Influence of Broadcast Media Enlightenment Campaigns on Prevalence of Breast Cancer among Women in Delta State

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Abstract

The study set out to determine the influence of broadcast media enlightenment campaigns on the prevalence of breast cancer among women in Delta State. The specific objectives were to determine the level of women's awareness of breast cancer in Delta State; to identify the broadcast medium through which women in Delta State mostly access messages on breast cancer; to ascertain the extent to which broadcast media enlightenment campaigns had prompted women in Delta State to engage in breast cancer preventive strategies; and to determine factors that impede women's access to broadcast media messages on breast cancer in Delta State. The research adopted the descriptive survey research design to generate both quantitative and qualitative data through questionnaire and in-depth interview. A sample size of 405 was drawn from women in Delta State. It was found that women's awareness of breast cancer in Delta State was very high (99.8%). The findings also indicated that radio was the primary medium through which women in Delta State access messages on breast cancer. The findings further showed that broadcast media enlightenment campaigns have prompted majority (72.6%) of the women in the state to practise breast self-examination as part of preventive strategies against breast cancer. The study, among others, recommended that the media and other relevant stakeholders should do more in creating awareness in a manner that will give women thorough knowledge of the prevalence of the disease, especially as some of the women studied indicated that they were 'moderately aware' of the disease; and that most information on breast cancer should be disseminated to members of the public, particularly those in Delta State, through radio.

Keywords: Broadcast media, enlightenment campaigns, prevalence, breast cancer, women, Delta State.

Introduction

Cancer is one of the deadliest diseases plaguing humanity the world over. In Nigeria, cancer is a major killer-disease. Statistics indicate that mortality from the disease has drastically increased in the country in recent time. According to the Committee Encouraging Corporate Philanthropy (CECP), (as quoted in Okoghenun, 2014), there are over 100,000 Nigerians diagnosed with cancer, with 80,000 dying of the disease every year. CECP further notes that four in every five cancer patients die in Nigeria, making the country one of the countries in the world with the worst cancer statistics.

In February 2015, doctors raised the alarm that more Nigerians were dying of cancer, even as the majority of victims were women. Adebayo (2015) quotes the Head of Oncology and Radiotherapy Unit of the Lagos University Teaching Hospital, Idi-Araba, Prof. Remi Ajeigbe, as stating that, "Cancer rates are soaring globally and Nigeria is no exception; at present, there are about two

million cancer cases recorded in Nigeria; besides, we record about 100,000 new patients every year."

Many prominent Nigerians have lost their lives to one form of cancer or the other. These, among other numerous ones, include former military vice president, Admiral Augustus Aikhomu (rtd), former Nigerian First Lady, Mrs. Maryam Babangida, wife of the immediate past Edo State Governor, Mrs. Clara Oshiomhole, former Adviser to ex-president Goodluck Jonathan on Research, Documentation and Strategy, Oronto Douglas, former Director-General of the National Agency for Foods and Drugs Administration and Control (NAFDAC), Prof. Dora Akunyili, former presidential spokesperson, Mrs. Oluremi Oyo, as well as former Director-General of the Centre for Democratic Studies (CDS), Prof. Omo Omoruyi (Okoghenun, 2014).

It is not only prominent persons that have died of or are suffering from cancer in Nigeria. All over the country, deaths resulting from the disease are being recorded from time to time, just as the number of patients battling with it is on the increase.

But while there are various forms of cancer, such as prostate cancer, liver cancer, breast cancer, ovarian cancer, lung cancer, cervical cancer, to mention but a few, medical experts say breast cancer is the most common cancer among women. According to Nelson (2013, p.1), breast cancer is a major cause of death among women, aged 30 years and above. The World Health Organization, WHO (2015), describes breast cancer as the top cancer in women both in the developed and the developing countries. With reference to Nigeria's breast cancer situation, Adetifa and Ojikutu (2009) write thus:

> In Nigeria, between 1960 and 1980, cervical cancer had 19.9% prevalence while breast cancer had 11.2%, but between 1981and 1995, breast cancer has taken over the lead with 25.7% while cervical cancer followed closely with 22.7%. These statistics... show breast cancer to be rated first among all other cancers.

Although breast cancer is survivable if detected early and treated, mortality from the disease has continued to soar in developing countries of which Nigeria is a part. Makanjuola, Amoo, Ajibade and Makinde (2013, p. 32) adduce some reasons for this ugly trend. According to them,

> The low survival rates in less developed countries may be explained mainly by lack of early detection programmes, lack of adequate diagnosis and treatment facilities which results in a high proportion of women presenting with late stage disease.

