INFORMATION NEEDS OF RURAL WOMEN IN THE EARLY DETECTION OF BREAST CANCER IN ORUMBA SOUTH LOCAL GOVERNMENT AREA, ANAMBRA STATE, NIGERIA

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Abstract
Breast cancer remains one of the major leading causes of cancer-related deaths among rural women in the world. Due to their low socio-economic status, they have limited access to information for its early detection. The objective of this study was to determine the information needs of rural women in Orumba South Local Government Area of Anambra State, Nigeria, in the early detection of breast cancer. Descriptive survey study was conducted among 500 Anglican rural women randomly selected from fifteen villages. To obtain the women's opinion, sixty-item structured questionnaire was distributed, read out and interpreted to them by the researchers and trained research assistants, at the Anglican Church premise during their yearly August meeting. Statistical analysis of data collected was carried out using the Statistical Package for Social Sciences Version 17. The results showed that vast number of early detection information and breast cancer facts were unknown to the rural women (mean scores=2.29 and 1.42). The major medium through which they access breast cancer information was community health centre (55%) while they preferred other channels of communication such as the women group meetings (95.4%). The study established that women critically need information for detection of breast cancer quite early.

Keywords: Information Needs, Breast Cancer, Early Detection, Rural Women, Orumba South

Introduction

Breast cancer is the commonest form of cancer and one of the major leading causes of cancer-related deaths among women in the world. It is indeed, becoming an emerging epidemic in many countries of the world. The Surveillance Epidemiology and End Results (SEER) of the National Cancer Institute (2013) estimated that 232,340 women will be diagnosed with and that 39,620 women will die of cancer of the breast in the year, 2013.

As the name implies, breast cancer is an abnormal growth or a malignant tumour, arising from the cells of the breast which predominantly occur in women and also, rarely in men (Balentin, 2011). National Cancer Institute (2010) has indicated that the cancerous tumors in the breast usually grow very slowly so that by the time one is large enough to be felt as a lump, it may have been growing for as long as ten years and if not detected early enough or if left untreated, these malignant tumors can invade the fatty tissue of the breast and then spread to other parts of the body. It further indicated that the first noticeable symptom of the disease is typically a lump that feels different from the rest of the breast tissue and usually painless. Lumps found in the lymph nodes located in the armpit can also indicate breast cancer. Apart from lump, changes

in the breast size or shape, skin dimpling, nipple inversion or spontaneous single-nipple discharge and sometimes, pains can also indicate breast cancer.

The cause of breast cancer has not yet been conclusively proven by medical science but certain factors which are considered to be connected to it according to World Health Organization (2006) are genetic, hormonal, viral, and environmental. Contributing risk factors as presented by American Cancer Society (2007) include gender, age, family history, race, radiation treatment, menstrual periods, and hormone replacement therapy, not breast feeding, alcohol intake, high fat diet intake, lack of exercise and so on. According to them, a woman's lifetime risk of developing the disease is one in eight.

Recent observations as pointed out by Amosu, Degun, Thomas, and Babalola (2011) show that the frequency of breast cancer has overtaken that of other female cancers, such as ovarian cancer, or cervical cancer. Estimate from the 2008 global burden on cancer has predicted that in the next decade, more than 17.5 million women around the world will develop breast cancer and more than 5 million women will die of the disease (Komen, 2013). Presently, these postulations seem to have been overtaken by current events in breast cancer cases.

This clearly indicate that breast cancer, being the most prevalent of all cancers among women, constitutes a major public health issue globally. Its advancement and mortality rates however, seem to be higher in developing countries, particularly in the rural areas, probably, due to lack of awareness, late detection, less access to screening and presentation. American Cancer Society (2012) indicated that breast cancer mortality rates are higher in developing countries as a result of late detection and diagnosis. Also, American Cancer Society showed that compared to developed countries, African women (Nigeria inclusive) do not have a higher rate of breast cancer incidence but have an alarming higher mortality rates. As it further explained, it does not imply that women in developing countries are less likely to get the disease instead, because women from these countries are not very much informed about the disease and usually have less access to screening and general health services. They are less likely to be diagnosed at earlier stages of the disease. Contrary to the situation in developing countries, American Cancer Society (2012) further revealed that the reason for the higher incidence of the disease in developed nations is mostly due to proper awareness, early detection and presentation of the disease, and sufficient availability of screening programmes that detect early invasive cancer; some of which would otherwise have been diagnosed much later or not at all.

