

RESEARCH ARTICLE

Reducing the Breast Cancer Menace: the Role of the Male Partner in Ghana

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Abstract

Background: Breast cancer continues to be the most common type of cancer afflicting many women worldwide. Presently, educational campaigns and research target only women as if men have no role in the management of this disease. The study examined the willingness of male partners to assist in early female breast cancer detection as well as their awareness and knowledge levels. **Materials and Methods:** Using a semi-structured questionnaire, data was collected from 500 public servants within the Tamale Metropolis and analyzed in SPSS. **Results:** The level of awareness of breast cancer was very high (98.8%) but there was a low level of knowledge of breast cancer among the male population. Marital status and religion had no effect on attitude, but increasing educational status significantly increased knowledge and positive attitude towards breast cancer examination ($\chi^2=4.255$, $p=0.0391$). The majority (92.0%) agreed that men can assist in early breast cancer detection and 96.2% were willing to be provided with breast examination skills. **Conclusions:** Although level of awareness on female breast cancers among the men was high, they generally lack knowledge of the disease. Majority of male partners want to assist in early breast cancer detection if provided with the necessary skills.

Keywords: Breast cancer - public servants - males - partners - awareness - attitude - Ghana

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Introduction

Breast cancer continues to be the most common and lethal type of cancer afflicting many women worldwide, and it is reported to have claimed the lives of 460,000 out of the approximate 1.4 million diagnosed in 2008 with Africa being worst affected since 54.4% of the 68,000 women diagnosed lost their lives (Ferlay et al., 2010). The higher mortality rate among African women can be attributed to various factors such as; African women being more susceptible to the more aggressive triple negative subtype of breast cancer, lack of public awareness of the disease even among women, limited organized programmes for screening, delayed presentation and limited number of well-resourced health facilities that can optimally manage the condition (Wadler et al., 2011).

In developed countries, breast screening is usually done using mammograms which is not the case in most developing countries where mammograms are found in very few facilities and thus not accessible to most women (Sambanje and Mafuvadze, 2012). For the woman in the developing countries, greater awareness of breast cancer and adequate training in breast self-examination (BSE) combined with regular clinical breast examination would therefore greatly ensure early detection of breast lumps which may be cancerous (Anderson et al., 2003).

Failure by women to practice breast examination has been associated with delay in presentation and a subsequent poor prognosis, with forgetfulness, fears, lack of time, laziness and lack of confidence among others being cited as the reasons. (Mason and White, 2008; Nafissi et al., 2012; Ghazali et al., 2013). In a Ghanaian study involving 19,423 women, 330 (1.7%) were histologically proven to have breast cancer, of which 248 patients (75.2%) had palpable breast lumps and most of them being in the age range 40-49 years should be either married or have male partner. This onset of diagnosis is quite close to that reported in Malaysia where the mean age was 50.6 years though breast cancer in a 15 year old was recorded in Iran (Ohene Yeboah and Adjei, 2012; Abdullah et al., 2013). Majority of women who have breast cancer are married (Khan et al., 2014). Breast cancer does not only affect women since spouses of women who are diagnosed of breast cancer also go through significant distress sometimes exceeding that of the woman (Lewis et al., 2008; Thomas, 2010; Al-Amoudi and Abduljabbar, 2012).

Whereas several studies have been conducted to assess the knowledge and attitudes of females towards breast cancer and BSE, such cannot be said for the male population. This study aimed to evaluate the awareness level, knowledge and attitude of men towards breast cancer, their involvement in early detection by way of

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physical examination, and their readiness to be provided the skills to perform breast examination on their partners. Also considered were demographic factors associated with their knowledge and attitude.

Materials and Methods

Study design and setting

The study was modeled on the theory of planned behaviour which suggests that the likelihood of behavioral change is dependent on the amount of control persons have over both a given behavior and their determination to change it (Ajzen, 2002). A cross sectional survey was conducted to obtain respondent's information such as: awareness and knowledge on breast cancer, source of information, breast self-examination and respondent's willingness to examine their partners' breasts for lumps. Participants were male public servants in the Tamale Metropolis from the Security Services, Health Services, Education Service, Finance/Banking and Administrative Services. Others were from the Birth and Deaths Registry, Land and Forestry, Drivers and Vehicles Licensing Authority, Sports Council, Food and Drugs Authority, Library Services, Ghana Water Company, and Volta River Authority.

Based on the results of a previous study, a total of five hundred and thirty (530) public servants of all categories in the respective public agencies were invited to participate in the research using modified convenient sampling, where specific numbers were allocated to each public agency according to their estimated departments and population (Salati and Rather, 2009). The respondents were selected using convenient sampling, thus the sample constitutes those who were present at the time of visiting the department/institution and invited in person by the researchers. Only males who demonstrated willingness to take part in the research by giving written consent were included in the study.