And according to WHO (2015), although some risk reduction might be achieved with prevention, majority of breast cancers cannot be eliminated in low and middle income countries where breast cancer is diagnosed in very late stages. "Therefore," WHO (2015) emphasizes, "early detection in order to improve breast cancer outcome and survival remains the cornerstone of breast cancer control." A general public awareness creation about the disease is a crucial function of the media, in line with the agenda-setting theory from which this study draws its strength. The media are expected to, in a robust and aggressive manner, set the agenda about breast cancer for public enlightenment. For, according to Daramola (2001, p.50), "the media decide what they think should

be on the priority consideration of the people." Sadly, however, while cases of breast cancer in Nigeria have assumed a worrisome dimension, media awareness campaigns and enlightenment about the disease do not seem to have received much boost.Delta state, being a part of Nigeria, has apparently not fared better in this regard. The state shares the nation's breast cancer burden. Most deaths from the disease have continued to be attributed to its late detection and treatment, a situation which raises doubts about the actual level of women's awareness of the disease.

At the time of this study, available literature revealed a dearth of media-based empirical works on breast cancer among women in Delta State. Consequently, there was little or no knowledge of the actual level of influence the broadcast media enlightenment campaigns had on women in the state regarding the disease. The lack of knowledge or information about the influence of the media in this regard had further made it difficult to determine with certainty the most appropriate medium or media to use in disseminating information on breast cancer to women in the State.

What is more, while factors like family history of breast cancer, prolonged null parity, among others, could prompt women to engage in breast cancer preventive measures, the media are arguably the most potent instrument that could engender engagement in such measures. Yet in Delta state, the extent to which the broadcast media induced engagement in breast cancer preventive strategies was hardly known. This study, therefore, aimed to fill this gap in literature. The specific objectives of the study were to:

i. determine the level of women's awareness of breast cancer in Delta State;
ii. identify the broadcast medium through which women in Delta State mostly access messages on breast cancer;
iii. ascertain the extent to which these media enlightenment messages have prompted women to engage in such breast cancer preventive strategies as breast self-examination, mammography and clinical breast examination;
iv. determine the factors, if any, that impede women's access to broadcast media messages on breast cancer in Delta State.

Theoretical Framework

This study was anchored on the Agenda Setting Theory and the Health Belief Model (HBM).

The agenda setting theory

The basic idea of the Agenda Setting Theory is that the media set agenda for the public to follow. In other words, there is a close relationship between the manner in which the mass media present issues and the level of importance attached to such issues by the consumers of media content. In 1963, a political scientist, Benard Cohen wrote in his book, *The Press and the Foreign Policy*, that "the press may not be successful much of the time in telling people what to think, but it is stunningly successful in telling them what to think about" (Daramola, 2001 p. 50).

According to Wogu (2008 p. 139), although the processes leading to the agenda setting theory were not begun by Benard Chen, it was he who popularized the theory and first articulated earlier views into a more astute line of thought today coined as Agenda Setting Theory. However, further strength was given to the Agenda Setting Theory by Maxwell E. McCombs and Donald Shaw (1972 p. 176), who, after an empirical research, submitted, among other things, that:

> Readers learn not only about a given issue, but also how much importance to attach to that issue from the amount of information in a news story and its position… The mass media may well determine the important issues, that is, the media may set the 'agenda' … Wogu, 2008 p. 142).

The theory holds that most of the pictures we store in our minds, most of the things we think or worry about, most of the issues we discuss, are based on what we have read, listened to or watched in different mass media. The media make us think about certain issues, they make us think or feel that certain issues are more important than others in our society (Asemah, 2011 p.176).

Among the elements involved in agenda setting, according to Folarin (1998 p 69) as cited in Wogu (2008 p. 141), include the quality or frequency of reporting, the prominence given to the report through headline display, pictures and layout in newspapers, magazines, film, graphics or timing on radio and television, as well as the cumulative media-specific effects overtime.

What the foregoing means to this study, therefore, is that if the broadcast media choose to give significant airtime to the reportage of breast cancer and all issues associated with it, such issues will become the most important issues on the minds of the media audiences.

