BREAST SELF-EXAMINATION: A NARRATIVE LITERATURE REVIEW ANALYSING THE FACTORS INFLUENCING THIS PRACTICE

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ABSTRACT

Background: Breast cancer could be detected in many ways, breast self-examination is known to be the best way to elicit breast lumps. However, breast screening programmes using mammogram has been adapted in many developed countries for an early detection of the palpable or non-palpable breast cancers. Sometimes, breast cancer is detected incidentally during a routine clinical examination by a health professional or seen in imaging which was performed to unrelated problem. **Objective:** Assessment of knowledge, awareness, attitude, and current practices related to breast self-examination (BSE) and associated factors among women in different parts of the world. **Methods:** This study is a narrative review of the available medical literature related to BSE. We have used the internet searching different bibliographic databases published in English, that exploring the practice of BSE in different parts of the world. Nine papers published in the period between 2006-2020 had been included in the study with 2883 participants. Results: A total of 09 studies has been identified (2883 participants). Lack of BSE practice still seen with significant number of women, it is a multifactorial phenomena, those could be individual patient related or a community related as socio-demographic status of the area. The level of education has a significant impact on the awareness about breast cancer and BSE practice. The regular BSE rate varies between 4-35% with an overall average of 22%. **Conclusion:** Strategies to improve BSE awareness and practice among females is needed to be addressed in particular in the areas of low socio-economic status, the tele-medicine is a useful tool if resources are available.

KEYWORDS: Breast cancer, Breast self-examination, Mammogram.

INTRODUCTION

GLOBOCAN group report in 2020 revealed that the most frequent newly detected cancer in the global cancer statistics list is breast cancer. There were 2,261,419 newly diagnosed cases (11.7% of all sites), It is followed by lung, large bowel, prostate, and stomach cancers. The same report showed that, the breast cancer is in the fourth place in the cancer-related mortality list with 684,996 deaths (6.9% of all sites),[1], the other most frequent causes of cancer related mortality, are lung (18%), colon (9.4%) and liver (8%).[2] The most recent UK data also reporting that, breast cancer is recognised as the most frequent diagnosed cancer as about 55,000 new cases detected yearly, also the reports mentioned that it is responsible for about 7% of all cancer deaths.[3] It has been agreed that Breast Self-Examination(BSE) is a useful and essential screening strategy in breast cancer care, in particular when used in combination with health-professional physical examinations and breast imaging as a mammogram (Fig.1). Most of Breast cancer survivor women (57%) often detected breast cancers by a methods other than mammogram, either by self-examination (25%) or accidently(18%); hence, the recommendations that all women routinely perform BSE as part of their overall breast cancer screening strategy.[4,5,6]

RESULTS

A total of 09 studies has been identified; six papers from Africa, and three from Arabic Asian countries. A total of 2883 participants included with age range of 13-70 years. The higher education rate level varies among the groups, it was between 12-40% in 5 groups and 100% in one. The regular BSE(monthly) rate was between 4-35% with an overall average of 22% (Table.1). Some reports concluded that, the younger age groups had had poor knowledge about BSE and are not performing BSE, where socio-economic status and education level have a significant influence on the level of knowledge about breast cancer and the importance of BSE.

DISCUSSION

Okobia et al in 2006, presented a result of a cross-sectional study that was conducted to assess the knowledge, attitude and practices related to BSE in 1000 Nigerian women. Professional employed participants and those with higher level of education had significant level of knowledge about breast cancer. The results showed that mean knowledge score of BSE among the cohort was 42.3% and only 21.4% of the participants knew that breast cancer presents commonly as a painless breast lump. BSE practice generally was low; only 43.2% of

