduction:

Breast cancer is type of cancer which is proliferation of malignant cells that arises in the breast tissues and diseases arises entirely in female and men respectively. It develops in different portions of breast, most breast cancers arises in the duct that conduct milk to the nipple (American Cancer Society, 2012).

Globally, approximately 1.7 billion of females were diagnosed with breast cancer and approximately 522.000 females deceased due to breast cancer (Opeyemi, 2014) . In 2018, approximately 2.1 million women were diagnosed with breast cancer in 2018, contributing to about 11.6% of the total cancer incidence burden (GLOBOCAN 2018).

Breast cancer is one of the cancers that majority of the women have been diagnosed with globally over decades (24.2%, i.e. about one in four of all new cancer cases diagnosed in women worldwide are breast cancer), being the most common in 154 of the 185 countries included in GLOBOCAN survey. It is a universal disease affecting people regardless of race, socio-economic status or culture and can instill fears of pain, stress, shock, suffering, increase dependency syndrome, deformation and loss of life. The fear of this disease delays screening, examination and

diagnosis in the hope that the symptoms and signs will disappear, thus, this delay in seeking medical attention can affect the impact of treatment and diagnosis (Young *et al*., 2003). In addition, evidences from research work has shown that breast self-examination is consistent screening tools when used as adjunct to clinical breast examination and mammography (Vieira *et al*.,2012). In developing regions like in Africa and Asia there is relatively low rates varying from 3.9 – 29.9 in every 100,000 people. These declining rates have been attributed to declining uptake frequency and inadequate reporting of cases (McGrath, 2004). In Africa, breast cancer remains the leading cause of death among women. An estimated of 882900 Cases in developing country were diagnosed, of which 324300 women died, the higher prevalence rate is noted in East , North and west Africa (Tfayli *et al.*, 2010). It has been reported that among young women in Africa, they have identified that most of breast cancer is in the rise in females less than fifty of age a suggestively young age than in Caucasian countries (Figueroa *et al.*, 2014). In the Sub-Saharan Africa breast cancer incidence for women is at 15-53 for every 100,000 women, making it the second common type of cancer in women (Antoine, *et al.*, 2011). In East Africa, GLOBOCAN estimated that breast cancer new cases were 19.9 % in female all ages and incidence rate per 100.000, in Kenya and Uganda were 52% and 34% respectively (Bray *et al* ,2018). In Kenya, One out of every nine Kenyan women tested positive with breast cancer at its advanced levels (Neondo, 2010). Between 2010 and 2012, breast cancer was the mainly diagnosed form of cancer amongst Kenyans with about 80% - 90% of the cases presented with stage 3 and 4 of the ailment, when the treatment cost is high with low survival chances (Apffelstaedt, 2012). Kenyan statistics indicate that out of seven women six have not gone to be screened for breast cancer despite having increased campaigns on awareness that have been carried out by the Kenyan government, hospitals, and Non-Governmental Organizations (NGOs) (Nairobi Cancer Registry, 2012).Early detection of breast cancer plays a key role in reducing its morbidity and mortality. This reinforces the breast health awareness, education and supplements people with knowledge on what to do when a lump is detected. This will give women opportunity of having information and skills for preventive and

management behaviors to women for early breast screening practices and prompt treatment of breast cancer. Kenyan data, indicate that majority of women are not aware of the signs, symptoms, and possible causes of the breast cancer (Nairobi Cancer Registry, 2006). Additionally, Homa Bay County which is in the rural of Kenya and in relation to the Kenyan perspective on breast cancer as one of the commonest cancer in Kenya, may not or have very low knowledge, negative attitude and low practice for early detection of breast cancer. According to Riogi *et al*. (2021), there are very limited organized breast clinics outside the main city of Nairobi in public hospitals to help reduce the risks of extreme stages of breast cancer while over 79% of the patients indicated a stage 3 and 4 of breast cancer in the Kisii Referral breast cancer facility that Homa Bay County breast cancer cases relies on. Many factors however, are bound to affect breast screening for early detection among women. Therefore, it is necessary to obtain information about the factors that influence screening, their distribution and how important they are in decision making about participation in breast cancer screening.

