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Knowledge of Breast Cancer and Breast Self Examination Practices Among Students at Bolgatanga Girls Senior High School, Ghana

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ABSTRACT

Breast cancer is the most commonly diagnosed cancer in women and it is the leading cause of cancer deaths among women. Breast cancer has emerged as the most commonly diagnosed cancer among women in sub-Saharan Africa, surpassing cervical cancer. This study sought to specifically assess the knowledge levels of female Senior High School (SHS) student of breast cancer and breast self-examination. It was also to ascertain whether females in Senior High Schools practiced Breast Self-Examination (BSE) and the barriers to practicing BSE. The study utilized quantitative method; and descriptive, cross-sectional design was to investigate the knowledge of breast cancer and practice of breast self-examination. The Bolgatanga Girls' Senior High School was used; they had a total population of 1, 946. Simple random sampling was used to choose students in year three who were 600. A sample size of 260 students were chosen for the study. The results showed that students had low knowledge of breast cancer risk factors and breast cancer screening methods however had high knowledge of breast cancer sign and symptoms. More than half of the respondents never performed BSE. The computer software Statistical Package for the Social sciences (SPSS) version 21 was used to analyze the data. Despite high awareness of breast cancer and BSE, in-depth knowledge is low and respondents' BSE practices were characterized by faulty timing and regularity. There is therefore the need to intensify education of the young girls on breast cancer and BSE for early detection and management.

Introduction

Worldwide, breast cancer is the most frequently diagnosed cancer in women and it is the leading cause of cancer deaths among women (Garcia et al, 2007).The global incidence of breast cancer as of 2012 was 1.7 million, with 6.3 million women already diagnosed with the disease in the previous five years (International Agency for Research on Cancer [IARC], 2013). Breast Cancer has been rising in many developing countries including Asia and Africa. The reasons for these trends are not completely understood but likely reflect changes in reproductive patterns, nutrition and physical inactivity, (Garcia, et al 2007). Breast cancer is the second most frequent cancer in Sub-Saharan African women with an incidence of 15-53 per 100,000 women (Ly, Antoine, André, Callard, Bernaudin & Diallo, 2011).

In Ghana, 1000 women die of breast cancer annually as a result of ignorance and delays in reporting to health facilities (Ministry of Health, 2014). Late reporting of breast cancer cases is associated with poor prognosis and high mortality rates (Schottenfeld & Joseph, 2006; American Cancer Society, 2012; Ohene-Yeboah & Adjei 2012). Mensah, Yarney, Kaku, and Opoku (2014) identified age, age of onset of menarche, breastfeeding, contraceptive use, and the age interval between menarche and menopause as contributing to breast cancer development. The disease usually produces no symptom at the early stage; however, breast changes such as tenderness, swelling, nipple discharge or ulceration, thickening of the breast, and the presence of painless lump(s) are some of the symptoms of breast cancer (American Cancer Society, 2014). According to the Centre for Disease Control and Prevention (CDC, n.d.), mammography, clinical breast examination, and breast self-examination (BSE) are the main methods for breast cancer screening. Though mammography is the most effective method, Onwere, Okoro, Chigbu, Aluk, Kamamu, and Onwere (2009) suggested BSE as a cost-effective method of early detection and that it should be integrated into existing public health policies.

Opoku, Benwell, and Yarney (2012), also claimed that given Ghana's lack of human and material resources to effectively implement such measures as routine mammographic screening, breast self-examination and early reporting of unusual findings for clinical examination

Statement of the Problem

The fatality of breast cancer according to literature is closely related to the stage at which it is diagnosed and treatment commenced (Schottenfeld & Joseph, 2006, ACS, 2012; Ohene-Yeboah &Adjei, 2012). In Sub-Saharan African and for that matter Ghana where there are challenges with sophisticated methods for screening and early detection, the burden of the disease cannot be overemphasized. (Onwere et al, 2009; Opoku et al, 2012). In Ghana, breast cancer is the leading cause of malignancy. In 2007, breast cancer accounted for 15.4% of all malignancies, and this number increases annually. Roughly 70% of women who are diagnosed with breast cancer in Ghana. Explanations for the delayed presentation among women in Ghana have been traced to the cost of, and access to, and routine screening mammography (Mugitti 2003)

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Large numbers of women are admitted with breast cancer at the major hospitals in Ghana. Most of them present at late stages of cancer (Ghana Health Service, 2008). Work done by Opoku et al (2012) found poor knowledge of breast cancer and breast self-examination as well as low screening practices among a group of women they studied.

