

Original article

Knowledge, Attitude and Practice concerning Breast Cancer among Women Attending Khartoum Breast Care Centre, Sudan

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Abstract

Breast cancer is an abnormal growth of cells, which tend to proliferate in an uncountable way. It develops from breast tissue and impacts 2.1 million women each year, and causes the greatest number of cancer-related deaths among women. A cross-sectional descriptive institutional based study was conducted with the aim to assess knowledge, attitude and practice among women with breast cancer or at risk, aged range between 15-65 years attending Khartoum Breast Care Centre. A total of 384 participants were selected by systematic random sampling techniques and data was collected by a questionnaire and analyzed by using (SPSS). Chi-square test was employed to test the association between different variables. The study showed that 55.5% and 80% of the participants had good knowledge concerning signs and symptoms and the risk factors of the breast cancer respectively. 42.2% of the participants accept the infection with breast cancer. 35.9% and 49.2% of the participants make clinical and breast cancer self-examination respectively. There is significant association between knowledge and breast cancer self examination at $p < .000$. There is significant association between attitudes of the respondents towards the infection with breast cancer and practicing breast cancer self examination at $p < .024$. Although, the participants have good knowledge (80%), concerning the risk factors of breast cancer and favorable attitudes (80.2%), towards the infected person, there is poor practice (35.9%), concerning clinical breast cancer test.

Keywords: Breast cancer, Knowledge, attitude and practice, Khartoum Breast Care Centre

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Introduction

Breast cancer is a type of cancer that starts in the breast. Breast cancer cells usually form a tumor that can often be seen on an x-ray or felt as a lump. It arises when abnormal cellular growth occurs in certain structures and types of cells within the breast. Breast cancers usually begin in the ducts, some start in the glands and others are less common as ductal carcinoma in situ (DCIS) and invasive carcinoma, phyllodes tumors and angiosarcoma, (ACS, 2019). Signs of breast cancer may include a lump in the breast, a change in breast shape, dimpling of the skin, and fluid coming from the nipple, a newly-inverted nipple, or a red or scaly patch of skin. Risk factors for developing breast cancer include being female, obesity, a lack of physical exercise, alcoholism, hormone replacement therapy during menopause, ionizing radiation, an early age at first menstruation, having children late in life or not at all, older age, having a prior history of breast cancer, and a family history of breast cancer, (Kyu HH, 2016).

Poor practices concerning the risk factors of the disease can be controlled by simple measurement as health education intervention. Study knowledge, attitudes and practices can help in selecting appropriate health education methods and help policy makers to fight cancer and opens the door for researchers to use result for further studies in the area. WHO, estimated that 627,000 women died from breast cancer in 2018. While breast cancer rates are higher among women in more developed regions, rates are increasing in nearly every region globally (WHO a., 2018). The prevalence of breast cancer in Sudan was 3.9 cases per 100,000 female populations, (Marwa, 2016)⁴. The incidence rates vary widely across the world, from 27 per 100,000 in Middle Africa and Eastern Asia to 92 per 100,000 in Northern America, (Yungshook Han, 2019). The survival rates have improved because access to medical care is improving in many nations and the majority of breast cancer cases are diagnosed at an earlier and localized stage. In addition,

improved surgery and tailored adjuvant treatment regimens are available, (WHO b, 2018).

The diagnosis of breast cancer is based on clinical examination in combination with imaging, and confirmed by pathological assessment. Clinical examination includes bimanual palpation of the breasts and loco-regional lymph nodes and assessment for distant metastases (bones, liver and lungs; a neurological examination is only required when symptoms are present). Imaging includes bilateral mammography and ultrasound of the breast and regional lymph nodes. Pathological diagnosis should be made according to the World Health Organization classification and the tumor–node–metastases (TNM) staging system, (Dhiyf alla Abu Idris, 2018), prevention includes; avoiding radiation exposure, by screening tests and self-examinations, manipulation of the hormonal milieu and use of tamoxifen, low-fat diets, and/or the consumption of flaxseed. Early detection is very important to avoid new cases of disease, also work to raise the awareness of all women about the risk disease and method to avoid the breast cancer in future, (CDC, 2019). Treatment should be provided by a multidisciplinary team, which includes: at least one surgeon, radiation oncologist, medical oncologist, radiologist and pathologist, who are specialized in breast cancer. A breast nurse, or a similarly trained and specialized health care practitioner, acting as a patient navigator, is also important. Other members of the breast team may include plastic/reconstructive surgeons, psychologists, physiotherapists and geneticists. Following a diagnosis of breast cancer, a patient finds herself in an unfamiliar landscape. This creates different levels of stress and needs to be addressed individually and tailored to each patient's needs. They will need space and time to process and comprehend their diagnosis, so they can cope psychologically with the diagnosis and treatment plan. To accommodate for this, information on

diagnosis and treatment choice should be given repeatedly (both verbally and in writing) in a comprehensive and easily understandable form. The use of reliable, patient-centered websites or similar sources of information is important and very useful, (Ziegler, 2017).

