INFLUENCE OF MASS MEDIA CAMPAIGNS ON BREAST CANCER KNOWLEDGE AMONG WOMEN IN ENUGU STATE

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ABSTRACT: *Breast cancer remains a major killer of women globally. Medical literature suggests that early detection could led to complete cure. Owing to the fact that early detection is dependent on women's levels of awareness and knowledge, several media campaigns have been lunched. However, one wonders the effectiveness of these campaigns on the knowledge and behaviour of women in Enugu State. This study, therefore, set out to ascertain the contributions of mass media to breast cancer knowledge among women in Enugu State. Survey research method was employed with questionnaire and interview guide as the measuring instruments. Cochran sampling technique was used to determine the sample size which stood at 384 based on a population of 1,671,795 women in Enugu State. The sample was randomly selected while Statistical Package for Social Sciences was used to analyze the data collected. The findings showed a positive relationship between level of education and information seeking from the mass media about breast cancer. Radio was found to be the most predominant medium used by the women. In this study, it is recommended that government should intensify media messages on breast cancer in the state, especially in the rural communities where most of the non-literate women reside. Future studies should focus on expanding the scope of this study to South – Eastern parts of Nigeria*

KEYWORDS: Breast Cancer, Knowledge, Awareness, Media Campaigns, Health

INTRODUCTION

Breast cancer is the most common cancer among women globally, with over one million new cases diagnosed annually, resulting in over 400,000 deaths. About 4.4 million women are living with the disease in the world (Oluwatosin and Oladepo, 2011, p.9; Akpo, Akpo, Akhator, 2009, p.2). Breast cancer will continue to pose serious challenge to Nigeria and other developing countries due to seemingly lack of media campaign directed at reducing cancer incidence and mortality (Gotzshe, 2011, p.8; Adika, Joffa, Makoro, Yagba- Obariobora, Apiyanteide, 2012, pp.17-23; Irurhe, 2012, pp.1-5; Ntekim, 2009, pp.242; Agarwal, 2011, p. 235). It had been shown that African women, including Nigerians, have low knowledge of the risk factors of breast cancer. Cancer, the generic name for carcinoma is the malignant type of uncontrolled growth of cells and tissues (Lawal and Adesunkanmi, 2008, pp. 107)

The risk factors for breast cancer include obesity, lower levels of physical activity, use of hormone replacement therapy, smoking, alcohol and family history, among others. Breast cancer often appeared as breast lump or bloody nipple discharge (Adebamowo, 2007, P. 4, Gerlach, Marino and Hoffman-Goetz (2006, pp. 240-244).

In the developed countries, most of the breast cancer patients seek for medical attention on time, due to better knowledge of the disease while breast cancer patients in Nigeria report late to hospitals for treatment due to lack of knowledge of the disease. The late report of breast cancer cases in Nigeria had been attributed to lack of national screening programme for breast

cancer, lack of knowledge of early detection measures, such as breast self-examination and clinical breast examination. Most studies suggest that breast self- examination was an efficient method of detecting cancerous turmour at an earlier stage, which will lead to higher rate of survival (Gotzshe, 2011,p.8; Akinola, Wright, Osunfidiya, Orogbemi, Akinola, 2011, p.11; Shalinini and Nayak 2011,p.7; Osime, Okojie, Aigbekaen, 2008, pp.192-197). Majority of breast cancer patients delay going for medical treatment due to lack of finances.

In developing countries, the majority of women diagnosed with breast cancer do not survive because their cancer is detected too late. Breast cancer prevention is not simply about educating and empowering women, equipping health workers with the appropriate skills and attitude are also crucial.

In developing countries, many women arrive with late-stage tumours that could have been detected at the primary care level. There are few trained primary- care nurses and physicians to recognize the symptoms that could be related to cancer, and also review family history of breast cancer. Early detection does not necessarily depend on expensive diagnostic equipment, but routine clinical examination performed by well- trained community health workers, like nurses and physicians (Bello, 2012, p.159 Salaudeen, Akande and Musa 2009, pp. 157-165).

Okoronkwo, (2014), was of the opinion that breast cancer could be curable if detected early with the practice of breast self- examination and through mammography. He also said that cure of breast cancer when detected early, could be through surgical operation, chemotherapy, and radiotherapy. He advised women to prevent breast cancer by eating healthy, exercise regularly, avoiding steroids and contraceptive pills.

Mammography, as a diagnostic and a screening tool, is the process of making use of low energy x-rays to examine women's breast for early detection of breast cancer. Since mammograms reduce mortality, United States preventive services Task Force suggested that every woman between 50 and 70 years should undergo mammography screening every two years (Gotzshe, 2013, pp. 119-124; Welch and Frankel, 2011, pp. 171, 200).

Like all x-rays, mammograms use doses of ionizing radiation to create images. Radiologists, further analyze the image for any mass. Ultrasound is further used for evaluation of masses on mammography or palpable masses missed on mammograms. In addition, Ductograms may be used for evaluation of bloody nipple discharge when the mammogram is non diagnostic, while Magnetic Resonance Imaging (MRI) can be used for further evaluation of questionable findings as well as screening for pre-surgical evaluation in patients with palpable cancer to detect any additional lesions that might change the surgical approach (Freidenson, 2010; Feig and Hendrick 2011, P. 115).

Historically, breast cancer has been known to mankind about 3,500 years ago, discovered by Ancient Egyptians. In 460 B.C., Hippocrates, known as "The father of Western Medicine", described breast cancer as humoral disease. He said that the body consisted of four humors, namely; blood, phlegm, yellow bile and black bile. He noted that cancer was caused by the excess of black bile (Mandal, 2015, p. 2).

This is where the contributions of the mass media to breast cancer knowledge come in. the media play an important function in public knowledge of health issues. They have the ability to create knowledge through their surveillance function. That is telling the people what to concern themselves about.

Health communication is vital to both health practitioners and the citizens. Health practitioners grow positively sensitive to the persuasive power of mass media. The citizens learn to make healthy choice concerning their health, such as importance of early detection of breast cancer (Williams, 2010, pp. 70-72).

As an effective means of information dissemination, the media need to be well equipped to play their role in educating and informing the women on how to prevent and detect breast cancer early. With the massive media campaign on breast cancer, the women will be equipped with the better knowledge of breast cancer and also the importance of routine checks on the breast.

As of now, there has not been enough media campaign on breast cancer. It is expected that the media should be strengthened to help educate the women on the prevention, early detection measures and treatment of breast cancer.

Education has a major role to play in the knowledge of breast cancer and its prevention and early detection methods. Low literacy is an inability to read and write and it may have a direct and negative effect on health, especially in health conditions like breast cancer, because of the inability to access and use health information, particularly written information. Health literacy is the ability to obtain, process and understand basic health information and services to make appropriate health decisions (Popoola, Igwilo, Sowunmi, 2013, p. 57).

Knowledge and education are important to enlighten women on the need to monitor the changes they might notice in their breasts and report such changes to medical experts. Early detection is the secret to cancer prevention and eradication, where women access information from the mass media on specific preventive measures such as breast screening to allow for early detection and intervention. Opportunity is made for longer survival period, as obtained in most developed countries. Most women in Nigeria seek medical attention late due to lack of access to vital information on breast cancer (Oche, Ayodele, Umar, 2012).

Statement of the Problem

The problem of this study revolves around the deluge of the messages by the media on breast cancer and the apparent ignorance of a large percentage of women about the disease. The question is; if the media have contributed so much, why is it that knowledge about breast cancer is still low in Enugu State?

Most of the women do not have the knowledge of early detection measures of breast cancer, the nature, how to prevent it and various treatment available for breast cancer. Could the problem be attributed to high number of illiterate women in the state, who could not comprehend media messages on breast cancer or lack of infrastructural facilities and amenities, especially in the rural areas, which prevent most of the rural dwellers from having access to media outputs of their choice? Also did high rate of poverty, unemployment, deny the women the opportunity of getting information on breast cancer from the mass media?

These questions gave impetus to the problem of this study which is: to extent did the mass media contribute to breast cancer knowledge among women in Enugu State, and how well did the women receive and understood the information ?.