In Ghana little is known about breast cancer and breast self-examination practices among the adolescent population who need the knowledge to make appropriate health seeking behaviours later in adult life. Given that most studies conducted used adult population or western countries, there is the need to assess the knowledge of breast cancer and breast self-examination as well as the practice of breast self-examination among female students in Ghana.

Objectives

1. To assess the knowledge levels of female in Senior High School (SHS) on breast cancer.
2. To assess the knowledge levels of female in Senior High School on breast self- examination.
3. To ascertain whether females in senior High School practice Breast Self-Examination.
4. To identify barriers to practicing BSE.

Significance of the Study

The findings may be used in the nursing discipline, practice, research and education to improve quality of care. The strategies may relate to promoting an integrated and systematic approach to health education, as well as the provision of relevant messages on breast self-examination. Appropriate health education may increase breast awareness by making women especially adolescent familiar with the anatomy and physiology of their breasts. The findings may also increase understanding among health practitioners regarding the correlation between breast self-examination, its practice and subsequent reduction in breast cancer incidence. Health education may empower women in decision making about their health and how breast cancer can be prevented by breast self-examination. The study's recommendations may also create opportunities for further research to generate evidence on broader perceptions regarding breast cancer among Ghanaian women. The findings may assist in the development of National Health Plans and Policies that include breast cancer prevention and management as one of the top priorities.

Literature Review

Knowledge of breast cancer and breast self-examination

Knowledge of breast cancer and breast self-examination as well as the practice of breast self-examination is important for the prevention of breast cancer among women. Breast self-examination is cost-effective and able to detect breast lumps before they reach advance stages (Faronbi & Abolade 2012). Knowledge of breast cancer and breast self-examination is generally low among women (Isara & Ojedokun, 2011; Okobia Clareann, Okonofua & Usifo, 2006). Whereas in some cases adequate knowledge or awareness does not translate into breast self-examination practice (Gwarzo, Subitu & Idris 2009).

Karayurt, Delek and Aynuur (2008), in a cross-sectional survey among Senior High Female Students in Turkey; found out that they had poor knowledge of breast cancer risk factors. Breast cancer and breast self-examination awareness was low and 62.1% of respondents had never heard of breast self-examination and less than half (30%) had information about breast cancer and breast self-examination. Another study carried out among undergraduate female students in Angola, by Sambanje and Benford (2012) concluded that there is a general lack knowledge of breast cancer and suggested that effective breast cancer education and prevention programs be developed and implemented for university students and the general public in Angola. Their findings showed that majority of the respondents who knew that breast self-examination could aid in detecting breast cancer early did not know how to perform breast self-examination.

In a cross-sectional descriptive study, Ahmed (2010) in Yemen that 1.4% of the respondents were knowledgeable on breast cancer though 76.9% of the respondents had previously heard about it. Breast self-examination was a well-known screening method (67.3%). The mass media was the main source of information on breast cancer and breast self-examination.

Okolie (2012) posited that there is inadequate knowledge of BSE practice despite positive knowledge and attitude towards it. In a cross-sectional among 200 female undergraduate nursing students in Enugu, Nigeria, revealed that breast cancer and breast self-examination were widely known. Isara and Ojedokun (2011) assessed the knowledge of breast cancer and practice of BSE among 300 female senior high school students in Abuja, Nigeria. The result revealed that all respondents heard about breast cancer. Knowledge of the disease was however low, (56.8%) had poor knowledge of breast cancer and 75.6% with poor knowledge of BSE. Akobia, Bunker, Okonofua and Osime (2006) conducted a study that revealed inadequate knowledge of breast cancer risk factors and signs and symptoms. In another study by Adekemi et al (2012) to assessed breast cancer knowledge and screening practices among 180 women in four selected communities in Egbeda Local Government Area of Oyo state, Nigeria, results showed adequate knowledge of breast cancer risk factors and symptoms among 56.7% of the respondents. Health professionals constituted the major source of information, followed by the media.

In a cross-sectional study among 500 women in Ghana by Opoku, Benvell and Yarney (2012) revealed that there was inadequate knowledge of breast cancer and breast examination among participants. The media was the major source of information follow by health workers as in Karayurt et al (2008).