Rural women in most developing nations such as Nigeria, are typically known to live in villages or remote areas which lack basic social amenities such as good health care, good schools, good roads, steady electricity supply, proper dissemination of information and are mostly illiterates, semi-literates, subsistence farmers, artisans, few young people who live in poor and deprived conditions due to lack of these basic necessities of life. (Amanze & Ibenne, 2011, Saleh & Lasisi, 2011). Hence, they seem not to have access to adequate infrastructure that can promote medical interventions.

Although the available statistics on breast cancer in Nigeria is not very reliable due to many factors that may have hindered adequate data collection and up-to- date records-keeping, the Global Burden on Cancer database (GLOBOCAN, 2008) provided numbers which indicate that breast cancer is responsible for about 15.9% of all cancer related deaths in Nigeria. Again, the global disease burden reported by World Health Organization (2008) demonstrated that out of 75,392 total deaths from all cancer or neoplasm in Nigeria, breast cancer recorded 10,469 (13.9%). It further stated that Nigeria has a population of about 40 million women aged 10 years and above who are at risk of developing breast cancer.

Sadly, however, detection and diagnosis in Nigeria seem to be done very late. By the time most women show up in the hospital, the disease is most likely widespread already and at a stage where nothing medical or surgical can proffer solution. Observing this deadly trend, Okobia (2006) lamented that late presentation of patients at advanced stage when little or no benefit can be derived from any form of therapy is the hallmark of breast cancer in Nigerian women.

Like every other state in Nigeria, where the incident of breast cancer is taking its toll, Anambra State is not without a share of its scourge. Although proper records of this issue in the state have not been well documented by the State Ministry of Health, clinical records from the Histopathology unit of Nnamdi Azikiwe University Teaching Hospital (NAUTH), Nnewi, indicate an approximate number of 197 occurrences between 2009 and 2012. Irrespective of the under-reporting of cases challenging the clinic from getting accurate data, it is still evident that a significant number of women in Anambra State also suffer from breast cancer each year.

Some researchers like Amosu, Degun, Thomas, and Babalola (2011) noted that detection and diagnostic measures of breast cancer have centred largely on the use of modern screening techniques, such as mammography, ultrasound, magnetic resonance imaging (MRI). The use of these advanced facilities has contributed to the good prognosis seen mainly in developed nations of the world, where majority of people are highly informed about breast cancer and know the need for its early detection; using such facilities. It is worrisome however to observe that such early detection approach seem not to be exactly the same in Nigeria as such facilities, infrastructure, and even manpower seem to be grossly inadequate in scope and spread. Again, a very few of these facilities which may be available are mostly found in some of the government owned-hospitals which are usually located in the urban areas; and access to them is even seriously limited by high cost. More worrisome is the fact that most rural women do not even seem to be aware that some of such facilities exist. It becomes highly imperative therefore, to adopt a most effective strategy in combating breast cancer, and as Routledge International Encyclopedia (2000) stated, "a woman's most effective strategy against cancer is early detection". Early detection of breast cancer is based on the observation that treatment is more effective when the disease is detected earlier in its natural history (Sasindran, Karthikeyan, and Belthazar, 2005).

Since it is obvious that modern screening facilities such as mammography for instance, may not be possibly available to all women in Nigeria, especially to the rural dwellers, adequate breast cancer awareness or in-depth breast cancer education that can enlighten the rural women on how to follow early detection guideline seem to be the best feasible alternative. In this case, Rao, Nair, and Kamath (2005) pointed out that breast health awareness and breast cancer campaign could be an important intervention. These women need to be well informed on the issue of breast cancer and on the crucial need for breast self-examination (BSE) which according to American Medical Association (2008) is a regular inspection by a woman for abnormalities in her breast, as well as on the need to go for clinical breast examination (CBE) or screening.