Data collection and statistical analysis

Two trained researchers collected data from participants between April and June, 2011 using a pretested structured questionnaire. A draft questionnaire was initially prepared and tested on 20 male public servants that allowed clarification of all questions. The final questionnaire was structured to gather from the participants, information related to demography and participants knowledge and attitudes towards breast cancer. A total of 500 questionnaires were collected after regular personal visits and verbal reminders to the respondents.

The level of knowledge of breast cancer was measured based on the respondents' answers to three questions; age of onset, cause or risk factors and major sign or symptom, of which respondents had to choose one out of listed options. The average percentage of respondents who chose the correct answers from these three areas measured the knowledge of the respondents in this study. In terms of age, above 30 years was considered the age of greatest risk; genetics and age are the correct causes of breast cancers since they are the non-modifiable risk factors beside early menarche and menopause (Pakseresht et al., 2009;

American Cancer Society, 2012). Breast cancer typically is symptomless when tumor is small but when it has grown to a size that can be felt, the most common sign is a painless lump or swelling, therefore any choice from the options which are signs and symptoms of advanced forms of breast cancer is incorrect (American Cancer Society, 2012). Measurement of awareness level required respondents choosing a Yes or No and also select from options provided, with having heard of breast cancer considered as being aware of the disease. Questions used to measure the skill and level of accessibility of the partner's breast and readiness to perform breast examination were also a yes or no and options to choose from.

The data was analyzed using Statistical Package for the Social Sciences (SPSS), version 15 (SPSS Inc, IBM, Chicago, IL, USA). Associations between participants' socio-demographic variables and awareness, knowledge and attitudes were assessed by the chi square test and logistic regression analysis. Statistical significance was assumed at $p < 0.05$ and at a confidence interval of 95%. Categorical data were expressed as frequencies and percentages.

The study was approved by the Ethics Committee of the School of Medicine and Health Sciences of the University for Development Studies.

Results

Out of the 530 questionnaires administered, 500 were returned which gave a response rate of 94.3%. Table 1 represents the demographic characteristics of the respondents. The respondents' ages were from 18-59 years, with the greatest number of respondents, 197 (39.4%) in the range, 30-39 years. Majority of the respondents were of the Christian faith, 274 (54.8%), and 308 (61.6%) were married. Of those who were unmarried, 151 (78.6%) had female sexual partners. Graduates from tertiary

Table 1. Demographic Characteristics of Respondents

Variables		Respondents (N=500) % (n)
Age (Years)	18-29	31.2 (156)
	30-39	39.4 (197)
	40-49	17.6 (88)
	50-59	11.8 (59)
Religious affiliation	Christianity	54.8 (274)
	Islam	43.2 (216)
	Traditional	1.2 (6)
	Others	0.8 (4)
Marital status	Single	38.4 (192)
	Married	61.6 (308)
Relationship status of the unmarried (n=192)		
	Has a female sex partner	78.6 (151)
	No female sex partner	21.4 (41)
Level of education	Basic school	4.2 (21)
	Secondary/High school	14.0 (70)
	Tertiary	81.8 (409)
Profession	Security	17.0 (85)
	Health	13.0 (65)
	Education	15.6 (78)
	Finance	11.4 (57)
	Local Administration	6.4 (32)
	Others	36.6 (183)

educational institutions such as Polytechnics, Nursing and Midwife Training Schools and Universities formed the bulk, 409 (81.8%) of the respondents. Personnel from the security services were the most represented professionals group, 85 (17.0%).

Table 2 showed the breast cancer awareness level among the male public servants. Majority of respondents, 494 (98.8%) were aware of female breast cancer but most of them, 308 (61.6%) did not know that men could as well suffer from breast cancer. The Television, 299 (59.8%) followed by the radio, 218 (43.6%) were the most common sources of information on breast cancer. Majority of respondents, 434 (86.8%) had none of their relatives diagnosed of breast cancer, and for those with relatives who were breast cancer sufferers; aunt, sister and mother were most commonly mentioned with only 1 (1.5%) having a wife sufferer.

Table 3 presents the results of the analysis of respondent's level of knowledge about breast cancer. Majority of the respondents, 141 (28.2%) had no idea about the age at which a female is at the greatest risk of breast cancer with 36.4% indicating the most probable age range of above 30 years. For the greatest risk factors, a minority of 12.8% considered genetics and age as the non modifiable risk factors associated with breast cancer. For the signs and symptoms associated of breast cancer, all the respondents mentioned signs with advanced form of breast cancer with none listing a painless lump or swelling. Up to 318 (63.6%) responded they could identify a cancerous breast but swollenness, 182 (36.4 %) and ulceration, 136 (42.9%) were the main symptoms mentioned. The overall mean knowledge score was 16.4%.