Practice of Breast Self-Examination

Karayurt et al (2008), in a cross-sectional survey among 718 senior high female students in Turkey, it was found that, of the 30% who said they have ever heard of breast self-examination, only 6.7% and 20% of respondents performed breast self-examination monthly and irregularly respectively. Ahmed (2010) in a cross-sectional study of 425 female university students found a disparity between awareness of BSE and BSE practice. Of the 76.9% of respondents who previously heard of BSE, only 17.4% were practicing it. This was supported by Yoo, Choi, Jung and Jun (2012) who reported that the practice of breast self-examination was low despite high knowledge of it. However, Al-Dubai, Ganasegeran, Alabsi, Abdul Manaf and Kassm (2012) in a cross-sectional study found that more than half (55%) of the respondents were practicing BSE.

Barriers to breast examination practice

Studies have shown that there is gap between awareness of breast self-examination and its practice breast self-examination as a result certain barriers (Ahmed 2010, Gwarzo et al 2009). Forgetfulness, procrastination, laziness, lack of time, fear of detecting a lump, lack of self-confidence and anxiety have been identified as some of these barriers (Okolie 2012). However, the major barrier to breast self-examination is lack of knowledge on how to perform it (Isara et al., 2011, Ahmed, 2010). In their study, Isara et al (2011) found that 65.9% of respondent who did practice BSE indicated they did not know how to do it, 21.7%

said they did not expect to develop breast cancer and 1.2% said they feared detecting breast lump.

Karayurt et al (2008) found lack of knowledge on breast self-examination as a major barrier to BSE. Another study by Karayurt and Dramali (2007) found that women who had fewer barriers to BSE were practicing it more frequently. According to Karayurt et al (2007) higher frequency of BSE practice is closely associated with confidence, perceived benefits, health motivation and perceived seriousness of breast cancer.

Methodology

This quantitative research adopted a descriptive design, using students from the Bolgatanga Girls Senior High School. This research adopted a descriptive cross-sectional approach. The total population of students were 1, 946. Simple random sampling of balloting was used to choose students in year three who were 600. Israel（1992） formula for determining sample size was used to calculate the required sample needed for the study at 5% level of precision. A sample of 260 students were chosen for the study and with the help of the register all students names were written down and the lottery method was used to select the respondents. The main instrument used for data collection was a structured questionnaire. It was pretested in Bolgatanga Senior High School. Statistics Package for Social Science (SPSS) version 21 software was used to analyse the data. Descriptive statistics was used to discern basic patterns in data. Permission was then sought from the authorities of Bolgatanga Girls' Senior High School. Anonymity and confidentiality of subjects were maintained by the exclusion the names of the subjects in the questionnaire. The entire process (administering and retrieving of questionnaires) took approximately 30 minutes.

Results and discussions

Knowledge on breast cancer

It was realized a majority172 (66.2%) and 177 (68.1%) of respondents had low knowledge on breast cancer and the screening methods respectively. This is similar to a study carried out by women (Isara & Ojedokun, 2011; Okobia Clareann, Okonofua & Usifo, 2006) that revealed that knowledge of breast cancer and breast self-examination is generally low among. The American Cancer Society (2012), stated mammography, clinical breast examination and breast self-examination as the recommended screening method for detecting breast cancer. In this study, most of students showed adequate knowledge regarding breast cancer screening methods. Clinical breast examination and breast self-examination were widely recognized by the students as screening methods for breast, recording 91.2% and 85.0% respectively. The least recognized method was mammography 26 (10.6%). Studies consistent with this exist elsewhere. Study by A-Hajj et al (2015) recorded over 70% awareness for clinical breast examination and breast self-examination while 38.5% was recorded for mammography. Developing countries are said to ill-prepared to institute mammography as a means of screening for breast cancer (sambanje et al 2012). This may explain the low knowledge of mammography as a method of screening for breast cancer in this study.

Level of knowledge on breast self-examination

The study revealed that nearly a half (112) 48.5% of respondents had low level of knowledge concerning breast self-examination. One hundred and twelve 43.0% students demonstrated moderate knowledge of breast self-examination . this is contrary with a study by carried out in Yemen by Ahmed (2010) who found that breast self examination was a well-known screening method by (67.3%) of respondents. A total of 250 (96.2%) of respondents had heard of breast self-examination before. However, 212 participants, representing 88.3% were aware BSE can be used to detect breast cancer.