The World Health Organization (WHO) has estimated that about one third of all cancer cases are preventable and a further one-third, if detected sufficiently early enough, is curable. This implies that survival for breast cancer cases is much better if the concerned women are able to detect the disease and seek for treatment at an early stage of the disease or if they make conscious and deliberate effort to attend regular clinical examinations. This however depends so much on if such women's information needs in this regards are properly identified and adequately met in such a way as to enable them have the required knowledge about the disease; its possible early signs, appropriate early detection practices and the need to attend routine clinical breast examinations and screenings. The Oxford Advanced Learners Dictionary (2010)

described these needs as something required because they are essential or very important and not just because they would have been liked to be had.

Every effort to combating the deadly disease, its advancement and mortality rates among rural women may prove abortive if their information needs are not identified and adequately met. Again, a lot of reasons might have been attributed to the existing ignorance, which seems to be making early detection impossible among rural women, but as observed by Ojikutu and Adewunmi (2009) the missing link in the actual sense most likely is the absence of an effective information system pattern for mobilizing and stimulating them into action with a view of safeguarding and improving their own health and life.

Apata and Ogunrewo (2010) described information as an important tool in the realization of any objective or goal set by individuals, which remains the life blood of any individual or organization, and a valuable resource required in any society. Therefore, information being a basic human need (Maitwe, 2001) and a vital essence which provides impetus for a nation's survival (Muhammed, 1994), could be the most potent weapon for the early detection and treatment of breast cancer among women; particularly rural dwellers, who due to lack of health care infrastructure are characteristically known to have limited access to screening facilities which are known to promote early detection. Information however, is dependent on media and comes in different formats, such as books, periodicals, newspapers, artifacts and so on. Any information captured in a written or digital format is usually not accessible to people who are not literate enough to access such media. This invariably affects access to useful information packaged in such media thereby negating all effort to early detection and possible cure of the disease. Thus relevant information for early detection and cure has to be well package to enable easy access and utilization according to Amanze and Ibenne, (2011). For Watts (2004), and Apata (2010), it is either culturally, inappropriate information or total lack of information provision that constitute a challenge to the information need of rural people but on the contrary, Ughegbu (1997) and Ejiogu (2012) argued that Nigerian rural communities are actually experiencing an increased flow of information. Amanze and Ibenne (20110), however maintained that the medium of information in many rural areas is inadequate and alien to the rural dwellers, as they are never learned to read or access the types of available formats. Also, Meyer (2005) stated that both print and non-print (books, newspapers, radio, television and other sound system) media or means of informing a populace makes information inaccessible and useless except the recipients know how to use these formats.

Since early detection is the fundamental step to curbing the advancement of breast cancer, and since ignorance of the disease seems to be abysmal and seems to be the major hindrance to early detection among rural women, they are in dire need of adequate and well packaged breast cancer information, its early warning signs, risk factors, and early detection measures, that could guide them on the early detection of the disease. Detecting breast cancer early in its disease pathway increases the opportunity for its effective treatment and reduces its advancement and mortality rates (American Cancer Society, 2003).

Women themselves, according to Global Action on Ageing (2002) can play such an important role in early detection through such ways as knowing how their breast normally look and feel like (breast awareness) so as to know when changes occur, practicing breast self-examination (BSE) to check out for any new abnormal development, promptly reporting any abnormality discovered in the breasts to a doctor, and going for regular clinical breast examination (CBE). Crucial to this is the need for women to be well informed in this regards.