A Pakistani study on female towards breast cancer was conducted by Sara in 2019. The study revealed that over 50% participants had knowledge about breast cancer symptoms. Majority (> 90%) had positive attitude and intended to see a doctor immediately if they ever felt a breast lump, but had poor (28.3%) practices regarding breast self-examination (Sara, 2019). A study, which was conducted in Nigeria about the practice of the respondents towards breast cancer clinical test and breast cancer self test respectively. The study revealed that about 60% of women don't make breast cancer clinical test and breast cancer self test respectively, (Michael N Okobia, 2020). A

Research Methodology

Study Design

This is a descriptive cross-sectional institutional based study. Khartoum Breast Care Centre (KBCC) is a non-profit, privately funded organization opened in October 2010. It is the only specialized and multidisciplinary Breast Cancer Centre in Sudan. It has advanced diagnostic and

Study population

The target population of the study were women with breast cancer or at risk, aged range between 15-65 years, who attends Khartoum Breast Care Centre. The majority

Sample size

The sample size was calculated by using the following formula: $n = (z^2 pq / (df)) / d^2$. Where: n is the sample size to be computed, z is the standard normal deviation at 95% confidence level (set at 1.96), p is the

Sample determination

All daily women with breast cancer or at risk, age between 15-65 years,

study that conducted in Ethiopia by Sarah Rayne, in 2019 revealed that the majority (67.4%) of the women were found to have negative attitudes towards breast cancer (Sarah Rayne, 2018).

Breast cancer is one of the most frequently detected cancers and is the major cause of death among women worldwide. Awareness of women's breast cancer encourages them to become familiar with what is normal or abnormal through looking at and feeling their breasts. The target population has poor knowledge and malpractices concerning breast cancer. The main objectives of this study are 1) to describe knowledge, attitude and practice among women concerning breast cancer in Khartoum Breast Care Centre and 2) to determine the relationship between sociodemographic factors, knowledge, attitude and practice of breast cancer in Khartoum breast cancer center.

surgical equipment utilized by highly dedicated and qualified physicians and support staff and has managed to establish an elite standard for specialized medical services in Sudan. KBCC not only covers Sudan, but also neighboring countries (Chad, South Sudan, Eritrea and Ethiopia).

come to the centre from many neighbouring areas as some come from other states and neighbouring countries.

proportion in the target population estimated to have proportion of breast cancer in target population ($p=50\%$ if unknown), d is the degree of accuracy /accepted margin (set at 0.05), $n = (3.8416 * .5 * .5) / 0.0025 = 384$.

attending the centre were chosen till the total determined sample size was selected

Data collection

Data was collected from the participants for three months by using questionnaire. The questionnaire includes 29 questions concerning the socio-demographic information, basic information, and questions concerning KAP of the participants. The participants award excellent if he checks all the choices, good

knowledge if he checks more than half of the choices, poor if he checks less than half and don't know if choose I don't know. For the attitudes there is three choices either, favourable/accepted agree or unfavourable/unacceptable/ disagree or I don't

Data Analysis

The collected data from field was coded and entered into the computer and analyzed by using (SPSS) 23.0 versions, showing the frequent and the percentage. χ^2

tests was used to show the association between different variables. The results were presented in text, figures and tables.

Results

The study showed that 45.5% of the participants were university graduated and 10.4% were post graduated. 34.4% of the respondents' monthly incomes ranged between 1500-<3000, 27.1%, between 3000-<4500 and 38.5% were above 4500 SDGs. Only 19.8% of the participants use contraceptive pills, nearly half 49.2% of the

participants practice breast feeding and 58.3% of the participants take balance diet. More than one-third 37.3% of the participants' reasons that inhabited them from going to the centre were preoccupation, 31.3% were lack of money, 25.8% were the far of the clinic while 5.65 were of lack of time.

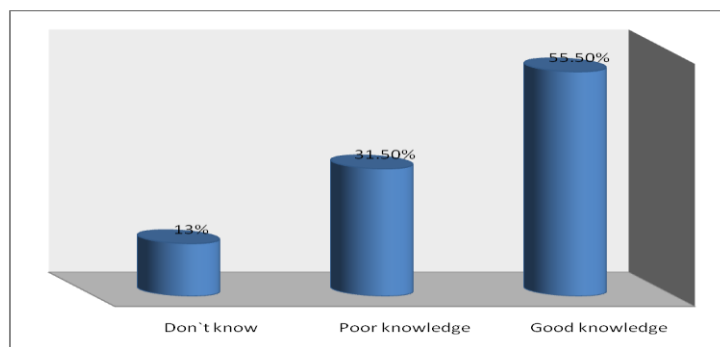


Fig.1 Knowledge of the participants concerning signs and symptoms of breast cancer

The study showed the following results (n=384). More than half 55.5% of the participants had good knowledge concerning the signs and symptoms of breast cancer, while 31.50% had poor knowledge (Fig 1).