Table 4 showed the results of the respondents' readiness to assist in early breast cancer detection and their level of skills on breast examination.

Table 2. Measuring Awareness Level on Breast Cancer

Variable	Respondents (N=500) % (n)
Have heard of breast cancer?	
Yes	98.8 (494)
No	1.2 (6)
Can men also have breast cancer?	
Yes	38.4 (192)
No	61.6 (308)
Sources of information on breast cancer*	
School	23.8 (119)
Radio	43.6 (218)
Newspaper	32.4 (162)
Friends	15.0 (75)
Television	59.8 (299)
Others (Internet, books and posters)	7.4 (37)
Has any of your relatives had breast cancer before?	
Yes	13.2% (66)
No	86.8% (434)
Type of relationship with breast cancer relative (N=66)	
Aunt	25.8 (17)
Sister	25.8 (17)
Mother	15.2 (10)
Wife	1.5 (1)
Others (patients, friends, distant relatives)	31.8 (21)

*Respondents were permitted to make multiple choices

Majority, 461 (92.0%) of the male respondents believed they could assist in the early detection of breast cancer. The results indicated that majority of the respondents, 283 (56.6%) had no knowledge on how to examine the female breast for cancerous lumps. Most of the respondents, 366 (73.2%) also had never performed breast examination and for the fewer number, 134 (26.8%) who had ever performed the examination, most, 105 (78.4%) of their clients were their partners, with the rest being patients and other relatives. Of the number who had never performed breast examination, their reasons were as follows; Lack of knowledge, 162 (44.5%), not a health worker, 57 (15.7%), never thought of it, 48 (13.1%), had

Table 3. Knowledge of the Respondents on Breast Cancer

Variable	Respondents (N=500) % (n)	Correct knowledge (%)
Age/years of onset		
0 -9	2.6 (13)	
19 - 20	13.4 (67)	
20 -29	19.4 (97)	
30 -39	19.2 (96)	19.2
>40	17.2 (86)	17.2
No idea	28.2 (141)	
Know the cause/risk factors of breast cancer		
Yes	27.8 (139)	
No	72.2 (361)	
If you know risk factors of breast cancer, state one (N=139)		
Genetics	35.3 (49)	9.8
Drugs	9.4 (13)	
Radiations	12.2 (17)	
Age	10.8 (15)	3
Putting money in the brassiere	18.7 (26)	
Others (Lifestyle, nulliparity, gender)	13.6 (19)	
Known signs and Symptoms of breast cancer		
Swollen breast	42.9 (136)	0
Pus discharging breast	4.1 (13)	
Ulcerated breast	26.2 (83)	
Change in colour of breast	9.4 (30)	
Others (deformed, lump, inverted nipple, very painful breast)	17.4 (55)	
Overall mean knowledge		16.4

Table 4. Level of Skills on Breast Examination by Male Public Servants

Variable	Respondents (N=500) % (n)
Can men assist in early breast cancer detection?	
Yes	92.0 (461)
No	8.0 (38)
Know how to examine a woman's breast for lumps?	
Yes	43.4 (217)
No	56.6 (283)
Have ever performed breast examination?	
Yes	26.8 (134)
No	73.2 (366)
Reasons for not performing breast examination on partner	
Lack of knowledge	44.5 (162)
Not a health worker	15.7 (57)
Never thought of it	13.1 (48)
Had no opportunity	23.1 (84)
Has no partner	3.6 (13)
Person on whom it was performed	
Partner	78.4 (105)
Others (Patients and relatives)	21.6 (29)

Table 5. Accessibility to Partners' Breast and Willingness to have Breast Examination Skills

Variable	Respondents (N=500) % (n)
How often do you have unhindered access to partner's breast	
All days of the week	13.8 (69)
Four to five times a week	2.8 (14)
Two to three times a week	22.0 (110)
Once a week	18.0 (90)
Once every two weeks	14.6 (73)
Occasionally	19.4 (97)
No access	9.4 (47)
Want to have breast examination skills?	
Yes	96.2 (481)
No	3.8 (19)

no access to the partners breast, 84 (23.1%) and has no partner, 13 (3.6%).

For men to be able to perform the physical examination on their partners, they must have access to their breasts. Table 5 shows respondents level of accessibility to the partners' breast and their willingness to have breast examination skills.