The Health Belief Model

The Health Belief Model (HBM) is a social cognition model developed by Irwin M. Rosenstock in 1966. It is a psychological and health behaviour change model for studying and promoting medical programmes of some public health services. The model was subsequently modified to accommodate emerging realities in the area of health. The HBM was originally designed to predict behavioural responses to the treatment received by chronically ill patients, but has recently been used to predict more general health behaviours. According to Burke (2013 p.1), the focus of the HBM is to assess health behaviour of individuals through examination of perceptions and attitudes someone may have towards a disease and the negative outcomes of certain actions. The HBM further posits that people will take action to undergo a health prevention behaviour when they are ready, they see it as beneficial, and the difficulty is not greater than what is to be gained (Lizewski, 2012 p.3).

Burke equally observes that the HBM assumes that behaviour change occurs with the existence of three ideas at the same time:

1. An individual recognizes that there is enough reason to make a health concern relevant (perceived susceptibility and severity).
2. That person understands he or she may be vulnerable to the disease or negative health outcome (perceived threat).
3. Lastly, the individual must realize that behaviour change can be beneficial and the benefits of that change will outweigh any costs of doing so (perceived benefits and barriers) (Burke, 2013 p.1).

Perceived susceptibility, perceived severity, perceived benefits and perceived barriers are thus the constructs of the original model. The constructs have, however, been modified to explain other important issues that need to be explained in the constructs.

From the above discussions, the relevance of the agenda-setting theory and the Health Belief Model to this study can be clearly seen. The agenda-setting theory will help the media to bring issues related to breast cancer to the front burner so as to increase public enlightenment about the disease. The HBM, on the other hand, helps to assess the health behaviours of individuals through examination of the perception and attitude one may have towards a disease (in this case, breast cancer), and the negative outcomes of such actions.

Breast cancer: An overview

According to the National Cancer Institute (2015), "Breast cancer is a disease in which malignant (cancer) cells form in the tissues of the breast". Breast cancer is a dreaded disease and a major cause of cancer mortality among women worldwide. Although breast cancer is mainly the disease of women, it also occurs in men. Irurhe, Raji, Olowoyeye, Arogundade, Soyebi, Ibitoye, Abonyi and Eniyandunni (2012, p.1), however, maintain that "breast cancer is rare in men, being of the ratio 1:100 compared to women", and tends to occur in hypogonadic males (men with BRCAI and BRCA2 genetic mutations) and those with chromosomal abnormalities. BRCAI and BRCA2 are human genes that belong to a class of genes known as tumor suppressors. Changes in BRCAI and BRCA2 genetic cells therefore result in breast cancer (National Cancer Institute, 2009, p.2 & 4), as cited in Omerigwe (2012 p.13).

In Nigeria, the prevalence rate of breast cancer is high. According to Makanjuola et al (2013 p. 32), "the prevalence rate of breast cancer in a study in Nigeria was 115 per 100,000, and 27,840 cases were expected to occur in 1999.

Studies on various ethnic populations in Nigeria, especially those of the north eastern and western parts of the country have revealed the demographic profile of breast cancer. Irurhe et al (2012, p. 1), citing Matthew (1978), Khwaja, Nirodi and Lawrie (1980), Adebamowo and Adekunle (1999) and Anyanwu (2000), write as follows:

> A review of breast biopsies in the Lagos University Teaching Hospital showed 34 percent of all breast biopsies done over a 10-year period to be malignant. A report from Zaria described the mean age of presentation of breast cancer as 42 years with 30 percent occurring in women less than 25 years of age. At the University College Hospital, Ibadan, 74 percent of breast cancer patients were pre-menopausal. A ten-year review of breast cancer in eastern Nigeria revealed that patients with breast cancer constituted 3 percent of all patients with breast disease and that 69 percent were pre-menopausal.

Reports have indicated that the peak age of breast cancer among Nigerian women is about 10-15 years, which is much earlier than what is observed in Caucasians in whom it occurs between the ages of 35-45 years (World Cancer Reports, 2011), as cited in Omerigwe (2012, p.14).

Breast cancer preventive measures

The National Cancer Institute (2015) explains cancer prevention as "action taken to lower the chance of getting cancer."In applying BSE, CBE, Mammography and other screening methods,

there are a number of things to watch out for. According to the World Cancer Report (2011 p. 10), as cited in Omerigwe (2012, p.14), the following symptoms may suggest the onset of breast cancer: dimpling or puckering, unusual pain, a sore that does not heal around the nipples, itching or rash, retracted (turned in) nipples, change of shape or size, bloody discharge from the nipple, arms swelling or lump in the armpit. Only with serious engagement in screening can one detect the symptoms that are not visible to the eyes and those that cannot be detected by mere palpating of the breasts.