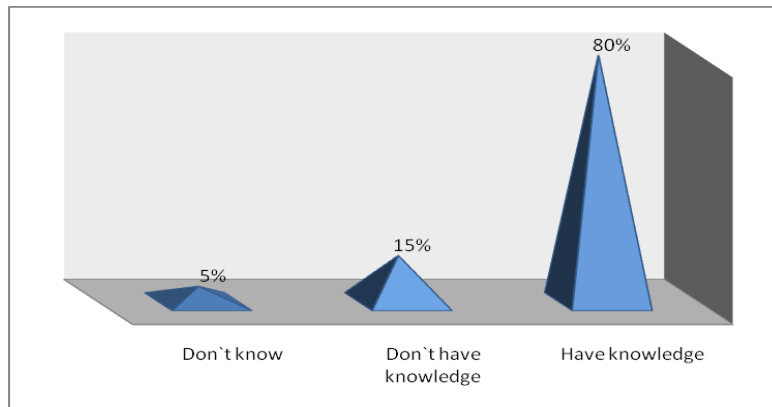


Fig.2 Knowledge of the participants concerning the risk factors of breast cancer

The majority 80% of the participants have knowledge about the risk factors of the breast cancer, while 15% don't have (Fig. 2)

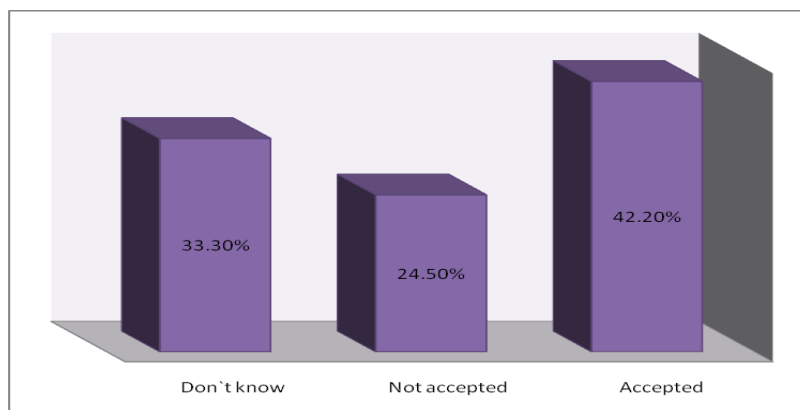


Fig.3 Attitudes of the participants towards the infection with breast cancer

Most 42.20% of the participants accept the infection with breast cancer while 24.5% don't accept the infection. (Fig. 3)

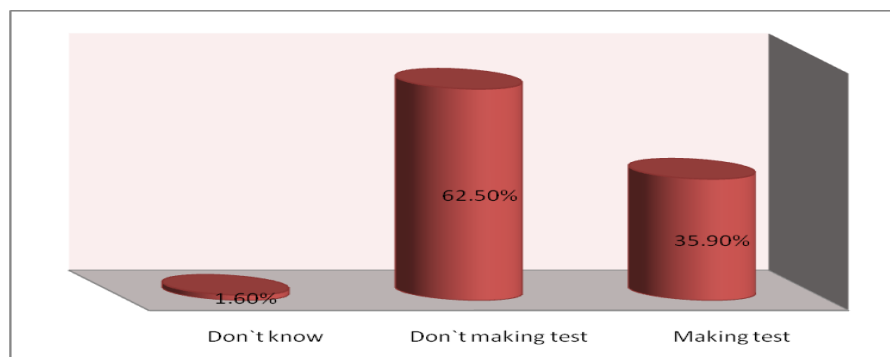


Fig. 4 Practice clinical breast cancer test

More than one-third 35.9% of the participants make clinical breast cancer test and 62.50% do not making clinical breast cancer test. (Fig. 4)

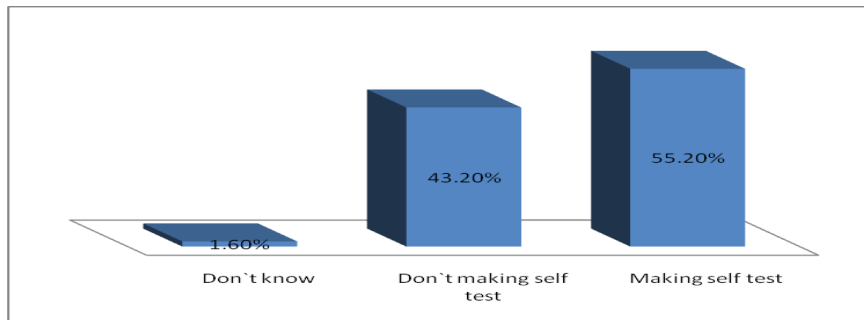


Fig. 5 Practice breast cancer self-test

More than half 55.2% of the participants make breast cancer self-test and 43.2% don't make breast cancer self-test (Fig. 5).