Research methodology:
study area
The study was conducted in Homa bay county Kenya. Homa bay County lies between latitude 0° 15'S and 0°52'S and longitudes 34° East and 35°" East and has an altitude of 1146 m above the sea level. The County's geographical area is approximately 4,760 Sq.km composing of 2,696 Sq.km of land area and 2,064 Sq.km of water surface area (Figure 2.1).
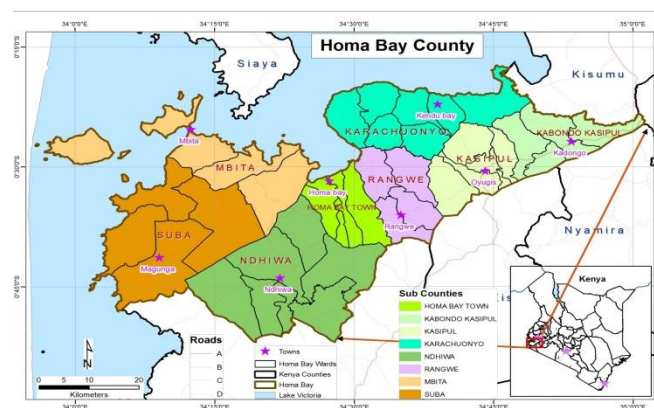

Figure 2.1 : Map of the study area

Research design and sampling procedure and data analysis

According to Kothari (2004), a research design is a structure of concepts within which research is performed. The study employed a cross-sectional survey study which is a non-experimental design examining data from a specific group, at one point in time (LoBiondo-Wood & Haber 2006). Objective one took a cross-sectional survey design, objective two descriptive cross-sectional while objective three took a cross sectional design. Additionally, the study utilized both qualitative and quantitative approaches.

The research took a multistage sampling procedure where 50% sampling units as supported by Mugenda and Mugenda (2003) were selected and two out of four sub counties were purposively selected based on the population characteristics of higher number of households than the rest for both rural areas like Ndhiwa, Suba, Karachuonyo and Rangwe. Another two out of four Sub Counties were selected for the urban areas like Homa Bay Town, Mbita Kasipul Kabondo and Kasipul. The proportion of wards where the study was conducted was computed from the four sub counties based on 30% sampling units as supported by Mugenda and Mugenda (2003). In Karachuonyo Sub-county, two wards out of seven were sampled, in Homabay town Sub-county one out of four, in Mbita Sub-county one out of five and in Rangwe Sub-county one out of four wards (Table 2.1).

Table 2.1: Proportional allocation of population by wards

Location/ Wards	Total Number of Households (Nh)	Sample size $nh = \left(\frac{Nh}{N}\right)n$
Kanyaluo	7001	81
Kibiri	5976	70
Rusinga	6507	76
Kanyada west	4924	57
Kagan	8568	100
Total	**32976**	**384**

Results and Discussion:

Respondents breast cancer screening in the past

The results on Table 3.1 indicate that 29.43% (n=113) respondents had done breast cancer screening in the past, while the majority 70.57% (n=271) had not. Early detection of breast cancer through screening is important in reducing the number of death from breast cancer. It is expected that having adequate knowledge and positive attitude influences positive decision by women to go for screening programs of breast cancer. From the FGDs, there is a lot of awareness creation through media and Community health Volunteers but many people haven't gone for cancer screening due to other factors such as the fear of being diagnosed with breast cancer and also due to poverty that is extreme among the residents incapacitating them to reach the hospitals. It is worth noting that as much as there is a higher percentage of respondents who have the knowledge about breast screening, if screening is not a norm amongst the population of study then very few may go for the screening. Knowledge of breast cancer screening is received through mass media but taking action for the screening is a given challenge amongst many as much as they may know the importance of screening.

Breast cancer examinations and mammography

Results in Table 3.1 show that 10.94% (n=42) had done either breast cancer examination or mammography, 76.3% (n=293) of the respondents have never done either of these tests while 12.76% (n=49) had done other kind of examinations. From the Focus group discussions, many of the participants explained that they mainly practice self breast examination due the fact that there is no expense involved as long as one is knowledgeable on how to do it. According to (Montazeri *et al.*, 2008), although many studies consider self-examination as part of breast cancer screening method, breast cancer guidelines emphasizes on clinical based examination and mammography. Analysis therefore reveal that majority of the women in Homa Bay County have never done clinical breast cancer examination, BSE or mammography for breast cancer early detection.