Mammography screening, for instance, can detect breast lumps but might not pick out other breast diseases like breast fibroid and cysts. Breast biopsy screening test is needed in this case to check for other related diseases (Omerigwe, 2012 p.20). In a recent analysis by an International Agency for Research on Cancer (IARC) working group, it was concluded that under trial conditions, Mammography screening may reduce breast cancer mortality by 25 – 30% and that in nation-wide screening programmes, a reduction by 20% appears feasible (World Cancer Report 2011 p. 9). Diagnostic mammography, ultra sound scan, cutting-needle biopsy and open biopsy are some of the screening techniques available for detecting breast cancer. Diagnostic mammography involves the use of x-ray to check for cancer in the breasts. Experts advise women to go for mammogram at least once every three years for early detection of breast cancer.

Another screening that can be carried out is genetic test, which is aimed at checking if there is mutation of Deoxyribonucleic Acid (DNA) genes, since such mutation is linked with development of hereditary breast and ovarian cancers. When these changes are identified by experts, appropriate treatment is offered to ensure normality. Women who have inherited harmful mutation in BRCAI or BRCA2 are said to be about five times more likely to have breast cancer than women who do not have such a mutation. The National Cancer Institute (2009 p. 14) gives further explanations on genetic testing as cited in Omerigwe (2012 p. 22):

> Several methods are available to test for breast cancer BRCAI and BRCA2 mutations. It has been established that most of these methods look for changes in BRCAI and BRCA2 DNA, and changes in the proteins produced by these genes. Oftentimes, a combination of methods are [sic] used. A blood sample is required for these tests, coupled with genetic counseling before and after the tests. Screening methods such as Magnetic Resonance Imaging (MRI) in women with BRCAI or BRCA2 mutations, mammography, BSE, CBE can be used.

There is therefore the need for genetic tests to check for BRCAI and BRCA2 mutations.The role of the media, especially the broadcast media, in enlightening the people on important health issues cannot be overemphasized. The media, through the agenda-setting function, are often quick to call the attention of members of the public to any sickness or disease that may pose a serious threat to their health, with a view to getting them to guard against it. It is through the media that health communication campaigns are carried out to promote the well-being of the people. Ogundoyin and Soola (2014, p.163) note that "health communication is found to be crucial in a hospital setting because the communication between a doctor and a patient bothers greatly on the issues of health where much of gathering and sharing of information remains vital to the two parties."

Some broadcast media awareness campaigns on breast cancer

In a bid to increase public awareness of breast cancer, many enlightenment campaigns have been carried out in the country in recent times. Most of these campaigns, however, only come up periodically (as against being held on a regular and consistent basis), with majority of them taking place annually, especially during the globally celebrated Breast Cancer Awareness Month (BCAM) held in October every year. Many groups, particularly non-governmental organizations, usually cash in on such occasions to raise public awareness on the disease. For instance, major radio and television stations in Nigeria, such as Radio Nigeria, RayPower FM, NTA and Channels TV, reported the road walks organized in October 2018 by the Breast Cancer Association of Nigeria (BRECAN), founded in 1997 by a breast cancer survivor and wife of the Ondo State Governor, Mrs. Betty Anyanwu-Akeredolu, as part of the activities to mark the Breast Cancer Awareness Month (BCAM). Similarly, as part of activities marking the 2019 World Cancer Day, BRECAN featured on Galaxy TV on 31st January, 2019.

Channels TV also reported that the wife of the Ogun State Governor, Mrs. Olufunso Amosun, led awareness campaigns on breast and cervical cancer to motor parks, major markets, and streets in Abeokuta, Ogun State capital, where she called on individuals and corporate bodies to step up actions against the menace of the disease. It is important to note that the broadcast stations where such campaigns are featured are national stations whose signals can be received in Delta State.

Some related studies need mentioning at this point. In a study, titled "Breast Cancer Awareness and Breast Examination Practices among Women in a Niger Delta Hospital," Sule (2011pp. 27-31) studied the out-patient women at the Central Hospital, Warri, Delta State, Nigeria. Copies of questionnaire were administered to women aged 20-80 years, and findings revealed, among other things, that:

> There was an awareness of breast cancer in 96.1% of the women. 43.6% of the respondents knew breast cancer usually begins with a lump. Self-breast examination was practised by 45.5% of the women. Clinical breast examination had been conducted in 15.6% of the women. A monthly self-breast examination had been done in 83.3% of self-breast examination practitioners.