the group admitted to carrying out BSE and only 24% are practising BSE on regular bases. Also it has been noticed that only 9.1% had clinical breast examination (CBE) in the year preceded the study.[7]
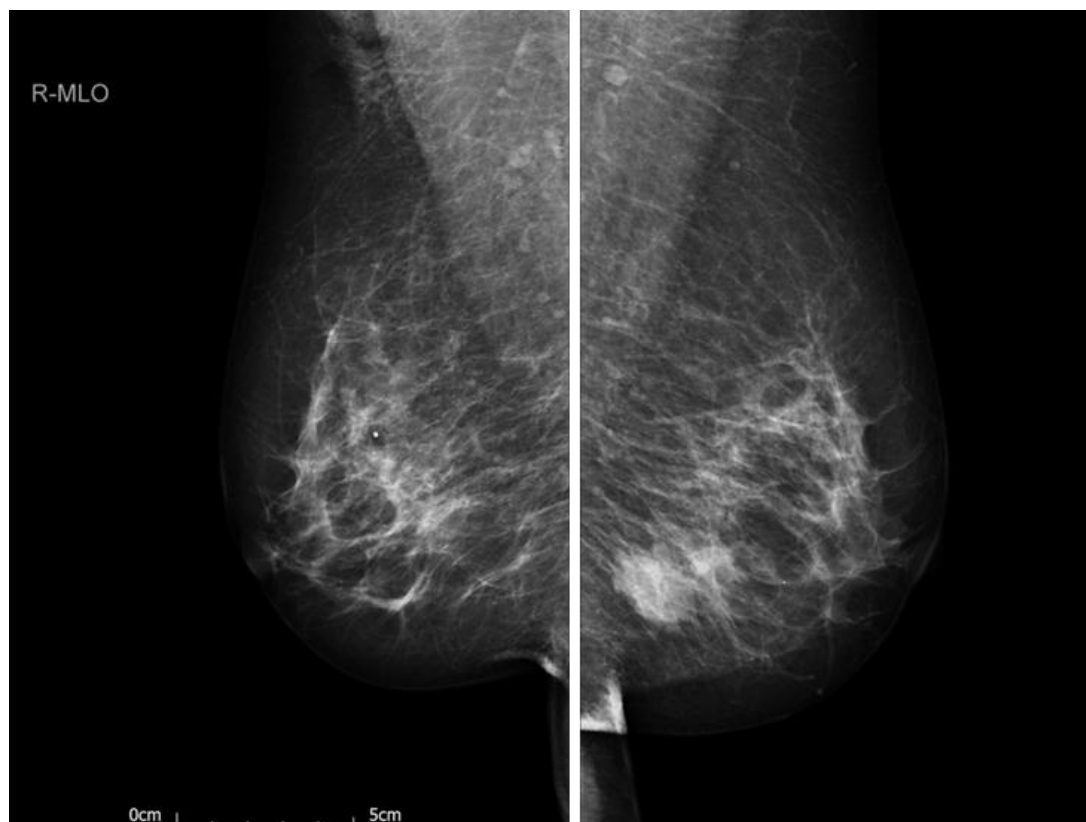

Fig. 1: Mammogram used as a screening tool for breast cancer.

Suh et al in 2012, published a results of a study conducted in Cameroon, this paper sought to explore the knowledge of BSE among 120 Cameroonian women, to assess their impression on the practice of BSE and to describe their perceptions on the aetiology, associated risk factors and preventive measures against breast cancer. About 75% of participants had heard about BSE previously, only 35% reported monthly BSE monthly where 40% of participants had never done a BSE. The most common perceived aetiology for breast cancer was "exposure to some risk factors" as smoking, consumption of genetically modified food products, excessive alcohol consumption and inactive sedentary lifestyle.[8] Ayed et el in 2015, published a research results related to BSE in terms of knowledge, attitude, and practice among nursing students. The study group included 97 young ladies. The outcome showed that most female nursing students (43%) had poor knowledge about BSE and are not performing BSE, where only 15.5% has a good level of knowledge about BSE.[9] Amoran & Toyobo in 2015 had mentioned that women in a rural community reported barriers to BSE as,

lack of knowledge of how to perform BSE (47.6%), also in about 47.6% of them had a perception of not being at risk.[10] Hanson et el, in a report published in 2015, looked at practice and barriers of breast self-examination among women in rural community in South Western Nigeria. The paper highlighted the fact that, more than three-quarters of the cohort do not practice BSE, this is significantly influenced by socio-demographic factors as lack of awareness, absence of symptoms, myths and fear of being diagnosed with breast cancer.[11]

Table 1: The relation between education level and BSE practice.

Author, Year	Country	Cohort	Age /Year	High education	Family history of breast cancer	BSE Regular	BSE Randomly	BSE not done
Okobia, 2006[7]	Nigeria	1000	30->50	11.9%	--	24.4%	10.5%	65%
Suh, 2012[8]	Cameroon	120	20->50	28%	24%	35%	12.5%	40%
Ayed, 2015[9]	Palestine	97	18-22	--	--	4%	28%	63%
Hanson, 2019[11]	Nigeria					23%		76.5%
Al-Alwan, 2019[13]	Iraq	200	24-70	57%	33,5%	5.5%	57.5%	37%
Alegbeleye, 2019[14]	Cameroon	200	20-51	40%	15%	32%	62%	6%
Usman, 2020[19]	Nigeria	400	13-20	--		15%	12.5%	--
Asmare, 2022[21]	Ethiopia	541	20-70	30%	--	31%	16%	54%