Research Questions

(1) To what extent do women in Enugu State get their breast cancer knowledge from the mass media, as opposed the other sources, such as interpersonal communication?

(2) How does the level of education of women in Enugu State determine their knowledge of breast cancer from the mass media?

(3) To what extent is knowledge- gap among literate and non- literate women of Enugu State regarding breast cancer information from the mass media.

(4) To what extent is knowledge- gap in breast cancer knowledge from the mass media between urban and rural women?

(5) What is the relationship between media use and knowledge of breast cancer among women in Enugu State?

Research Hypotheses

Hypothesis One

Hi: Enugu State women got their breast cancer knowledge from the mass media, as opposed the other sources, such as interpersonal communication.

Ho: Enugu State women do not get their breast cancer knowledge from the mass media, as opposed the other sources, such as interpersonal communication.

Hypothesis Two

Hi: There is relationship between level of education and knowledge of breast cancer from the mass media

Ho: There is no relationship between level of education and knowledge of breast cancer from the mass media

Hypothesis Three

Hi: In spite of media messages, there is knowledge-gap among literate and non- literate women of Enugu State regarding breast cancer information.

Ho: In spite of media messages, there is no knowledge -gap among literate and non-literate women of Enugu State regarding breast cancer information.

Hypothesis Four

Hi: Irrespective of exposure in the mass media, there is difference in knowledge of breast cancer between urban and rural women.

Ho: Irrespective of exposure in the mass media, there is no difference in knowledge of breast cancer between urban and rural women.

Hypothesis Five

Hi: There is a relationship between media use and knowledge of breast cancer.

Ho: There is no relationship between media use and knowledge of breast cancer.

REVIEW OF RELATED LITERATURE

Mass Media Campaigns Create Knowledge on Cancer Screening and Prevention

Mass media campaigns to motivate women to have papanicolaou (PAP) smears and undergo screening mammography have been going on in developed countries a long time ago. Screening of asymptomatic individuals for breast cancer, cervical and colorectal cancers is recommended for early detection. In Australia and the U.S.A., mass media campaigns in addition to reminder letters gave rise to short-term pap-smear uptake, especially when there was efficient screening services (Baron, Rimer and Breslow 2008, pp. 534)

Further studies indicated that short duration screening programmes that offered quick access to screening services, used reminder letters and also campaigns in television and radio to educate people on the need to undertake pap smears. Also in the cases of mammography, mass media campaigns and reminder letters were used in areas where screening was already organized and many people participated in the screening exercises (Mullins, Wakefield and Baron 2008).

Mass media campaigns without standard screening services, however produced no increase in the early detection of cancer. Also mass media campaigns have succeeded in creating awareness on the prevention of skin cancer. The media had continued to educate the people that skin cancer is caused mainly by over exposure to ultraviolent radiation in sunlight. Mass media also went further to tell people to reduce sun exposure, especially for fair-skinned persons to avoid high ultraviolent periods to wear protective clothing (Saraiya, Glantz and Briss 2004, pp. 422-466; Elwood, Makin, Sinclair and Burton 2009, pp. 107-132).

A study that assessed sun protection behaviourial change for 15 years in Australia, due to mass media campaign awareness, had shown that there has been improvements in attitudes and behaviour concerning skin cancer prevention, also, reduction in the incidence of melanoma was observed, especially among young people due to the media campaign (Saraiya, *et al.* 2004).

Health Communication Intervention Efforts in Changing Health Behaviour

Health communication has been identified with the efforts of touching virtually all aspects of health and wellbeing, including diseases prevention and cure, health promotion and quality of life. Health communication has done a lot in combining theories and practice in order to understand communication processes that would help change people's behaviour towards healthy living.

The effort is important at this time that many of the global public health conditions are rooted in human behaviour by combining efforts of many researchers and practitioners from various health fields and adopting multilevel theoretical approaches, health communications have the greatest opportunity to provide meaningful input in improving health attitudes and saving lives (Rimal and Lapinski, 2009, p. 2).

Intervention efforts to change behaviours are communicative acts. Health communication focused on the transmission function of information exchange, and also have in mind the channels through which intervention messages are attributed, how audience members responded and the features of messages that have the greatest impact.

These efforts reflect the essential components of the communication process: channel, source, receiver and message (Parrot, 2004, pp. 751 -787; Nabi, 2009, pp.292 – 320; Bronson, Haire-Joshu and Luke 2006 pp.341-370).

Three important health intervention considerations emerge from the fact that target audiences are members of social net-works, who interact with one another, engage in social ceremony and derive meaning from the enactment of habitual behaviors (Cho and Salmon, 2008, pp. 293 -317).

One of these intervention considerations is that communication is a dynamic process in which sources and receivers of information repeatedly interchange their roles, so there is need for health communication intervention to conduct extensive formative evaluation, access the needs of the audience. Secondly, the health communication should know that communication intervention do not fall into a social vacuum, however, information is received and processed through individuals and social settings that determine what people encounter through selective exposure, selective perception interpersonal relations and cultural and social norms.

More so, the health communication should expect discrepancies between messages disseminated and received, as they will arise not only as a result of differential exposure differences in interpretation in decoding media messages, therefore health communication should carefully study their audience to avoid unintended counterproductive effects (Cho and Salmon, 2008, p. 300; Lapinski and Rimal, 2005, pp.127 -147; Carey, 2009, p. 105).

Breast Cancer Knowledge in Nigeria

Most women in Nigeria do not have knowledge about dangers of breast cancer, thereby reporting late to hospital for treatment. Women in Nigeria generally treat breast cancer with apathy, and would most probably not talk about it, or seek medical attention, even if they noticed signs of breast cancer (Fajoyomi, 2009, p.2).

It is important to enlighten women on the need to monitor the changes they might experience around their breast and report such cases to medical experts. Since early detection of breast cancer is the key to positive treatment, and if opportunity is given to people to access information on preventive measures, and breast screening and self breast examination to allow early detention and intervention, a chance is created for longer survival of breast cancer patients, as is obtainable in most developed countries (Fajoyomi, 2009. p. 4; Salaudeen, *et al.* 2009, p.161; Oluwatosin, *et al*. 2011, p.9).

Also Oluwatosin and Oladepo, (2011, pp. 10-20), studied knowledge of breast cancer and its early detection measures among rural women in Akinyele Local Government Area, Ibadan, Nigeria. It was found out that the majority of the respondents do not have knowledge of early warning signs of breast cancer; overall knowledge of treatment of breast cancer among rural women were poor; the result also showed that none of the respondents acknowledged mammography as an early detection measure. It as well showed that few of the respondents acknowledged Breast Self-Examination (BSE) as an early detection measure. Other findings also showed that the recommended clinical examination once a year was not popular, and that the major source of knowledge of breast cancer among rural women were elders, neighbours and friends.

Salaudeen, *et al*. (2009, pp.157- 165), did a work on knowledge and attitudes to breast cancer and breast self examination among female undergraduates in University of Ilorin and Kwara state Polytechnic, Ilorin and the results established that most respondents heard of breast cancer

as a disease but the knowledge that breast cancer could be cured if detected early was low. Also the result showed that few respondents were willing to undergo mastectomy for possible breast cancer as they considered it non- feminine to have one breast or lose both; some considered it unacceptable, while others emphasized on the psychological effect after surgery. The study also showed that very few respondent seek information on breast self examination.

Kolawale, (2011, pp.11-20), in a study of feasible cancer control strategies for Nigeria, found out that Nigeria has no national policy or a comprehensive document on cancer control. The study also showed that there was no organized national programme for cancer prevention. The study also found out that control of reproductive cancers was only mentioned in the national policy on reproductive health, without a comprehensive document supporting it.

Njeze, (2014, p. 39) reviewed the presentation and historical diagnosis of breast lumps of patients seen in Trans Ekulu, Enugu, South Eastern Nigeria from 1993 to 2013 in a period of 21 years. In the result, only 38 percent of the patients came within 3 months of finding lumps in their breast and 83 percent had benign disease. Only 16.9 percent had breast cancer, out of which two females were in their 20s. It was therefore concluded that benign disease are the common breast disease in the area of the study.