Like all other empirical works reviewed below, Sule's study was not backed up with any media theory. This gap was filled in the present study, as relevant theories were employed to give strength to the work. Also, although Sule's findings indicated a high level of breast cancer awareness among the women studied, his research findings cannot be generalized to the entire Delta State, as the study focused only on the out-patient women in the Central Hospital, Warri, Delta State. This, coupled with the fact that all other empirical works reviewed below were done outside Delta State, further underscored the importance of the present study which focused on all women in Delta State.

Makanjuola et al (2013, pp.32-37) in their study on "Breast Cancer: Knowledge and Practice of Breast Self-Examination Among Women in Rural Community of Ondo State, Nigeria," set three objectives which included to assess women's knowledge of breast cancer and breast self-examination, to examine the extent of practice of breast self-examination among the women

studied, as well as to determine the women's perceptions of the causes, risk factors and prevention of breast cancer.

The above objectives, especially the first two, were in tandem with the objectives of the present study and were thus replicated in this work, which, however, focused on an entirely different study population – women in Delta State. Again, although Makanjuola et al (2013 pp.32-37) sought to know their respondents' level of knowledge about breast cancer and breast self-examination, they were virtually silent on the source(s) of such knowledge.

On the contrary,our study saw the need to ascertain the best medium or media through which women in Delta State could receive messages on breast cancer. This is because people find certain sources of information to be more accessible, available, affordable, preferable and reachable than other sources.

For instance, in a study conducted in South Delhi, India, Somdatta and Bari-dalyne (2008 pp.149-153) found that the television was the most common medium through which women heard about breast cancer, with 42% of the women using the medium as their main source of information, while radio was the least source of information about the disease, with only 3% of the women using the medium as a source of information about breast cancer.

But in a study conducted in Lagos State, Irurhe et al (2012 pp. 1-5) found that the first and major sources of breast cancer information for the female secondary school students on whom the research was conducted were radio and television.

Our study was therefore interested in identifying the broadcast medium or media through which women in Delta State could mostly access messages on breast cancer, in order to get relevant stakeholders to take advantage of such medium or media to educate and enlighten women on the disease.

Method

This study adopted descriptive survey research method. Nworgu (2006, p.77) notes that descriptive survey is the study which is aimed at "collecting data on and describing in a systematic manner, the characteristics, features or facts about a population." This study adopted descriptive survey because it is often the most appropriate design when the aim of a study is to describe the characteristics of a population. Since the main aims of this study were to evaluate the influence of broadcast media public enlightenment campaigns on the prevalence of breast cancer, and to describe the attitudes of women in relation to the disease, descriptive survey was considered most suitable. The researcher used questionnaire and in-depth interview in the study.

All the women in Delta State from age 15 and above constituted the population of this study. The total population of females in Delta State, based on the 2006 population census, is 2,043,136. Using the 3.2% annual growth rate, a projection based on the above 2006 census figure would give 2,981,629. To arrive at this figure, the following formula was used:

$$p\left(1+\frac{r}{100}\right)^{n}$$

Where: p = principal/first annual population

r = rate
n = time/year

$$2043136\left(1+\frac{3.2}{100}\right)^{12}$$
$$2043136(1+0.032)^{12}$$
$$2043136(1.032)^{12}$$
$$2043136\ x1.4593396$$
$$=2{,}981{,}629$$

Women were considered most suitable for this study because they are the people that are mostly affected by breast cancer. Women are usually the target of media campaigns aimed at creating awareness on breast cancer. It therefore became imperative to study them with a view to finding out the effectiveness of these media campaigns.

Sample size

The calculation for the sample size of this study was done in two segments.

Segment I

The researcher sought to work out a manageable and representative sample due to the large size of the population (2,981,629). The Australian Calculator as provided by the National Statistical Service (NSS) was used. The confidence level was 95%, a precision level of 0.05, and estimated variance of 5%, were used. The calculation yielded a sample size of 385.

The NSS states that the Australian calculator allows one to calculate the required sample size, standard error, selective standard error and confidence interval, proportion estimate using just one of these criteria as an input (para.2). From the calculation, 385 was given as the sample size.

Nevertheless, since there is no assurance of a 100 percent response rate, NSS (2012, para 8) notes that the number of individuals or groups that will not respond to the approved sample size need to be taken into account. In order to come up with accurate figure, over-sampling is then employed to make up for unreturned copies and those that may have been lost in the administration process. Because the researcher and his assistants administered the copies of questionnaire and collected them immediately from the respondents, a return rate of 95 percent was adopted. The calculation is presented below:

$n_2 = \frac{minimunsamplesize}{expectedresponserate} \times 100$

Where expected response rate = 95%
n_2= Adjusted sample size for non-response rate
Where Minimum sample size = 385

$$\frac{385}{95} \times 100 = 405$$

The sample size for the study was 405 respondents.