Mohamed et al in 2016, published a paper of a study done among 325 University female students in Saudi Arabia. The purpose of the study was to assess the level of breast cancer awareness among female university students, and to compare the frequency of BSE between medical and non-medical students. Overall 29% of the group practice regular BSE, looking to students specialty, the rate was 28.4% for the medical students and 30.1% for the non-medical students. The relation between student type and BSE practice is not significant (p=0.79).[12] Al-Alwan et el, in 2019 presented a paper examined the factors related to BSE in 200 women treated already for breast cancers. Ninety per cent of the cohort, were married, one third had a higher education. About 46% of the patients had a member of family affected by malignancy, however only 33.5% had a family history of breast. The authors concluded that, the education level, occupation and family history of cancer had significant impact on the practice of BSE.[13] This study also assessed the actual practice of BSE among those patients. The study showed that, the rate of ladies performing random BSE in (57.5%), and they are mainly patients belong to the age group (50-55) years (26.1%). Those who practiced monthly regular BSE, constituted only (5.5%) of the total sample, the age group (40-44) years formed the main bulk of those patients (36.3%). Analysing the data related to family history of malignancy, the authors had reported that a significantly higher rates of adherence

to BSE policy were seen among those with family history of malignancy; the rate was 51.3% in random BSE group and 72.7% in regular monthly BSE group. In fact breast cancer awareness and BSE expected to be more practised by patients who already treated for this disease, however this paper revealed that (37%) of the sample did not practice BSE at all.[13] Alegbeleye et al in 2019, in a study sought to explore the level of knowledge and practice of BSE (BSE) in female patients attending outpatient clinic in a North-western region of Cameroon. The results revealed that, there is a good level of knowledge about early warning signs and symptoms related to breast cancer as well as BSE. About 40% of the cohort had a higher education level, with about 32% of the women were practising BSE on monthly bases.[14] In 2020, Black and Richmond published a review focused on an early detection approaches in breast cancer among women living in sub-Saharan Africa (SSA). It has been mentioned that, breast cancer incidence is currently lower but climbing up in SSA compared with high-income countries, however cancer related mortality rates are disproportionately high. The report revealed that, breast cancer patients in SSA are younger compared with high-income countries. Unfortunately, most of them present at an advanced disease stage in addition they are facing limited management options and delays in commencing the treatment, all these factors are leading to poor outcomes. This review highlighted the fact that, while screening programs utilizing radiological imaging as mammogram (Fig.1) or clinical breast examination, has been effective tool in high-income countries. The current evidence suggests that other strategies as BSE might be equally important in breast cancer early detection, as well as in reducing breast cancer related mortality, in particular with limited- resources settings.[15,16,17]
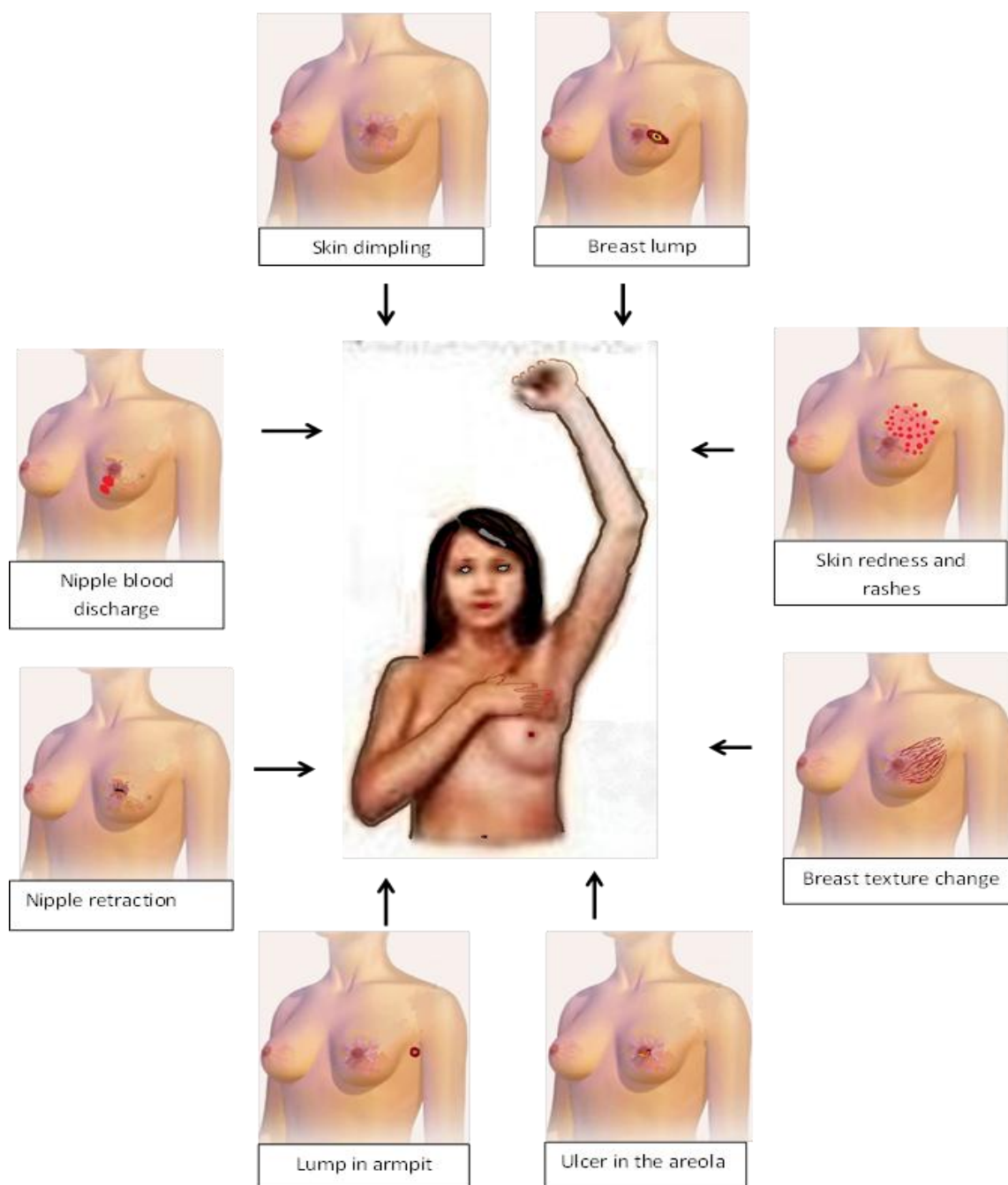
Fig. 1: Common symptoms of breast cancer.