On whether early detection of breast cancer is helpful, 86.2% of the respondents agreed but this does not translate to the practice of the majority

who believe that it is helpful to detect breast cancer to reduce the risk of severity. There is a very low number of the women who translate the belief into practice of conducting either breast cancer examination or mammography in Homa Bay County. This study resonates with Nojomi *et al*., (2014) who studied on the factors associated with breast cancer screening decision stage in Tehran, Iran. The study found out that women's intensions to do breast cancer screening is very high although the intensions do not translate to the practice; therefore there is need for comprehensive national program to give an opportunity to the women to act on their intentions. In other studies, findings revealed that the potential factors that bar most women in Egypt to go for breast cancer examination are 88.1%, would only seek examination when they are sick 77%, were not willing until they are recommended for by a doctor while 64% blamed it to the cost of the services given. The same could be able to be the determinant of willingness to do clinical breast screening or mammography in many parts of Africa like Kenya and specifically Homa Bay County.

Clinical examination procedure
Enquiring on the procedure during examination, out of those who had gone for clinical based examination or mammography, majority of the respondents 85.7% (n=36) agreed that there was an adequate explanation of the examination, 9.52% (n=4) indicated there was no adequate explanation, while others could not remember whether there was an explanation of the procedure. This is in contrast to the findings by Bawazir *et al.* (2019), which revealed that there is likelihood that information given to the majority seeking for breast cancer screening by health workers in many parts of the world was limited (14%). According to a Key informant, adequate explanation on the procedure for breast cancer screening is very important as it's capable of changing ones attitude and may also instill confidence and trust to the process and willingness to take up the examination.

Maintenance of privacy during examination procedure
The study sought to establish whether privacy was accorded to the procedure of examination. The results in Table 3.1 reveal that 95.24% (n=40) agreed while 4.76% (n=2) disagreed that there

was any privacy maintained during the examination procedure. However, according to (Mamdouh *et al*., 2014) among the potential barriers to breast cancer screening among many women globally is 71.4% blame for lack of privacy during the examination although the study is a replication of (Islam *et al*., 2016; and Solikhah *et al.*, 2019) where the findings found out that there is a high degree of privacy accorded to the patients in many health facilities during breast cancer screening.

Duration of screening results provision
On the duration at which those who were screened for breast cancer took to receive their results, 39.82% (n=45) agreed that it was immediately, 1.77% (n=2) disagreed while 58.41% (n=66) were not sure whether it is immediately or not. It was learnt from the FGD of 8 participants, that 62.5% (n=5) not sure of the screening results given immediately or not were as a result of majority that have never gone for screening in Homa Bay County. A short duration to results for screening is an important factor in participation in such interventions, and delay has been described before as a challenge in many areas (Alshahrain *et al*., 2019) There could be a relationship between time after which results are available to the persons screened and the number of people who could be willing to go for the screening. According to Key Informant, there are a number of people who are willing to do clinical based screening but that is only determined by the duration it takes and when the results would be released to them. The longer it takes the lower the numbers who do screening.

Partner support for breast examination
In finding out on whether the women get support from their partners for breast examination, 49.22% (n=189) confirmed that they get support from their partners, 5.73% (n=22) disagreed of any support from their partners, while 45.05% (n=173) were not getting support from their partners but from others. From FGDs, participants confirmed that some women get help from their close relatives. Notably, about half (49.22%) of the respondents confirmed that their partners supported them in different ways such as financial and psychologically encouraging them to go for clinical examination. The support to enable the women go for breast cancer screening, has previously been shown to improve efforts at early interventions (Smalls *et al.,* 2018).

Table 3.1: Influence of knowledge, attitudes and practices on breast cancer

Description	N	%
Had breast cancer screening in the past		
Yes	113	29.43
No	250	65.1
Undergone clinical breast examination or mammography		
Yes	42	10.94
No	293	76.3
Others	49	12.76
Examination procedure explained adequately		
Yes	36	85.71
No	4	9.52
Others	2	4.76
Privacy during the procedure adequately maintained		
Yes	40	95.24
No	2	4.76
Screening results immediate		
Yes	45	39.82
No	2	1.77
Others	66	58.41
Partner supports and finances breast cancer screening		
Yes	189	49.22
No	22	5.73
Others	173	45.05
Overall influence of knowledge, attitudes and practices on breast cancer		
Low	44	11.46
Medium	311	80.99
High	29	7.55