Segment II

Here, the study adopted the purposive sampling technique for the interview (which complemented the questionnaire in meeting the fourth objective of this study). This is because interview usually involves a small group of people and requires adequate response. A sample of twelve interviewees was used for the interview section. Four interviewees (made up of two health workers and two women, who are not health workers) were selected from each of the three senatorial districts of the state. These categories of respondents were chosen because of the nature of the survey in question. The health workers handle health problems such as the one involved in this study. The women, on the other hand, are the affected category of people who go to health practitioners to seek solution to their health problems. Health workers are also very much concerned with enlightenment campaigns against diseases.

Sampling technique

The researcher adopted purposive sampling to select the headquarters of each of the 25 Local Government Areas as well as locations and households for the distribution of copies of the questionnaire. The headquarters of the Local Government Areas were selected for the study because such headquarters were urban in nature and therefore had residents drawn from other communities within the Local Government Areas. What is more, women who had the capacity to interpret the questionnaire could be easily found in such selected areas. Copies of the questionnaire were administered to only the respondents who could read and interpret the questionnaire in their residential houses. The questionnaire was administered personally by the researcher and his assistants and retrieved the same day to avoid cases of missing copies. In all, 405 copies of questionnaire were distributed. Out of the number, 20 Local Government Areas got 16 copies each while the remaining five Local Government Areas got 17 copies each. The Local Government Areas in the latter category got 17 copies each because they have the largest female population in the state. The Local Government Areas were Burutu, Isoko South, Warri South, Ika North-East and Ika South Local Government Areas.

Analysis

Frequency tables and percentages were used in the presentation and analysis of the data gathered with the questionnaire, while the interview data were analyzed quantitatively. A total of 405 copies of the questionnaire were distributed to randomly selected participants in the 25 local government areas of Delta State. The total number of copies of the questionnaire returned and found usable for analysis was 401, representing 99.01% return rate. Since accommodation for contingencies such as non-response or recording error was estimated, this response rate was considered appreciable for the goals of the study.

Demographic characteristics of respondents

All the respondents were females, representing 100%. In the age distribution of the respondents, those who were within the age range of 20-24 had the highest number, which was 210 (52.4%); those within the age group of 25-29 were 96 (23.9%); those who were 30 years of age and above were 77 (19.2%); while those within the ages of 15-19 were 18, representing 4.5%. 298 (74.3%) of the respondents were single while 103 (25.7%) were married. 272 (67.8%) of the respondents had first degree. Others had the following educational qualifications: SSCE 36 (9.0%), HND 55

(13.7%) and higher degrees 38 (9.5%). 400 (99.8%) of the respondents were Christians while only 1 (0.2%) was a Muslim.

Psychographic data

The psychographic data gathered with the questionnaire are presented as follows.

Table 1. The respondents' psychographic data

Item	Variable	Frequency	Percent
Awareness of Breast Cancer	No	1	0.2
	Yes	400	99.8
	Total	401	100
Respondents' Source of Information about Breast Cancer	Broadcast Media	349	87.0
	Friends	31	7.7
	Family Relations	18	4.5
	Others	3	0.7
	Total	401	100
Information Regarding How Long Respondents Have Been Aware of Breast Cancer	1-2 Years	17	4.2
	3-5 Years	56	14.0
	6-8 Years	134	33.4
	9-11 Years	142	35.4
	12 Years and above	52	13.0
	Total	401	100
Degree of Breast Cancer Awareness by Respondents	Not at All	6	1.5
	Low	42	10.5
	Moderate	88	21.9
	High	265	66.1
	Total	401	100
Broadcast Media through Which Respondents Mostly Access Information on Breast Cancer	Radio	242	60.3
	Television	159	39.7
	Total	401	100
Respondents' Views on the More Effective Broadcast Medium for Disseminating Information on Breast Cancer	Radio	113	28.2
	Television	288	71.8
	Total	401	100
Respondents' Preferred Broadcast Medium for Receiving Information on Breast Cancer	Radio	104	25.9
	Television	297	74.1
	Total	401	100
Major Reason for Medium Preference	Easy Accessibility	117	29.2
	Moderate Cost	28	7.0
	Audio-Visual Advantage		
	Total	256	63.8
		401	100
Less Effective Medium for Disseminating Information on Breast Cancer	Radio	359	89.5
	Television	42	10.5
	Total	401	100
Broadcast Media Enlightenment Campaign Influence on Respondents' Preventive Actions against Breast Cancer	Yes	398	99.3
	No	3	0.7
	Total	401	100
Extent of Broadcast Media Influence on Respondents	Low Extent	24	6.0
	Moderate Extent	97	24.2
	Great Extent	280	69.8
	Total	401	100