Breast cancer assessment, using breast self-examination, clinical breast examination and mammography, are the secondary measures that aid in the early detection of breast cancer and better management Madubogwu, Ukah, Chianakwana and Anyiam (2013, p.113) evaluated the sensitivity, specificity, false positive and false negative rates of clinical breast examination for palpable breast mass on patients, at Nnamdi Azikiwe University Teaching Hospital, Nnewi, Anambra State, Nigeria. The result showed that clinical breast examination achieved true positive value of 42.7 percent, true negative value of 52.3 percent, false positive value of 5.5 percent and false negative value of 4.5 percent.

The result also showed the following diagnostic validities, sensitivity (90.4 percent), specificity (89.7 percent), false positive rate (11.3 percent), false negative rate (8.8 percent), positive predictive value (88.7 percent), negative predictive value (91.2 percent) and overall diagnostics accuracy of 90 percent. The authors were of the opinion that clinical breast examination in trained hands was a useful tool for assessing breast cancer, especially in poor countries where mammography is still largely unavailable. They therefore recommended this examination to all women from the age of 20 years, especially in people with positive family history of breast cancer.

Breast cancer patients generally have low rates of survival due to being diagnosed at advanced stages, raising critical issues above prevention and avoidance of risk factors. Breast self-examination makes women more "breast aware", which in turn may lead to an early diagnosed of breast cancer. Iheanacho, Ndu and Emenike (2013,p.148) conducted a study to determine the level of awareness of breast cancer risk factors and practice of breast self-examination among 240 female students in seven hostels at the University of Nigeria, Enugu Campus. The result of the study revealed that 87 percent did not have knowledge of the risk factors and 13 percent did not have knowledge of breast self examination, 93 percent have heard and understood the meaning, while 17 percent never heard.

On the practice of breast self examination, 73 percent have performed it, 25 percent never did, 25 percent performed it monthly and 4 percent, weekly. The students had good attitude (88 percent) to breast self examination, but only 5 percent did not, and 97 percent believed that it is good for breast cancer to be detected early, while 3 percent did not agree. The result also

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showed that most of the students had insufficient knowledge of breast cancer risk factors, and majority did not practice the self breast examination monthly. The study, therefore, recommended regular organization of seminars and workshops for students, to address such sensitive topics like breast cancer risk factors and breast self examination

Hou, Ogundiran, Ojengbede, Morhason-Bello, Zheng, Facekenthal, Adebamowo, Anetor, Akinyele, Olopade and Huo (2013, p.551) studied pre-menopausal women from the Nigeria breast cancer study from 1998 to 2011. The result revealed that out of the 718 cases examined 21.2 percent had pregnancy -associated breast cancer for two or more years and 20.2 percent had pregnancy- associated breast cancer for three to five years. The study suggested that prospective mothers with multiple births and family history of breast cancer may have an elevated risk of breast cancer during their immediate post partum period.

Makanjuola, Amoo, Ajibade and Makinde (2013, p.32) Conducted a study among 100 women in Ala Community, in Akure North Local Government Area of Ondo State, Nigeria. The study was intended to assess the knowledge of breast cancer and practice of breast self examination among the women in Ala Community. The result showed that out of the 100 women studied a greater proportion of 60 percent had poor knowledge of breast self examination and nearly all had knowledge of the existence of breast cancer. 55 percent believed that the most frequently perceived cause of breast cancer was hereditary, followed by the 50 percent of the women who believed that breast cancer was caused by witchcraft. 65 percent said that the most frequent risk factors was excessive alcohol consumption. Some (45 percent) were partially aware of causes of breast cancer and some (60 percent) believed it could be prevented with a vaccine, while others (34 percent) recognized breast examination as a breast cancer prevention method. The major source of knowledge for breast cancer and breast self examination were the mass media, but a few (13 percent) had practiced breast self examination. The study concluded that there was poor knowledge of breast self examination and poor practice. It therefore suggested breast knowledge campaign and self efficacy development to aid early detection and better prognosis of cancer in Ala community.

Popoola, *et al.* (2013, p.55) explored and evaluated the relationship between literacy and early detection of breast cancer among patients attending Oncology tertiary health care facility at Lagos, Nigeria. The study aimed at improving the rates of cancer screening and cancer outcomes, by increasing the medical community understands the complex interplay, as it relates to such patients in Nigeria.

Out of a total of 184 histologically diagnosed breast cancer patients used in the study, the result revealed that the knowledge and practice of both breast self-examination and mammography dwindled with decreasing educational attainment. It was therefore concluded that, in order to improve women's health, it was necessary to provide equal educational opportunities for women, especially for the low literacy groups in the society.

Popoola, *et al*. (2013, p.49) conducted a study to evaluate the effect of literacy on breast cancer diagnosis and treatment with the hope of achieving a more holistic approach to the management, prevention and control of breast cancer. The study was conducted at the Lagos State University Teaching Hospital.

Out of 190 patients studied, there was a statistically significant association between the level of education and awareness and practice of breast cancer screening methods. The study concluded that clear communication tailored to patient culture and literacy were essential in

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improving the awareness and positive attitudes towards the benefits of early breast screening, so as to have better outcome.

Elumelu, Oladeji, Adenipekun and Eriba (2013, p.1) evaluated the sexuality problems in young women who had completed treatment for breast cancer and on follow up appointment, at the University College Hospital, Ibadan, Nigeria. The result revealed that, out of the 101 patients studied, 83 percent were conscious of their appearance.

Body image problem were reported by 81.3 percent of the patients, and 73 percent claimed that the treatment had left their body less whole, while 76.2 percent felt discomfort with nudity because of their scar.83.2 percent said they have sexual dysfunctions and absence or reduction of sexual desire, followed by 69 percent of the patients who said they have lubrication difficulties, 55 percent said they experienced dyspareunia, while 55 percent said they have inhibited female organism. Also reported, included lack of sexual satisfaction (73.3 percent), and increased tension in their home and emotional difficulties with their spouses. The study concluded by advising clinicians to be aware that sexuality dysfunctions are possible side effects that could be considered during counseling sessions, while managing their patients. Women who are given information and instruction about breast self-examination and breast awareness by health care professionals are supposed to demonstrate higher knowledge and confidence and tend to practice breast self- examination more than those who received information from other sources. Oluwatosin, (2012, p.22) evaluated primary health nurses, knowledge, practice and client teaching of early detection measures of breast cancer in five rural and three urban areas from eleven local government areas in Ibadan Oyo State. The result revealed that only 20 percent considered painless lump as an early sign of breast cancer, while 40.9 percent considered pain as an early sign.

80.9 considered breast self- examination as early detection measure, while 40 percent considered clinical breast examination and 30 percent considered mammogram as early detection methods. The logistic regression of client teaching on four variables showed that for every increase in knowledge of breast cancer, the odds of client teaching significantly increased by 7.5 percent. The study also showed that there was significant relationship between knowledge of early detection measure; practice of breast self –examination and client teaching. The author therefore suggested that attention should be given to detection methods of breast cancer, to enhance breast cancer early detection among the primary health care nurses, so as to enhance health deviation self-care of the clients. They concluded that knowledge, practice and client teaching by nurses at the primary health care level will contribute to early detection of breast cancer.

Carcinoma of the breast which is the leading cause of death in women aged 30 years and above, has tried to reduce life expectancy of the populace. The incident is rising rapidly, and majority of the patients seek medical attention late. Irurhe, *et al*.(2012, p.1) made a cross–sectional survey among students of three secondary schools in Mainland Local Government Area of Lagos, Nigeria , to assess their level of awareness and knowledge of breast self-examination.

The result showed that 97 percent heard of breast-cancer and 30.5 percent had radio and television as first source of information, but their knowledge was low. The authors therefore concluded that majority of the respondents had heard of breast cancer but the knowledge and understanding of the disease were very low.