Source: Field data (2019)

Influence of Knowledge of the risks to BCA and adoption of early screening

The researcher sought to understand the relationship between knowledge of the risks to breast cancer and adoption of early screening among women. The results from a Pearson chi square analysis showed that knowledge on various risks to breast cancer significantly informed the need for early adoption of screening. It can be concluded that, knowledge is key in informing action towards adoption of early screening and detection of breast cancer among women. The analysis therefore indicate that the higher the knowledge levels on the risks the higher the chances of adoption of the early screening of breast cancer among women in Homa Bay County. Thus need for more sensitization forums to build the populations capacity in terms of knowledge. The measurement items are presented

In the Table 3.2

Influence of attitudes towards BCA and screening uptake

The researcher sought to understand the role of attitudes towards breast cancer and its outcome in relation to screening uptake, From the Pearson chi square findings, attitudes like curability of BCA, willingness to undertake BCA and if early detection of BCA is helpful were statistically insignificant in influencing BCA screening uptake with P>0.05.This indicated that most of the decisions to undertake early screening of breast cancer among women was less informed by their attitudes but more by other factors like knowledge on risks of BCA. The results are shown in Table 3.3.

Table 3.2 Influence of Knowledge of the risks to BCA and adoption of early screening

Item assessing knowledge on risks of BCA	Chi square Value	P-value
Breast cancer can be inherited in families	37.101	0.00
Women never being pregnant	29.52	0.00
Women having her first child after the age of 30 years	36.3	0.00
Women having her first menstrual period early, before age 12 and late menopause	34.93	0.00

Dependent variable: Adoption of early screening of BCA; the association was statistically significant at p<0.05

Table 3.3 Influence of attitudes towards BCA and screening uptake

Assessing attitudes towards BCA	Chi square Value	P-value
Curability of BCA	2.335	0.311
Willingness to undertake BCA	1.214	0.544
Is early detection of BCA helpful	6.57	0.37

I.V: BCA screening uptake, insignificant at p>0.05

Influence of the Women practices on adoption of early BCA screening

The findings indicate that there was no statistical significance p>0.05 between various practices and adoption of early screening and detection of BCA. Therefore, the analysis reveals that there is a possibility of the women in Homa Bay County adopting early breast cancer screening not based on the past practices like screening, clinical examination and procedures but on need for early detection for necessary interventions and related treatment. The results are as presented in Table 3.4

Table 3.4 Influence of the Women practices on adoption of early BCA screening

Practices among women		Adoption of early detection
Screening in the past	Spearman's Correlation	0.030
	Sig. (2-tailed)	0.575
	N	356
Clinical examination	Spearman's Correlation	0.013
	Sig. (2-tailed)	0.799
	N	363
Examination procedure	Spearman's Correlation	-0.054
	Sig. (2-tailed)	0.307
	N	363

Overall influence of knowledge, attitudes and practices on breast cancer

In overall, the influence of knowledge, attitudes and practices on breast cancer was rated at 11.46% (n=44) low, 80.99% (n=311) medium and 7.55% (n=29) high by the respondents in Homa Bay County. Majority of the respondents therefore consider the influence of knowledge and attitude as medium on breast cancer practices in Homa Bay County. Based on their experiences, majority of the respondents attest that those with proper knowledge and attitude have the high chances

practicing the breast cancer examinations than those with insufficient knowledge. However, there is need for concerted efforts in turning the knowledge into practice among the residents.

Conclusion and Recommendations:

Knowledge of breast cancer and the various risks to breast cancer significantly at a $p<0.05$ informed the need for early adoption of screening. Therefore, knowledge is key in informing action towards adoption of early screening and detection of breast cancer among women; Attitudes like curability of BCA, willingness to undertake BCA and if early detection of BCA is helpful were statistically insignificant in influencing BCA screening uptake with $P>0.05$. This indicated that most of the decisions to undertake early screening of breast cancer among women was less informed by their attitudes; while Practices among women indicated no statistical significance to adoption of early detection of BCA at a $p>0.05$. There is high percentage of the residents in Homa Bay County who have never done breast cancer early detection practices. There is need for concerted public health awareness campaign on breast cancer early detection advantages in the community and by the Community Health Volunteers to encourage majority into the practice.

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