Respondents' Action Based on Broadcast Media Influence	Breast Self-Examination Mammography Clinical Breast Examination Others Total	 291 72 36 2 401	 72.6 18 9 0.5 100
Whether There Were Factors Impeding Women's Access to Broadcast Media Messages about Breast Cancer in Delta State	Yes No Total	357 44 401	89 11 100
Factors Hindering Respondents' Access to Broadcast Messages on Breast Cancer	Illiteracy Barrier High Cost Poor/Low Broadcast Media Publicity on Breast Cancer Low Media Audience Reach Total	46 87 176 92 401	11.5 21.7 43.9 22.9 100

Discussion of Findings

As evident in the *Table* on the psychographic data above, 99.8% of the respondents were aware of breast cancer while only 0.2% of the respondents were not. By implication, therefore, majority of the women in Delta State are aware of breast cancer. This finding is in tandem with the findings in the study carried out by Sule (2011) in Warri, Delta State, in which he found that "there was an awareness of breast cancer in 96.1% of the women."

Equally worthy of note in our study is that the women's high awareness was traceable to the broadcast media, through which 87% of the respondents said they became aware of breast cancer. On the contrary, only 7.7%, 4.5% and 0.7% of the respondents indicated that they got to know about breast cancer from friends, family relations and other sources respectively. In the same vein, as can be seen in the same *Table 1*, in response to the question that sought the respondents' self-assessment of their level of awareness of breast cancer, 66.1% of them said their level of awareness was 'high,' while 21.9% indicated that their level of awareness was 'moderate'. Respondents who said their level of awareness was low were 10.5%. Only 1.5% of the respondents said they had no knowledge of breast cancer. It can therefore be concluded that the majority of women in Delta State are very much aware of breast cancer as a disease.

The study sought to find out the broadcast medium through which women in Delta State could mostly access messages on breast cancer. The results in the above table indicate that 60.3% of the respondents mainly accessed messages on the disease through radio. Respondents who accessed information on breast cancer on the television were 39.7%. The results revealed that women in Delta State mostly access information on breast cancer through radio. Some, however, access such information on the television.

This is contrary to the results of the study conducted in South Delhi, India, by Somdatta and Baridalyne (2008, p.152), in which they found that the television was the most common medium through which women heard about breast cancer, with 42% of the women using the medium as their main source of information, while radio was the least source of information about the disease, with only 3% of the women using the medium as a source of information about breast cancer.

However, the findings of our study somewhat corroborates the study by Irurhe et al (2012) in Lagos State, Nigeria, in which it was found that the first and major sources of breast cancer information for the female secondary school students on whom the research was conducted were radio and television.

It deserves mentioning in our study that while majority of the respondents indicated that they usually accessed breast cancer information mainly on radio, majority of the respondents (71.8%), however, indicated that television was a more effective medium for dissemination information on breast cancer. 74.1% 0f the respondents added that they preferred the television for receiving such information. The psychographic t*able* further reveals that the audio-visual advantage the television has over radio was the reason the respondents (63.8%) preferred the medium. Obviously for the same reason, 89.5% of the respondents indicated that radio was not as effective as television in the dissemination of messages about breast cancer.

It can be concluded, therefore, that while at the time of this study, radio was the first and major medium through which women in Delta State got access to messages on breast cancer, majority of the women, however, wished television was their major source of information, viewing the medium as a more effective and preferable medium, compared to radio, for the dissemination of breast cancer enlightenment messages. As for the extent to which broadcast media enlightenment messages had prompted women in Delta State to engage in such preventive strategies as breast self-examination, mammography and clinical breast examination, while 69.8% of the respondents affirmed that broadcast media information on breast cancer influenced them to a 'great extent' (with 99.3% of the respondents admitting that broadcast media enlightenment messages influenced them to engage in preventive measures against breast cancer), the overwhelming majority of the respondents (72.6%) clearly indicated that the particular preventive measure such enlightenment messages had influenced them to engage in was breast self-examination. The respondents who indicated mammography were 18% while those who indicated clinical breast examination were 9%. Only 0.5% of the respondents indicated 'others'. By implication, therefore, women in Delta State mainly practise breast self-examination as a preventive measure against breast cancer, and such a practice is attributable to radio and television enlightenment campaigns on breast cancer. This is in line with the research findings of Sule (2011 p. 29) in a study conducted on out-patient women at the Central Hospital, Warri, Delta State, in which it was found that "a monthly self breast examination had been done in 83.3% of self-breast examination practitioners." Also, Kayode, et al (2005), as cited in Makanjuola (2013 p.33) assert that despite the advent of modern screening methods, more than 90% of cases of cancers of the breast are detected by women themselves, stressing the importance of breast self-examination.