In a study conducted by Omotara, *et al*. (2012, p.1) to determine the level of awareness, the attitude and practice of rural women regarding breast cancer, in four local government areas of

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north eastern Nigeria , namely, Konduga, bama, Gwoza and Madagali, revealed that only 58.2 percent of them have heard of breast cancer, out of these , only 28.2 percent perceived the cause to be medical condition, 21.4 percent said it was spiritual, 20.8 percent believed breast cancer was caused by use of brassieres and 2.3 percent said it was caused by excessive breastfeeding. only 38.7 percent knew of breast self-examination, 9.1 percent said they had done breast self-examination before, 58.8 percent said they may do it, if it will be beneficial, 19.9 percent said they will perform breast self-examination if their husbands agree and 4.2 percent agree to it if there is known cure. The study therefore suggested critical and urgent need for more sustained awareness of breast cancer.

Ayoade, Tade and Salami (2012, p.14), conducted a study to investigate the clinical feature and presentation of breast diseases in surgical outpatient clinic of Olabisi Onabanjo University Teaching Hospital, Sagamu. Out of the 119 female patients studied, the commonest symptoms were breast lump (91.7 percent) and breast pain (23.1 percent). Breast pain was significant complaint in patients with breast malignancy.Also observed were palpable lumps(85.1 percent) malignant diseases (36.3 percent)and begin disease (57.8percent), while 14.8 percent, including those that had malignant disease absconded.

The study therefore concluded that breast lump was the commonest clinical feature of breast disease and over 60 percent of the breast diseases were benign.

In a study conducted by Olowokere, Onibokun and Oluwatosin (2012, p.238) in four rural communities of Egbeda Local Government Area of Oyo state, it was discovered that 52.7 percent of the women had adequate knowledge of cancer risk factors and symptoms. 52.8 percent of women were aware of breast self-examination, 51.7 percent were aware of clinical breast examination.

Few of them (3.9 percent) have heard of mammography and used it for diagnosis; Majority (72.8 percent) did practice breast self-examination which is the most readily available. The study therefore suggested that the health care professionals at the primary health care level should do more to educate the rural women on the skills to use breast self-examination effectively to promote their health.

Adika, Joffa, Makoro, Yagba-Obariobora and Apiyanteide (2012, p.17) studied the compliance to practice and knowledge of breast self-examination among 92 nurses who were employees of Federal Medical Center and University Teaching Hospital, Okolobiri, both in Bayelsa state, Nigeria.

Result of the study revealed that 38 percent of the nurses had good knowledge, 48.9 percent, had very poor knowledge and 13 percent had poor knowledge of signs and symptoms. Also, 43.5 percent had good knowledge of risk factors, 39.1 percent had very good knowledge of risk factors and 17.4 percent had very poor knowledge of risk factors. About 95.7 percent knew about breast self-examination with 23.9 percent of them practicing it once a month, 87 percent knew about mammography with 92..4 percent of them never applied it.

Furthermore, 80.4 percent knew about clinical breast examination and 81.5 of them never applied it, while 7.6 percent applied it within a year or month. The study concluded that nurses had very good knowledge of breast self-examination, clinical breast examination and mammography, but minority of them practiced or applied these methods.

Oche, Ayodele and Umar (2012, p.114) studied 100 female workers at Usman Danfodiyo University Teaching Hospital, Sokoto, to determine the level of knowledge of female health

workers about breast cancer and their attitude and practice of mammography. The result showed that 67 percent of female doctors have better knowledge of breast cancer, and its risk factors, with 80 percent of female doctors having better knowledge   than nurses. Majority of the workers (84 percent) were aware of mammography and its uses, but only 9 percent had used it in the last one year, reason for not using it, according to them was lack of knowledge of the procedure. The study concluded that the low rate portrayed a bad omen on the fight against breast cancer, and therefore called on the need for educational intervention to increase the awareness and knowledge of mammography.

Popoola, *et al*. (2012, p.24) evaluated the five year survival rate, pattern of disease presentation, to determine some predictive factors of five years survival among patient diagnosed and managed for breast cancer at the Lagos State University Teaching Hospital, Nigeria. The result of the study revealed that at the point of coming to the hospital for treatment women with stage III breast cancer were 45.6 percent, followed by women with stage IV (35 percent), stage ll (16.6 percent), and stage I (2.4 percent).

The overall five year survival in the population studied was 25.6 percent, and the five year survival rates for the patient were; stage ll (45 percent), stage III (15 percent) and stage IV (5 percent). The five year survival rate for early stage (I and ll) was 45 percent, while that for advanced stage (III and IV) was 16 percent.

The study concluded that patients most times came to the hospital in advanced stages of the disease and with aggressive tumour, which may have resulted in poor survival out come.

To determine the level of awareness of mammography and mammographic screening among women in Lagos, Nigeria, Akinola, *et al* (2011, p.125) conducted a research to determine the level of awareness of female patients who visited various clinics at the Lagos State University Teaching Hospital, Ikeja, from January 2009 to June 2009. The result showed that majority (59.6 percent) of the patients had a tertiary education. A family history of breast cancer showed 6 percent and less than 20 percent had under gone mammography.

Only 20 percent of all subjects were aware of the recommendation that they should receive routine mammography and mammographic screening on an annual or biannual basis, depending on their age, and of the side effects associated with the procedure. The mass media was the women's main source of information, and majority (67.6 percent) of the patients had performed breast self-examination, but less than 5 percent of them had their breast examined by mammography.

The result also showed low level of awareness about mammography and mammographic screening showing the urgent need to educate women about the risk of breast cancer as well as the importance of screening as a tool for the early detection and treatment of breast cancer.

In order to assess the current level of knowledge of breast cancer and its early detection measures, Bassey, Irurhe, Olowoyeye, Adeyomoye and Onajole (2011 p.1232), studied level of knowledge, attitude and practice of breast self- examination among nurses in Lagos University Teaching Hospital (LUTH). The study tried to evaluate the socio- demographic data, level of knowledge of breast cancer, the attitude and practice of breast self-examination. The result revealed that respondents' knowledge of breast cancer and breast self-examination were high (97.3 percent). Majority (85.6 percent) knew how to carry out breast self-examination and 58.6 percent got their information from radio and television. The attitude of respondents to breast self- examination was good, and most (98.5 percent) thought that breast

self- examination was necessary, while 84.3 percent claimed to have carried out breast self-examination before. The study therefore concluded that the level of awareness of breast cancer and breast self- examination were high among nursing students of the Lagos University Teaching Hospital and their level of education and chosen profession may have a lot to do with the result.

To verify the relationship between knowledge and practice of breast cancer screening, Bello, *et al*. (2011, p. 296) studied two groups of women with different levels of breast cancer. These included nurses at the LAUTECH Teaching Hospital, Osogbo, and non- health professional women from the 35 Local Government Areas of Osun State Nigeria.

The result revealed that, the mean score for the nurses was 10.9 ± 3.6 percent, while that for the non-health professionals was 3.5 ± 4.1 percent. 22.9 percent of nurses and 15 percent of non health professionals among those above the age of 40 years, had had a mammogram. The study concluded that good knowledge does not imply later screening rates in the study area.

Olu-Eddo and Ugiagbe (2011, p. 212) studied 1864 benign breast cancer diseases at the University of Benin Teaching Hospital, Benin city, Nigeria. They discovered that benign breast cancer diseases constituted 70 percent of lump and were mostly fibroadenoma and fibrocystic change, and this occurred predominantly in young females. Although the premalignant lesions of a typical hyperplasia were less common, the study suggested that biopsy of all benign breast diseases should be done to exclude lesions, and routine mammographic screening of at risk individuals instituted to increase early detection. They, therefore called on all pathologists, oncologists and radiologist, not only to recognize and distinguish benign breast diseases from breast cancer, but also to have in depth knowledge of the pattern of occurrence of these disorders on their geographical locale.

Kene, Odigie, Yusuf, Yusuf, Shehu and Kase (2010, p.104) studied the pattern of presentation and survival of breast patient were conducted by at Ahmadu Bello Teaching Hospital, Shika Zaria. The result showed that most patient (62.1 percent) were pre-menopausal. 62.1 percent went to the hospital with advanced breast cancer disease, while women that their left breast were affected were 62.1 percent. The overall survival rate beyond 36 months was 70.4 percent and premenopausal patients (70.6 percent) had better survival rate beyond 36 months than menopausal (68.5 percent) patients. The authors concluded that, the overall survival rate was low, and patients with early breast cancer had better survival than those with advanced diseases. Also majority of the patients were young pre-menopausal women with advanced breast cancer.