Lera et al in 2020, in a study included 629 women aged between 20-69 years, looked at the factors influences BSE, The authors concluded that, longer breast feeding period (13-24 months), are 2.43 times more likely to practice BSE than those who breast fed for different durations. The employed participants were 3.13-times more likely to examine their breasts than those who were unemployed, also students were 3.73-times more likely to perform BSE than other groups.[18] Usman et al in 2020, in another study assessed the attitude, knowledge and BSE practice among female secondary school students in Osogbo Metropolis- Western

Nigeria. About 97.5% reported that they have some knowledge about breast cancer while 58.8% have heard of BSE. Only 15% reported that, they are practising BSE regularly. The outcome revealed that a large proportion of participants have heard about breast cancer and BSE however without adequate knowledge of the correct technique of BSE thereby resulting into malpractice of BSE and poor attitude towards it.[19]

Table 2: Factors may influence compliance.[9,10,13,18,20]

Age
Anxiety/fear of discovering a lump
Influence of their upbringing
Previously received education about the BSE technique
Faith/trust in one's own ability to perform the BSE
Education level
Occupational status
Socio-demographic factors
Family history of breast cancer
Family history of malignancy
Marital status
Level of country income
Smoking
Gestation & parity
Breast feeding
Hormonal therapy(Contraception/HRT)

Asmare et al in 2021, published the most recent report included 541 participants. The study aimed to explore attitude, knowledge, and practices related to BSE and linked factors among women in Gondar Town, Northwest Ethiopia. About 56%, 46% and 45.8% of the cohort had a good level of knowledge, favourable attitudes, and performed BSE respectively. The authors stated that, emphasis should be made on boosting the knowledge, attitude, and practice of the adult females toward BSE along with a breast cancer awareness campaign.[21] As mentioned earlier, socio-economic status and level of education and addition to other factors [Table.2] have a significant impact on the extent of knowledge about breast cancer and the awareness about the importance of BSE. Breast cancer symptom early recognition by patients especially in the economical, cultural and educational deprived communities is very crucial to tackle this disease on time. Due to some barriers as social stigma and fears of the consequences of cancer also may put those women in a difficult situation and in most of cases, they present with an advanced disease stage. Herby, the author is highlighting the importance of education and raising awareness about breast cancer symptoms [Fig.2] and BSE.

CONCLUSION

It is clear that, a continuous call is needed all the time for, theoretical as well as practical education for BSE, strategies to improve BSE awareness and practice among females is needed to be addressed in particular in the areas of low socio-economic status, the tele-medicine is a useful tool when resources are available.

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