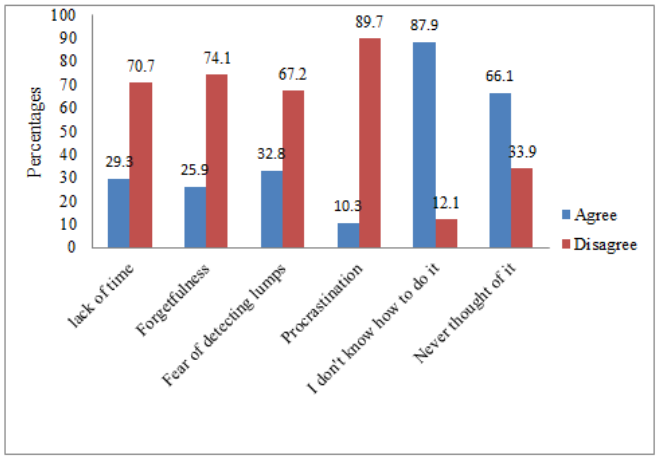
The right time to begin breast self-examination (at start menarche) was well known among the majority of respondents 141 (58.8%). With regards to how regular BSE should be done, less than half (39.8%) of the respondents were knowledgeable.

Practice of breast self-examination

Majority of the respondents 143, (55.2%) practiced breast self-examination. Interestingly, this figure included 24 (24.2%) of respondents who indicated that do not know how to perform BSE, while 36 (23.2%) of who reportedly know how to perform BSE never practiced it. This was contrary to a study conducted by Ahmed (2010) that found out that out of 76.9% of respondents who previously heard of BSE, only 17.4% were practicing it. More than half of the students who responded to this question said they ever done breast self-examination 143 (55.2%), while 116 (44.8%) never performed breast self-examination. Only 32 (22.4%) examined their breast once (a month while the majority 90 (62.9%) did any time the felt like doing it. The performance of BSE in relation to the menstrual cycle was also faulty. Very few 15 (10.5) indicated they examine about seven days after menses with the greater number of doing it on the first day of menses (33.6%) and anytime of the menstrual cycle (48.3%). Studies in Nigeria have drawn similar conclusions; Okolie et al (2012) and Irurhe et al (2012).

Barriers to breast self-examination

This section examines the reasons for non-performance of breast self-examination. One hundred and sixteen (116) representing 44.6% respondents admitted never examining their breast. Reasons given for non-performance of BSE included forgetfulness, lack of time, procrastination, fear of detecting lumps, not knowing how to do it and never thinking about it. Those who did not perform BSE because they did not how to do it were the majority, follow by respondents who never thought of performing BSE (87.9% and 66.1% respectively). This is shown in figure 3 below.



However, the major barrier to breast self-examination is lack of knowledge on how to perform it (Isara et al., 2011, Ahmed, 2010). In their study, Isara et al (2011) found that 65.9% of respondents who did practice BSE indicated they did not know how to do it. Karayurt et al (2008) found lack of knowledge on breast self-examination as a major barrier to BSE. Another study by Karayurt and Dramali (2007) found that women who had fewer barriers to BSE were practicing it more frequently. According to Karayurt et al (2007) higher frequency of BSE practice is closely associated with confidence, perceived benefits, health motivation and perceived seriousness of breast cancer.

Conclusions

Pragmatic efforts are needed by stakeholders to educate especially the youth on knowledge on breast self-examination for early detection and management of breast cancer. Lack the knowledge on skills to perform the breast self-examination are the main reason for not performing them. The mass media and peer education can be effective methods in disseminating information about how to carry out breast self-examination.