Akarolo-Anthony, Ogundiran and Adebamowo (2010, p. 4), studied breast cancer epidemic in Africa, the result showed that there was an emerging epidemic of breast cancer in Africa, including its risk factors. The study concluded that risking incidence of breast cancer was being driven by increasing life expectancy, changing life style, diet, physical activity and obstetric practices.

Study on knowledge and practice of breast self examination among female undergraduate students of Ahmadu Bello University of Zaria was carried out by Gwarzo, *et al*. (2009, p.56). It was found that although 87.7 percent of the 221 female students studied, had heard of breast self-examination, only a few percent of them performed the examination monthly. Mass media was found to be their main source of knowledge (45.5 percent), followed by health workers (32.2 percent). Regular performance of breast self- examination was significantly correlated with the duration of their stay in the university. The study concluded that there was a disparity

between high levels of knowledge of breast self – examination compared to a low level of practice. They suggested that public health education, using the media could reduce knowledge-gap and increase early detection of breast lump.

Akpo, *et al*. (2009, p.2) studied attitude to screening practices among the introductory clinical medical students in Delta State University Warri, Nigeria. The result revealed that 89.1 percent had knowledge of breast cancer, 62.7 percent knew of the risk factors for its development, and 67.8 percent knew of its symptoms.

All performed breast self-examination regularly, but 22.2 percent did not know how often to perform breast cancer examination. About 16.7 percent have never heard of breast cancer screening from a nurse or doctor, while 88.9 percent never had clinical breast examination. The result concluded that the overall knowledge of breast cancer, risk factors and performance of breast self–examination were good.

Ntekim, *et al*. (2009, p.242) studied the clinical and socio –economic features of breast cancer in women aged 40 years and below at the University Collage Hospital, Ibadan, Nigeria. The result revealed that, the patients with stage I of breast cancer were 2 percent, stage II (13 percent), stage III (46 percent) and stage IV (85 percent), found also, were patients with invasive Carcinoma cases, (95 percent). Also patients with positive family history (2 percent), income earners, (85 percent), young married patients, (46 percent).

The result also showed that 85 percent of the patients had primary and secondary school education, and the source of financial support for the patients was their relatives. The study concluded that the number of young females in Nigeria who have breast cancer were on the increase and most of them went to the hospital, while majority of them had low income. The study therefore appealed to the physicians to pay serious attention to breast lumps in the young females, and to the government, to offer free health care services to such patients in order to promote early access to treatment.

Adejumo, Aluko and Oluwatosin (2008, p.161), in trying to tackle the mortality and morbidity rate of carcinoma, studied the level of awareness of breast cancer screening methods among the female undergraduate students of university of Ibadan. The result revealed that 82.7 percent of the students were aware of the breast self-examination and 46 percent said they had performed mammography.

The study indicated that the mass media topped the list of sources of information by the students. The study also revealed high level of awareness of breast self-examination, and low level of knowledge of mammography. It therefore encouraged healthy workers to teach their patients breast self- examination, and incorporate clinical breast examination into their routine physical examination.

Oluwole (2008, p.99) studied the awareness, knowledge and practice of breast self-examination among female health practitioners at Federal Medical Centre, Owo, Ondo State, Nigeria. The study cut across Christians and Muslims, and all the ethnic groups who are workers in Federal Medical Centre, Owo. The result revealed that majority (94 percent) were aware of breast self-examination. Some of them (30 percent) knew the different methods for screening for breast cancer, most of them (56 percent) knew that breast self-examination should be performed monthly, while majority (80 percent) practiced breast self-examination, although only some of them (50 percent) practiced it monthly.

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The study concluded that, although majority of the female workers were aware of breast self-examination, the knowledge about screening methods for breast cancer was poor. It therefore suggested that the practice of breast self-examination among females should be encouraged. Anyanwu, (2008, p. 17) was of the opinion that third world breast cancer patients are characterized by seeking medical attention late. This poor outcome, according to him, had encouraged patients to patronize quacks and alternative healers. He revealed that public control measures have targeted mainly public education and provision of screening facilities without indicating popular habits and factors that have been association with breast cancer, such as obesity, tobacco, alcohol, among others. The author therefore conducted a research on breast cancer patients in four hospitals located in Eastern Nigeria, investigating some epidemiological data, including the social habits of the patients, like age, sex, marital status, education and social status, menopause, lactation, smoking, alcohol intake, tumour, obesity assessment and staging, histologic studies, treatment and outcome.

The result of the study revealed some improvement in terms of seeking medical attention early, compared to a historical control of earlier reports from the sub region. It also showed that alcohol intake and smoking were at low levels among the patients. He therefore concluded that there is need to take another look at cancer public health campaign mechanisms in the face of competing demands from HIV, and that public control measures should include among others, teaching of breast self- examination (BSE) to patients, Clinical Breast Examination (CBE) to health workers and opportunistic CBE to all patients.

Theoretical Framework

This work is anchored on the diffusion of innovation theory, which is used to influence individuals to action. The diffusion of innovation theory suggested that the mass media can be an important component in influencing beliefs and attitude that will eventually lead to a behaviour. The theory which was established in 1903 by the French Sociologist, Gabriel Tarde noted five qualities that determine the success of an innovation as

(1) **Observable result:** The easier it is for individuals to see the results of an innovation, the more likely they are to adopt it. Visible results lower uncertainty and also promote peer discussion of a new idea, as friends and neighbours of an adopter often request information about the new idea.

(2) **Trial ability**: This is the stage on which an innovation is experienced within a limited bases. An innovation that is trialable remains certain to the individual who is considering it.

(3) **Simplicity and ease of use***: This is the degree to which an innovation is seen as not difficult to understand. New ideas that are simpler or easier to understand are adopted and accepted more than innovations that demand the adopter to develop new skills.

(4) **Compatibility with existing values and practices:** This is the degree to which an innovation is seen as being consistent with existing values, past experiences and needs of potential adopters. An idea that is not consistent with the existing values, norms or practices will not be accepted as rapidly as an innovation that is compatible.

(5) **Relative Advantage:** This is the degree to which an innovation is perceived as better than the idea it supersedes. The greater the perceived relative advantage of an innovation, like health issues, political, social and economic issues, the more rapid its rate of adoption is likely to be.

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Diffusion research centers on the conditions which increase or decrease the likelihood that a new idea, product or practice will be adopted by members of a given society. The theory suggested that media as well as interpersonal contacts provide information and influence opinion and judgment.

RESEARCH   METHODOLOGY

Research Method

The researcher adopted survey research method in carrying out the study. This method was adopted because it is the most appropriate for this kind of study.

Population of the Study

The population for the study consisted of the entire population of women in Enugu State. The population for the study is 1,671,795 (one million, six hundred and seventy one thousand, seven hundred and ninety five), according to 2006 census exercise. However, for the purpose of effective supervision and greater accuracy, the sample for the study was drawn from nine towns, representing the three senatorial zones in the state.

Determination of Sample Size

In order to get a scientifically accepted sample size from the above stated population, Cochran (1977, pp.71-75) sampling technique was adopted and a sample of 384 drawn.

Sampling Technique

Probability sampling technique was employed to ensure that sample size adequately represent the population. Also, probability sampling method was used to determine the copies of questionnaire administered per senatorial zone.

For the purpose of selecting which town was included from among the numerous towns that made up the zones, simple random sample was used (see Appendix D for the processes of selecting the towns randomly). The population figures for 2006 showed that female population in Nsude was 22, 153, Iheaka was 9,027, GRA Enugu was 12,974, Awgu was 24,667, Oduma was 30,280, Orba was 21,983, Ugbawka was 15,669 Amaechi Idodo was 5,318 and Nsukka was 53,040.

Since the sample size was 384, then Nsude, with a population of 22,153 (11.4 percent) was allocated 44 copies of the questionnaire; Iheaka, with a population of 9,027 (4.6 percent) was allocated 18 copies of the questionnaire; 26 copies of the questionnaire were administered to G.R.A. Enugu with a population of 12,974 (6.6 percent); 49 copies of the questionnaire were administered to respondents in Awgu, with a population of 24,667 (12.6 percent); Oduma, with a population of 30,280 (15.5 percent) received 60 copies of the questionnaire, ; Orba with the population of 21,983 (11.4 percent) was given 43 copies of the questionnaire; while Ugbawka, with the population of 15,669 (8.0 percent) received 30 copies of the questionnaire.