Discussion

This is the first study to report the awareness and knowledge levels of breast cancer among male public civil servants in Ghana. It is also the first study that measured the attitude of men toward performing breast examination on their partners. In the current study, there was a high level of awareness, estimated at 98.8% which is similar to the 93.6% found among Saudi Arabian men (Al-Amoudi and Abduljabbar, 2012). This high awareness level in this study can be attributed to the class of respondents used, of which 409 (81.8%) had tertiary level education. Additionally, the fact that some of the respondents, 66 (13.2%) had close relations diagnosed of breast cancer may also be the reason for the increased level of awareness. This level of awareness among men is encouraging, when compared to the lower levels (21.4% -58.2%) reported among women in Nigeria (Okobia et al., 2006; Omotara et al., 2012). Despite the impressive level of awareness, only 192 (38.4%) of the respondents knew that men could also develop breast cancer, a situation that can potentially deprive men sufferers of early detection and treatment.

In this study, the mass media especially television, radio and newspapers were the main sources of information for the respondents which is in variance with the study in Saudi Arabia where health professionals were the main source of information for the men who took part in the study (Al-Ahoudi and Abduljabbar, 2012). Although there is no literature to explain the reasons for the differences in the source of information, cultural difference may be a factor because whilst topics that border on sexuality can be freely discussed through the mass media in a secular country such as Ghana, that cannot be said for an Islamic country such as Saudi Arabia.

A cross-sectional study on women in Ghana showed most respondents indicating knowledge deficit about both breast cancer and BSE which is responsible for

the presentation to health facilities of stages III and IV breast cancer types in developing countries including Ghana (Opoku et al., 2012; Ohene-Yeboah and Adjei, 2012). It is a fact that persons closest, both physically and emotionally to women, are their partners or spouses who also have access to parts of the women, including the breasts. Also partners of women are negatively affected financially and emotionally when they are diagnosed of breast cancer. A study in Denmark found that male partners of women in whom breast cancer had been diagnosed were at an increased risk of severe depression and subsequent admission to hospital (Nakaya et al., 2010). Because of the above reasons, providing men with knowledge of breast cancers will ensure they encourage their partners who show any symptom to report to the hospital early enough.

The level of knowledge of the respondents in this study was poor. A similar study among Kashmiri men also reported a poor awareness and knowledge levels (Salati and Rather, 2009). Considering this low level of knowledge among our study population who, by the standards of a developing country, can be said to be well-educated, a poorer level of knowledge is expected among the general population.

A greater proportion of respondents, 283 (56.6%) admitted to not knowing how to perform breast examination and most of them attributed it to the lack of knowledge and skills, 162 (44.5%) and lack of access to the female breasts 84 (23.1%). Even for those who said they knew how to perform breast examination, a fewer number had really practiced it. Despite the low knowledge level, majority of the respondents, 461 (92.0%) agreed that men can assist in early breast cancer detection while, 481 (96.2%) were willing to be provided with breast examination skills. For the men to be able to perform the examination, they must have access to the breasts of their partners. In this study, 356 (71.2%) of respondents had access to partners' breasts from every day to every fortnight, and for this reason, providing them skills in breast examination, would enhance partner breast examination to ensure early detection of signs and symptoms of breast cancer. In this study, a significant proportion of respondents, 105 (78.4%) who had ever been involved in breast examination performed the procedure on their partners. This means that with a lot more men provided with knowledge on breast cancer and the skills on breast examination, their female partners will obtain greater support to ensure that the mortality and morbidity associated with the disease is reduced. This study showed that marital status does not influence a person's level of knowledge on breast examination ($p=0.5170$) and religion does not affect one's readiness to have skills in breast examination ($p=0.2261$). The implication of this finding is that education on breast cancers can be taken to persons' places of worship without discrimination in relation to marital status. Respondents with tertiary education were significantly more knowledgeable than those of lesser levels of education ($\chi^2=4.255, p=0.0391$). The reason may be that breast cancer and its management forms part of curriculum of programmes that are health related.

Several limitations were encountered during this research including the lack of statistical data on the

number of public servants within the Tamale metropolis hence inability to use the probability sampling method. In addition, some heads of institutions were reluctant to permit their subordinates to participate in the study. This study involved the use of self-administered questionnaire rather than interviews hence reliability of answers could not be verified. Varying socioeconomic factors which was not considered in this study could as well influence the overall outcome. This study was conducted among only public servants in Tamale, a city in northern Ghana; hence the result might not represent the knowledge and attitude among Ghanaian men.

In conclusion, although the awareness level is excellent, there was a deficit in knowledge in relation to breast cancer. There is therefore, the need to include men in breast cancer education campaigns which currently is directed towards females. The education campaign should include providing skills on partners' breast examination, since men are willing to be empowered to detect lumps in their partners' breasts as breast cancers affect them financially and emotionally. The use of the mass media for the dissemination of information on breast cancer should be encouraged. Also, interactive breast examination skills training can be organized at work places as well as places of worship using the services of knowledgeable health professionals.

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