References

1. Garcia, M., Jemala, Ward, E. M., Centre, M. M., Haoy, Siegel, R. L., and Thun, M. J., (2007) *Global Cancer Facts and Figures*, Atlanta, G. A., American Cancer Society
2. International Agency for Research on Cancer. (2013). Latest cancer Statistics- Global cancer burden rises to 14.1 million new cases in 2012: Marked increase in breast cancer must be addressed. [Press release]. Retrieved from www.iarc.fr/en/media- centres/pr/2013/pdfs/pr223_E.pdf
3. Ly, M., Antoine, M., André, F., Callard, P., Bernaudin, J. F. & Diallo, D. A. (2011). [Breast cancer in Sub-Saharan African women: review. *Journal of Bull Cancer*; 98(7):797-806.
4. Charity, N., (2008) Breast Cancer Facts, Answers and Questions Association for International Cancer Research, Scotland 152991
5. MOH (2014). Breast Cancer Kills 1000 Women Annually. [News] Retrieved from www.moh-ghana.org/news-content.aaspx?id=51
6. Schottenfeld, D. & Joseph, F.F. 2006). Cancer Epidemiology and Prevention.Oxford University Press.
7. American Cancer Society. (2012) Cancer Facts and Figures [Fact sheet]. Retrieved from www.cancer .org/research /cancerfact statistics/cancerfigures2012/
8. Ohene-Yeboah, M; Adjei, E. (2012). Breast in Kumasi, Ghana. Ghana Medical Journal 2012; 46(1):8-13
9. Mensah, A. C; Yarney, J; Kaku, S.N; Opoku.S.(2014). Risk factors for breast cancer in pure African society, Impact of Age, Reproductive history, Family History and Breast Feeding. Cancer Research Journal 2(5)82-87
10. Center for Disease Control and Prevention (n.d) Breast Cancer: What screening Test There? [Online exclusive] Retrieved from http://www.cdc.gov/cancer/breas/basics_info/screening.htm
11. Onwere, S; Okoro, O; Chigbu B, Aluka, C; Kamanu, C; Onwere, A. (2009). Breast self-examination as a method of early detection of breast cancer: Knowledge and practice among antenatal clinic attendees in South Eastern Nigeria. Pakistan Journal of Medical Sciences 2009; 25(1):122-125.
12. Opoku, Y. S; Benwell, M; Yarney.J. (2012).Knowledge, attitudes, beliefs, behaviour and breast cancer screening practices in Ghana, West Africa.The Pan African Medical Journal. 2012; 11:28
13. Mugitti G I (2003). Experience with breast cancer in Zimbabwe. Journal of the Royal College of Surgeons of Edinburgh 38: 75-78.
14. Ghana health Service (2008) statistics of breast cancer and demography.http://www.statsghana.gov.gh/ (accessed1February 2015).
15. Faronbi, J. & Abolade, J. 2012). Breast self examination practices among female secondary school teachers in a rural community in Oyo State, Nigeria. Open Journal of Nursing;Jun2012, Vol. 2 Issue 2, p111
16. IsaraA. R. & Ojedokun, C. I. 2011 Knowledge of breast cancer and practice of breast self examination among female senior secondary school students in Abuja, Nigeria. Journal of preventive medicine and hygiene.;52(4):186-90.
17. Okobia, M.N. Clareann, H.B. Okonofua , F.E & Usifo, O. 2006). Knowledge, attitude and practice of Nigerian women towards breast cancer: A cross-sectional study. World J Surg Oncol. 2006; 4: 11.
18. Gwarzo, U.M; Sabitu,K; and Idris,S.H (2009). Knowledge and practice breast self examinationamong female undergraduate students of Ahmadu Bello University Zaria, northwestern Nigeria.
19. Karayurt, O; Delek O; Aynuur, C. C. (2008). Awareness of breast cancer risk factors and practice of breast self examination among high school students in Turkey. BMC Public Health; 8:359 doi: 1186/1471-2458-8-359
20. Sambanje, M.N. and Benford, M (2012) Breast cancer knowledge and awareness among university students in Angola. The Pan African Medical Journal. 2012;11:70
21. Ahmed, B.A (2010) Awareness and practice of breast cancer and breast self examination among university students in Yemen. *Asian Pacific Journal of Cancer Preview* 11(1):102- 105
22. Okolie, U. V. (2012) Breast self-examination among female undergraduates in Enugu, Southeast, Nigeria. IJNM.;4(1):1–7.
23. Adekemi, E.O., Adenike, C.O and Abimbola, O.O. (2012). Breast cancer knowledge and screening practices among women in selected rural communities of Nigeria. Journal of Public Health and Epidemiology 4(9) 238-245 DOI: 10.5897/JPHE12.058
24. Yoo, B.N., Choi, K.S., Jung, J.K (2012) Awareness and practice of breast self-examination among Korean women: results from a nationwide survey. *Asian Pacific Journal of Cancer Preview* 13(1):123-5
25. Al -Dubai, S.A., Ganasegeran, K., Alabsi, A.M., Abdul M.M.R., Ijaz S, and Kassim S (2011) Exploration of barriers to breast-self examination among urban women in Shah Alam, Malaysia: a cross sectional study.
26. Karayurt, O., Dramali A. (2007) Adaptation of Champion's Health Belief Model Scale for Turkish women and evaluation of the selected variables associated with breast self-examination. Cancer Nursing 30(1):69-77
27. Israel, G. D. (1992). Determining sample size. Retrieved from http://edis. ifas.ufl.edu/pdffiles/PD/PD00800.pdf