In the same vein, Amechi Idodo with the population of 5,318 (2.7 percent) got 10 copies of the questionnaire and Nsukka, with the population of 53,040 (27.2 percent) was given 104 copies of the questionnaire (See Appendix I, for the calculation for the sharing of the questionnaire to sampling areas).

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Measuring Instrument

The questionnaire was measuring instrument used in the study. The structure of the questionnaire was such that was capable of selecting the responses useful in giving answers to research questions and testing of research hypotheses (See Appendix A) . The study was depended chiefly on primary data, generated using the questionnaire.

Pre-Test, Validation and Reliability of Research Instrument

The result obtained from the Cronbach's Alpha analysis (see Table 3.14) for the responses found an Alpha coefficient measure of 0.818 (81.8%). This result implies that the internal consistency of the responses of the research instrument (Questionnaire) is 81.8% consistent, indicating a very high degree of internal reliability.

To establish the validity of the measuring instruments, copies of the questionnaire and interview schedule were given to three lectures at the Mass Communication Department of University of Nigeria, Nsukka.

DATA PRESENTATION, ANALYSIS AND RESULTS

Discussion of Results

The result of this study revealed that 6.6 percent of the respondents have heard of breast cancer, while 33.8 percent claimed that they have not heard about breast cancer, (Fig. 3). This is contrary to the result of the study carried out by Okobia, (2006, pp. 36-40), in Edo State, Nigeria, where it was reported that only 21.4 percent of the respondents have knowledge of breast cancer. The finding of this present study agreed with the result of the study carried out by Irurhe, *et al*. (2012, pp. 1-5), among female secondary school students in Nigeria, in which 97 percent of the respondents had heard of breast cancer. Also, in agreement with this work was s study carried out by Salaudeen *et al.* (2009, pp. 157-165), in Ilorin Nigeria, where they revealed that 97.2 percent of the respondents had knowledge of breast cancer.

Also, Omotara, *et al.* (2012, p. 2), in study they conducted in North East Nigeria, showed that 58.2 percent of the respondents have knowledge of breast cancer. In similar vain, Olowokere, *et al*. (2012, pp. 283-245), carried out a study in Ibadan, Oyo State, Nigeria, which also indicated that 52.8 percent of the respondents had heard about breast cancer. Iheanacho, *et al*. (2013, pp. 147-152), in a study conducted in Enugu, Nigeria, revealed that 87 percent of the women studied, had knowledge of breast cancer. It is worth noting that the result of many studies carried out showed high level of breast cancer knowledge. This may be attributed to the increase in breast cancer knowledge campaign by the mass media. The reason for this assertion is that, following the trend in knowledge of breast cancer from when Okobia, (2006, pp. 36-40), in Edo State, reported low level of knowledge , to the present time, there has been consistent rise in the percentage of women who are knowledgeable of breast cancer.

This study also showed that majority of the respondents, totalling 227 women (59.4 percent), got their knowledge of breast cancer through the radio, followed by television (43.2 percent), newspapers (30.9 percent), magazines (30.4 percent), bill boards/sign boards (27.5), posters (29.5 percent), internet (25.1 percent). These were shown in Fig. 1, Table 4.2, Table 4.3, Table 4.4, Table 4.5, Table 4.6, Table 4.7and Table 4.8 respectively. This may be attributed to the fact that most of the respondents (66.0 percent), reside in the rural Areas, while (34.0 percent)

of the respondents reside in the urban Areas, (Table 4.21). These rural women can afford radio more than television due to the differences in their prices. Also, due to lack of infrastructural facilities and frequent breakdown of power supply, these rural women can comfortably purchase batteries to power their radio sets.

It was also shown that 43.2 percent of the respondents preferred television to print media. The visual aspect of television placed television viewing at an advantage position. This is because the respondents learn from television faster and first hand through demonstrations, on how breast self-examination is being carried out. Again, television programmes do not need high level of education, as they could be understood by mere viewing.

On the level of education, the result showed that 15.2 percent of the respondents had Primary education, 33.5 percent had Secondary education, 19.4 percent attended Tertiary/University and 31.9 percent had no formal education, (Table 4.16 and Table 4.17). Low level of education is therefore contributory factor to the low percentages of respondents that got knowledge of breast cancer through the newspapers, magazines, posters, bill boards/sign boards and internets, as these media require literacy for the respondents to comprehend their contents.

The result in this study was in line with the study conducted by Salaudeen, *et al*. (2009, pp. 157-165), at the University of Ilorin and Kwara State, Nigeria, where it was shown that the major source of knowledge of breast cancer was electronic media. Of these electronic media, television (31.6 percent) was the first source of knowledge. Similar observation was reported in Enugu State in a study conducted by Nwagbo, *et al*. (1996, pp. 32-34), where 38.8 percent of the respondents first source of knowledge of breast cancer was the electronic media. The respondents had access to these electronic media, while relaxing at home and at their various places of work.

Several other studies gave credence to the findings in this present study concerning electronic media as the major source of knowledge . Adejumo, *et al.* (2008, p. 161) , indicated in the study, they carried out on the female undergraduate students of University of Ibadan, Nigeria, that 58.8 percent of those studied said that electronic media was their first source of knowledge . In the same vain, Kayode, *et al.* (2005, pp. 42-47), in a study conducted among female secondary school teachers in llorin, Nigeria, showed that the commonest source of knowledge of about breast cancer was the television (29.7 percent), closely followed by knowledge gotten from friends (28.2 percent) and (19.6 percent) who got their knowledge from multiple sources, while (4.6 percent) heard about breast cancer from health personnel.

The present study contrasted with the findings of Oluwatosin and Oladepo (2011, pp. 10-20), in their study among rural women in Akinyele Local Government Area, Ibadan, Nigeria, where they showed that the respondents' leading source of knowledge of breast cancer were elders, neighbours, and friends (15.4 percent), while (5.4 percent), mentioned television and radio, (4.4 percent) acknowledged health workers as their source of knowledge.

The findings in this present study, agreed with that of Bello, *et al*. (2011, pp. 296-300), in a study among female nurses and laywomen in Osogbo, Nigeria. They found that the first source of knowledge for more than 65 percent of the women was the radio. This present study is also in agreement with the earlier findings by peters, *et al*. (2005, pp. 48-53), which emphasized the role of the mass media in creating breast cancer knowledge. Moreso, in consonance with the findings of this study was a research conducted by Irurhe, *et al*. (2011, pp. 1-5), among female secondary school students in Lagos, Nigeria. They showed that 39 percent of the respondents

first heard of breast cancer from radio and television, while 14 percent of the respondents read about that from the newspapers and magazines.

This study also is in agreement with the findings from female patients at a Teaching Hospital in Lagos, Nigeria, by Akinola, *et al*. (2011, pp. 125-129), where they showed that 4.2 percent of the women heard about breast cancer on television, while 8.5 percent said they heard from radio. This present work is also in agreement with the study conducted by Oluwole, (2008, pp. 99-104), among female health practitioners at Federal Medical Centre, Owo, Ondo State, Nigeria, which revealed that 9.6 percent of the respondents got their knowledge of breast cancer through the radio.

On the use of internet to get knowledge of breast cancer, this study showed that 25.1 percent (Table 4.29) of the respondents knowledge of breast cancer through the internet. This may be attributed to the fact that most of the urban women may be computer literate, and so, were able to access the internet for their breast cancer knowledge . This finding was contrary to the result of a study carried out by Oluwole, (2008, pp. 99-104) among female health workers in Federal Medical Centre, Owo, Ondo State, where only 4.3 percent of the respondents got knowledge through the internet. In the same vain, a study conducted by Oche, *et al.* (2012, pp. 144-149), in a Tertiary Health Institution in Northern Nigeria, showed that 16 percent of the respondents accessed the internet for knowledge of breast cancer.