Table 1 Association between level of education and making breast cancer clinical examination (n= 384)

Level of education	Making self breast cancer test			Total
	Yes	No	Don't know	
Illiterate	22	13	1	36
Primary	18	21	0	39
Secondary	32	57	5	94
Graduate	50	124	0	174
Post graduate	15	25	0	40
Total	138	240	6	384

There is a significant association between level of education and making breast cancer clinical examination at $\chi^2 = 31.35$, $df = 10$, $p = .001$. (Table 1).

Table 2 Association between level of education and making breast cancer self-examination (n= 384)

Level of education	Making self- test in the house			Total
	Yes	No	Don't know	
Illiterate	13	22	1	36
Primary	14	24	1	39
Secondary	54	36	4	94
Graduate	103	71	0	174
Post graduate	28	12	0	40
Total	212	166	6	384

There is a significant association between level of education and making breast cancer self-examination at $\chi^2 = 24.87$, $df = 10$, $p = .006$. (Table 2).

Table 3 Association between Knowledge and breast cancer self-examination (n= 384)

Knowledge	Breast cancer self-test			Total
	Doing breast cancer self-test	Don't doing breast cancer self-test	Don't know	
Have knowledge	139	68	6	213
Don't have knowledge	51	70	0	121
Don't know	22	28	0	50
Total	212	166	6	384

There is significant association between knowledge and breast cancer self-examination at $\chi^2 = 27.757$, $df = 4$, $p < .001$. (Table 3).

Table 4 Association between Knowledge and attitudes of the participants towards the infection with breast cancer (n= 384)

Knowledge	Attitudes of the respondents towards the infected person with breast cancer			Total
	Favorable	Unfavorable	Don't know	
Have knowledge	117	35	61	213
Don't have knowledge	28	46	47	121
Don't know	17	13	20	50
Total	162	94	128	384

There is significant association between knowledge and attitudes of the participants towards the infection with breast cancer at $\chi^2 = 37.315$, $df = 4$, $p < .001$. (Table 4).

Table 5 Association between attitudes of the participants towards the infection with breast cancer and self-breast cancer examination(n= 384)

Attitudes of the respondents	Breast cancer Self-test			Total
	Doing breast cancer self-test	Don't doing breast cancer self-test	Don't know	
Favorable	102	58	2	162
Unfavorable	44	50	0	94
Don't know	66	58	4	128
Total	212	166	6	384

There is significant association between attitudes of the participants towards the infection with breast cancer and practicing breast cancer self examination at $\chi^2 = 11.208$, $df = 4$, $p = .024$. (Table 5).

Discussion

In this study 55.5% and 80% of the respondents had good knowledge concerning signs and symptoms and the risk of the breast cancer respectively. The good knowledge is due to the educational level, as 55.9 % of the respondents were either graduated or post graduated. This good knowledge increases the chances of applying preventive measurements of the disease. This agrees with the study, that conducted by Sara et al., which revealed that over 50% participants had knowledge about breast cancer symptoms(Sara, 2019). But disagreed with the study about relationships between KAP and breast cancer that conducted in Nigeria, which showed that the respondents had poor knowledge of breast cancer(Michael N Okobia, 2020).

The study revealed that 40.9%, of the participants` family members had favorable attitudes towards the infection with breast cancer. As mentioned before, the reasonable level of education contributes in promoting the family members` attitudes towards breast cancer. This result disagrees with study that conducted in Ethiopia in 2019 which showed that the majority (67.4%) of the women were found to have

negative attitudes towards breast cancer (Sarah Rayne, et al, 2018).

The study revealed that 62.5% and 42.2% of the participants don`t make breast cancer clinical examination and breast cancer self test respectively, although they have good knowledge (80%), concerning the risk factors of breast cancer. Concerning breast cancer clinical test, this is because they cannot afford the cost of the services as 61.5% of participants had limited monthly income ranged between 1500-<4500 SDGs. This result agreed with the study which was conducted in Nigeria about the respondents, who don`t make breast cancer clinical test and breast cancer self test respectively. The study revealed that about 60% of women don`t make breast cancer clinical test and breast cancer self test respectively, (Michael N Okobia, 2020). Although, the participants have good knowledge (80%), concerning the risk factors of breast cancer and favorable attitudes (80.2%), towards the infected person, there is poor practice (35.9%), concerning clinical breast cancer test. The study recommends that State Ministry of Health should conduct health education program focusing on breast cancer clinical and self examinations.

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