What is more, that the women's engagement in breast self-examination in particular, and other preventive measures in general was attributable to the broadcast media enlightenment campaigns on breast cancer, which further justifies the relevance of the agenda-setting theory to this study. Explaining the theory, Asemah (2001 p.176) notes that it "holds that most of the pictures we store in our minds, most of the things we think or worry about, most of the issues we discuss, are based on what we read, listened to or watched in different mass media."

The table on psychographic data clearly shows that the overwhelming majority of the respondents (89.0%) averred that there areindeed factors hindering their access to broadcast media messages about breast cancer, specifically pointing out the factors serving as impediments to women's

access to broadcast media messages about breast cancer, with 43.9% of the respondents citingpoor or low media publicity on the disease as the worst factor, while 22.9% indicated **'**low media audience reach**'**. The least of the hindrances was the barrier of illiteracy (11.5%).

However, the qualitative data gathered from interviews (which were specifically aimed at complementing the questionnaire in meeting the fourth objective of this study) were somewhat at variance with the quantitative data gathered with the questionnaire for the same objective. Although all the interviewees stated that there were a number of factors hindering women's access to media messages on breast cancer, majority of them maintained that illiteracy was the greatest barrier to women's access to media messages on the disease, followed by poor media publicity on the disease**.**The respondents, however, cited some other 'less serious' factors such as high cost of television set, low media audience reach, poor radio and television signals, misconceptions about breast cancer as well as apathy towards media enlightenment messages on health issues, including breast cancer.

From the above quantitative and qualitative analyses, it can be safely concluded that there are factors impeding women's access to media enlightenment campaigns on breast cancer. However, given that in the quantitative analysis, poor media publicity was cited as the greatest barrier to women's access to media messages on breast cancer, with illiteracy as the least factor in the quantitative analysis; and given that in the qualitative analysis, illiteracy was considered the greatest barrier, closely followed by poor media publicity on the disease, it can be confidently concluded that poor media publicity on breast cancer and illiteracy among women are the two greatest factors impeding women's access to media enlightenment campaigns on breast cancer in Delta State.

Conclusion

As earlier pointed out, breast cancer is a major cause of cancer mortality among women globally. It is believed that raising public awareness of the disease is a key strategy towards reducing its prevalence. Interestingly, the result of this study has indicated that awareness of breast cancer among women in Delta State is quite high. All the respondents except one said they were aware of breast cancer. Also, majority of the respondents said they were influenced by broadcast media enlightenment campaigns to take actions to prevent breast cancer. By implication, therefore, the influence of broadcast media enlightenment campaigns on the prevalence of breast cancer among women in Delta State is high.

However, the claim by many of the women that they were 'moderately aware' of the disease is a call for the creation of more enlightenment programmes by the media. The problems of poor media publicity on the disease and illiteracy need to be addressed. In view of the seriousness of the disease, it should be featured regularly in the media. Also, that radio is inexpensive and most members of the public get information mainly through the medium - as has been found in this study - is a fact that should be exploited by the media and other stakeholders to aggressively provide information on various health issues, not least breast cancer.

Recommendations

Based on the findings of this study, the following recommendations were made.

1. The media and other relevant stakeholders should do more in creating awareness in a manner that will give women comprehensive and thorough knowledge of the prevalence of the disease, especially as some of the women studied indicated that they were 'moderately aware' of the disease.

2. Most information on breast cancer should be disseminated to members of the public, particularly in Delta State, through radio, since it is the primary medium for accessing information, as has been found in this study.

3. Government should strive to alleviate poverty, so as to empower more people to afford television sets, otherwise adjudged as the most effective and preferred medium for accessing information on breast cancer because of its audio-visual advantage.

4. Enlightenment messages should be disseminated both in English and local languages to break the barrier of illiteracy and reach as many members of the public as possible.

5. Ant-breast cancer campaigners, in collaboration with the broadcast media, should stress the need for women to visit the hospital for mammography and clinical breast examination which have somewhat been relegated, as has been found in this study.

6. Broadcast media houses should give more airtime to enlightenment campaigns on breast cancer.

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