This study also recorded that 30.9 percent of the respondents read the newspapers for their breast cancer knowledge while 30.4 percent got their knowledge from magazines (Table 4.25 and Table 4.26, respectively). These figures are high, compared to a study done by Irurhe, *et al*. (2012, pp. 1-5), where only 14 percent of the respondents got their knowledge of breast cancer from the newspapers and magazines.

Again, 27.5 percent of the respondents in this study had knowledge of breast cancer through the bill boards/sign boards, (Table 4.27), while 29.8 percent got their knowledge from posters (Table 4.28). This is very significant, considering the fact that a study conducted by Akinola, *et al*. (2011, pp. 125-129), at a Teaching Hospital in Lagos, Nigeria, showed that a mere insignificant percentage (0.9 percent), got knowledge of breast cancer through fliers.

Aside from the mass media, the respondents in this study got knowledge of breast cancer through family members (29.6 percent), (Table 4.9). This may be attributed to the fact that some of the respondents may not be able to access the media, due to their low educational level. This finding did not agree with an earlier study carried out by Salaudeen, et al. (2009, pp. 157-165), in Ilorin, where 4.0 percent of the respondents got their knowledge of breast cancer from family members. This finding in this study, also differed from the result obtained in a study conducted by Oluwole, (2000, pp. 99-104), in Owo, Ondo State, Nigeria, where only 1.1 percent of the respondents got their knowledge from their family members.

Among the respondents in this study, 35.3 percent replied that they got knowledge of breast cancer through friends (Fig. 2: and Table 4.10). This may be as a result of the number (31.2 percent) of the respondents that are not educated, (Table 4.8). These less educated respondents may not be able to access the media, and so, may comfortably rely on friends for their knowledge of breast cancer. This finding was higher than the result of the study carried out by Akinola, *et al*. (2011, pp. 125-129), in Lagos, where 4.3 percent got their breast cancer knowledge through friends. Similarly, a study conducted by Oluwole (2008, pp. 99-104), in Ondo State, showed that 1.4 percent of the respondents got thier knowledge of breast cancer through friends.

Also 29.3 percent of the respondents in this study, indicated that their knowledge of breast cancer came through the health workers (Table 4.11). This may be attributed to the fact that most physicians performed Clinical Breast Examination (CBE) on their patients, and have also intensified their efforts in educating the women more about breast cancer. This result was higher than the finding by Akpo, *et al*. (2009, p. 2), in Delta State, Nigeria, where 16.7 percent acknowledged that their physicians and nurses discussed breast cancer screening with them. This finding in this present study was also higher than what Akinola, *et al*. (2011, pp. 125-129), obtained in his study, in Lagos State, that 4.3 percent respondents heard about breast cancer through their doctors.

However, the result obtained in the present study was higher than those of Salaudeen, *et al*. (2009, pp. 157-165), in Ilorin, on health workers as first source of knowledge (14.6 percent), but lower than the finding of Olowokere, *et al*. (2012, pp. 238-245), in Ondo, which was 47.2 percent. Also, a study conducted by Omotara, *et al*. (2012, pp. 115-120) in North East, indicated that 34.1 percent of the respondents, performed Breast Self-Examination (BCE), on the advice of their health workers, this figure was higher than what was obtained in the present study. However, results of other studies like those of Ajayi and Adebamowo (1999, pp. 20-24), Jebbin and Adotey (2004, pp. 166-170) and Friedman, *et al*. (1999, p. 30), were equally in agreement with the findings in the present study, on health workers as their first source of knowledge .

In response to whether the level of education of women in Enugu State determined the knowledge of breast cancer from the mass media, the findings in the study, showed a weak positive relationship between level of education and breast cancer knowledge through the television with correlation measure of 30.6 percent with a p-value of 0.000. The result also revealed that there exist a weak positive relationship between level of education and breast cancer knowledge through the newspapers, magazines, posters, internet and bill boards/sign boards, with corresponding correlation measures of 10.7 percent, 10.5 percent, 13.1 percent, 3.6 percent and 10.1 percent respectively, with corresponding p-value of 0.037, 0.039, 0.011, 0.489, 0.05, which falls on the rejection region of the hypothesis assuming a 95 percent. This implies that level of education has a better positive relationship with breast cancer through the radio (Table 4.13).

These findings could be attributed to the level of education of most of the respondents, as many of them are not highly educated. They preferred radio as their choice of getting information about breast cancer, followed by television which is also easier to understand its programmes, due to the visual effect of it. Also, some of the programmes in the radio are done in the indigenous languages or vernacular. This made it easier for the respondents to understand, unlike the newspapers, magazines, internet, posters and bill boards that require education before the contents could be understood.

The present study was in line with a previous study conducted by Agboola, *et al*. (2008, pp. 5-10), on knowledge, attitude and practice of breast self-examination of female health workers in Olabisi Onabanjo University Teaching Hospital, Sagamu, Nigeria, which showed that positive relationships were demonstrated between educational level and breast cancer knowledge.

In conformity with the findings, Popoola , *et al*. (2013, pp. 49-54), in a study on literacy and breast cancer diagnosis and treatment among patients in a tertiary health institution in Lagos, Nigeria, showed that formal education provided an advantage in the understanding of various health issues. It also showed that breast cancer patients who had low level of education were

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at higher risk of seeking medical care on time, because of their inability to access the media, especially, print media.

The result of the present study also revealed that knowledge-gap existed among literate and non-literate women of Enugu State regarding breast cancer information from the mass media. A total of 247 out of 263 literate respondents had knowledge of breast cancer, while only 6 respondents out of 199 non-literate respondents had knowledge of breast cancer through the mass media (Table 4.14). Furthermore, most of the educated respondents belong to higher socio-economic status, and as such, can access the contents of both electronic and print media, while the less educated respondents, who belong to lower socio-economic status, cannot avail themselves of the mass media contents.

In disagreement with the finding that more educated people access the media often, Ibrahim, *et al*. (2011, pp. 388-392), showed in his study that majority of literate people in Lagos do not access the media as often as one would have thought, even with the large concentration of both print and electronic media establishments, used in breast cancer knowledge . On the other hand, a study conducted by Oluwatosin and Oladepo (2011, pp. 10-20), in Ibadan has proved that formal education provided an advantage in the understanding of various health issues.

On the knowledge-gap in breast cancer knowledge from the mass media between rural and urban women, the study indicated that out of a total of 130 urban women, 128 respondents had knowledge of breast cancer, while 125 respondents out of 252 rural women had knowledge of breast cancer (Table 4.18). Showing a knowledge- gap in breast cancer knowledge from the mass media. This was so, because of the fact that most rural communities in Enugu State are generally characterised by poor living conditions, absolute poverty and absence of infrastructural facilities. Also, most of the respondents in the rural areas are illiterates and semi-illiterates, therefore, they could not access the media, like the urban dwellers, where most of them, belonging to the higher socio-economic status, can access the media and can comprehend the media contents faster, because they are educated.

In conformity to this finding, Okobia, *et al*. (2006, pp. 36-40), in his study, was able to show that there was a poor knowledge of breast cancer among rural dwellers in Egor Local Government Area, Edo State, with only a minority practising breast self- examination and clinical breast examination. Also in total agreement with the present work was a study carried out by Somdatta and Baridalyne, (2008, pp. 149-153), in India. They showed that women who were aware of breast cancer were of higher socio-economic status or more educated. It also showed that women of low socio-economic status had a low incidence of breast cancer compared to women of higher socio-economic status, but they suffer a higher mortality rate, due to lack of knowledge of the disease.

On the relationship between media use and knowledge of breast cancer, it was shown in the study that an obvious relationship existed between media use and knowledge of breast cancer. It was revealed that a strong relationship existed between radio use and knowledge of breast cancer, with a correlation measure of 86.4 percent, while a positive relationship existed between television use and knowledge of breast cancer with a correlation measure of 63.3 percent. Also, a weak relationship existed between newspaper use, magazine, posters, internet and bill boards/sign board, with corresponding correlation measures of 47.7 percent, 47.2 percent, 44.0 percent, 46.6 percent and 41.4 percent respectively (Table 4.22).

What this meant was that because many respondents exposed themselves to radio contents, followed by television, they tend to get knowledge about breast cancer through these media,

more than others, like magazines, newspapers, internet, posters and bill boards/sign boards. This implied that the mass media, through its information and educational functions, informed and educate the women on issues of breast cancer.

The mass media create knowledge on various issues, like health. Through their various contents, they collect, store, process, and disseminate news, data and facts, which members of the public require in order to make decisions that can help them live life meaningfully (Okunna, p. 108). The media users are not passive, but active in interpreting and integrating the media contents into their lives. Since the Uses and Gratifications theory, established by Katz, *et al*. (1974), stipulated that media audience exposed themselves to media contents that gratify their needs, the respondents in this study were usually active, critical and selective in their media use.

On the response of the oral interview with some breast cancer survivors, the study showed that majority of the respondents (60 percent), depended on radio, for their knowledge of breast cancer, followed by television (30 percent) and health workers (10 percent), (Table 4.30). These findings were in agreement with the responses recorded in the questionnaire, on the major source of knowledge of breast cancer, what this meant was that most of the respondents preferred radio. This may be, because they were not highly read, and therefore belonged to low socio-economic status, and can only afford to listen to the radio for their knowledge of breast cancer.

Also, because of the incessant power failure and their inability to provide alternative power supply like generating sets, most of the respondents comfortably powered their radio with batteries and access the information on breast cancer. The 30 percent of the respondents that got knowledge through the television, may be those that fall into the higher socio-economic status, and the respondents that can afford television sets and at the same generating sets to power their television sets, in case of power failure. The remaining 10 percent that got their knowledge through the health workers may be those poor respondents who reside in the rural Areas, whose only source of knowledge were through the health workers, because they cannot afford the radio or television sets.

It is therefore noteworthy to say that none of the cancer survivors interviewed sourced their knowledge through the print media like newspapers, magazines, bill boards/sign boards and posters or through internet. It could be due to high prices of newspapers and magazines and high cost of internet facilities.

Also, worthy of note is that 90 percent of the breast cancer survivors reside in the urban Areas, while 10 percent live in the rural Areas (Table 4.31). This implied that women in the urban Areas avail themselves of knowledge of breast cancer through the mass media, more than rural dwellers and thereby, sought medical attention on time more than those in rural Areas. The findings also indicated that a knowledge-gap existed in breast cancer knowledge from the mass media between the rural and urban women in Enugu State.

On the survivors' educational level, it was shown in the study that 20 percent had primary education, 50 percent had secondary education and 30 percent had Tertiary/University education; while none of the survivors were uneducated (Table 4.32). This result showed that education had a lot to play in the knowledge of breast cancer, since the higher educated one is, the more one grasp and comprehend knowledge of breast cancer from the mass media. This also goes a long way to prove that a knowledge-gap existed in breast cancer knowledge from mass media between literate and non-literate women in Enugu State.

The findings on oral interview conducted on some women diagnosed with breast cancer, in this study, showed that 81.8 percent of the respondents had knowledge of breast cancer, while 18.2 percent claimed they they did not have the knowledge , (Table 4.33). This implied that although a greater number of women in Enugu State may be knowledgeable about breast cancer, most of them did not know the importance of seeking medical attention on time in order to save their lives.

On sources of knowledge of breast cancer, among the women diagnosed with the diseases, the findings showed that 36.4 percent of the respondents pointed radio as their source of knowledge, followed by 18.2 percent of the respondents that got knowledge through the television. Also those that got their knowledge through friends were 18.2 percent, while those that claimed that did not have knowledge of breast cancer were 18.2 percent, and 9.0 percent mentioned health workers as their source of knowledge of breast cancer (Table 4.34).

From the findings, it was obvious that majority of the women diagnosed with breast cancer got their knowledge from the radio. This may be as a result of lack of infrastructural development and harsh economic situation in the State. No wonder none of the respondents got their knowledge through the newspapers, magazines or internet, because they could not afford them.

On the residence of the breast cancer sufferers, 27.3 percent resided in the rural Areas, while 72.7 percent lived in the urban Areas (Table 4.35). Out of these respondents, 45.5 percent acquired Primary education, 45.5 percent had Secondary education, while 9.0 percent had Tertiary/University education (Table 4.36). This implied that, although higher number of breast cancer sufferers reside in the urban Areas, very few number (9.0 percent) of highly educated women had breast cancer.

This could be attributed to the fact that educated women access the mass media faster and apply the knowledge better, such as breast self-examination and clinical breast examination. Also educated women live healthier life style and prevent breast cancer more than the less educated women. This was in agreement with a study conducted by Popoola, *et al*. (2013, pp. 49-54), which showed that breast cancer patients with low level of education seek medical care late, due to their inability to access the media contents. This goes to confirm that knowledge-gap existed among literate and non-literate women of Enugu State regarding breast cancer information from the mass media.

Testing of Hypotheses

Hypothesis one indicated that Enugu State Women got their breast cancer knowledge from the mass media, as the other sources, such as intrpersonal communication, like family members, friends, health workers.

Hypothesis two showed that there was relationship between level of education of women in Enugu State and knowledge of breast cancer from the mass media.

Hypothesis three showed that there was knowledge-gap among literate and non-literate women of Enugu State regarding breast cancer information from the mass media.

Hypothesis four revealed that there was knowledge-gap in breast cancer knowledge from the mass media between urban and rural women in Enugu State.

Hypothesis five indicated a relationship between media use and knowledge of breast cancer.

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Summary of Findings

The following findings were made at the end of this study which is aimed to ascertain the contributions of the mass media to breast cancer knowledge among women in Enugu State.

1.   It was found that most women in Enugu State were always exposed to the radio as their preferred medium of knowledge of breast cancer.

2.   It was also found that level of education of women in Enugu State determined their knowledge of breast cancer from the mass media.

3.   Findings also revealed that there was a knowledge-gap among literate and non- literate women of Enugu State regarding breast cancer information from the mass media.

4.   Also revealed was that knowledge-gap existed in breast cancer knowledge from the mass media between urban and rural women.

5.   Finally, it was established that there was a relationship between media use and knowledge of breast cancer.

CONCLUSIONS

The following conclusions were drawn based on the findings of the study. The media, especially the radio, contributed meaningfully in informing and educating the women in Enugu State of breast cancer. This was evidenced in the high frequency of exposure to the radio and high knowledge of breast cancer, especially among the urban dwellers. There was high level of confidence in media information of breast cancer; hence the women depended on the media for relevant knowledge of breast cancer, because they perceived the information as credible and educative.

The high level of knowledge of breast cancer also led to high number of literate women that prevented breast cancer, through the practices of early detection measures like Breast Self-Examination (BSE) and Clinical Breast Examination (CBE). All the same, the high level of knowledge of breast cancer, was evidenced in the number of urban dwellers that survived breast cancer, because they sought medical attention on time, for treatment, immediately a lump was detected.

Although most women in the rural Areas, mentioned friends as their major source of knowledge on breast cancer, the study was a clear departure from the past when there was loss of confidence in media reports on health issues but poverty, lack of infrastructural facilities and high rate of illiteracy could not allow the mass media contribute meaningfully to breast cancer knowledge among women in Enugu state

RECOMMENDATIONS

The following recommendations were considered appropriate in view of the aforementioned findings and conclusions.

1.   The mass media should increase their scope of coverage of breast cancer for the benefits of Enugu State women in particular and Nigerian women in general.

2. Both Federal, State and Local Governments should fund, sustain and encourage breast cancer knowledge campaigns in the mass media, as a matter of urgency.

3. Adequate infrastructural facilities should be provided in the rural Areas, in order to close the gap in the mass media between the rural and urban dwellers.

4. Government should stop paying lip-service to its poverty alleviation programmes, as residents of rural Areas are bedevilled with illiteracy and poverty, which had continued to deny them access to the media contents of their choice.

Contributions to Knowledge

This study has shown that media knowledge campaign on health related issues like breast cancer generally target those in least need of it, mostly the already motivated and informed segments of the society. So it runs against the widely held belief that diffusion of information by the mass media will reach every body and thus, result in an overall better informed public. The segments of the women with lower socio economic status and low education remain completely ignorant of media messages on health issues.

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