Statement of Problem

Women living in the rural areas of Nigeria do not possess the required information that could guide them in early detection of cancer as News Agency of Nigeria (2013) revealed that a good number of Nigerian women out of ignorance are still dying of the disease. Also, studies like Science Daily (2011) indicated that rural woman are still more likely than women living in cities to be diagnosed with late-stage breast cancer which is the most severe form of the disease. It is sad to note that a good number of Nigerian rural women do not know the early warning signs nor the early detection measures for breast cancer. Majority do not even know the need to go for routine clinical breast examination (CBE), even in their local health centres, except in the case of certain emergencies. Thus, medical experts who stand a better chance of examining them to detect any abnormality in their breast do not have the first hand opportunity of doing this, and so, certain abnormalities which may require further screenings to ascertain the onset of cancer may not be carried out. Therefore, in an environment where ignorance that results to late detection and presentation of breast cancer seems to be predominant and where there seems to be no established national screening programme for breast cancer, there is an urgent need for appropriate and adequate early detection information measures, since the fact remains that an informed mind is better equipped with knowledge for self-survival. Otherwise, more than 3.6 million rural women (Nigerian women inclusive) around the world will die of the disease between 2015 and 2024 as predicted by the International Agency for Research on Cancer (Komen, 2013).

Thus, the need to identify the information needs of the populace, ascertain the existing awareness of breast cancer among the populace; which also tends to be part of their information needs, determine the media through which breast cancer information is accessed by the populace, ascertain the preferred media for the effective propagation of breast cancer information among the populace and find out the factors that hinder the rural populace from accessing breast cancer information is worthwhile. There appears to be limited empirical research on the information need of rural women in the early detection of breast cancer in Nigeria. There also seems to be no such research that covers Orumba South Local Government Area of Anambra State, Nigeria. It is in view of these that the researchers were motivated to investigate the information need of rural women in early detection of breast cancer. Hence the question, what is the information need of rural women in early detection of breast cancer in Orumba South Local Government Area of Anambra State, Nigeria?

Purpose of the Study

The primary aim of this investigation was to determine the information needs of rural women in the early detection of breast cancer in Orumba South Local Government Area. The study specifically sought to:

1) identify the information needs of the rural women in early detection of breast cancer;
2) ascertain the existing awareness on breast cancer among the rural women;
3) find out the media through which the rural women access breast cancer information;
4) ascertain the preferred media for the effective propagation of breast cancer information among the rural women; and
5) identify the factors which hinder the rural women from accessing breast cancer information.

Research Questions:

1) What are the information needs of rural women in early detection of breast cancer?
2) What awareness on breast cancer exist(s) among the rural women?
3) Through what media are breast cancer information accessed by the rural women?
4) What are the preferred media for the effective propagation of breast cancer information among the rural women?

5) What factors hinder the rural women from accessing breast cancer information?

Scope of the Study

This study was limited to the rural Anglican Women living in the fifteen villages of Orumba South Local Government Area of Anambra State, Nigeria. From the religious divide, Orumba South Local Government Area, appears to have greater concentration of rural women among the Roman Catholic and Anglican denomination in Anambra State. The researchers observed that there are more rural women in the Anglican Churches in these communities than in the Catholic churches. The study was also restricted to identify the rural women's information needs in early detection of breast cancer, assess their awareness on the disease, finding out the media through which they access breast cancer information, ascertain the preferred media for effective propagation of breast cancer information among them and identifying the factors which hinder them from accessing such needed information. .

Methodology

The descriptive survey research design was adopted for this study and the study was conducted in Orumba South Local Government Area of Anambra State, Nigeria, which consists of fifteen rural areas namely: Ogboji, Umuomaku, Enugwu-Umuonyia, Onneh, Agbadu, Akpu, Nawfijah, Isulo, Eziagu, Ezira, Umuchukwu, Ogbunka, Owerri-Ezukala, Ihite and Umunze.

A total number of 3,488 rural Anglican women in the Women's Guild Chapter, from each of the fifteen rural communities in Orumba South Local Government Area made up the population of this study and the sample size consist of 500 respondents, selected through proportionate stratified random sampling technique. The data was collected through a sixty-item structured questionnaire which was validated by experts in the field of Library and Information Science as well as in Health Science. The instrument was administered and collected by the researchers and with the help of research assistants who were adequately trained on the modalities of administering the questionnaire. Descriptive method of data analysis was used in answering the research questions.

Results

The result of the study were presented and discussed in line with the specific objectives of the study:

Table 1

Information needs of rural women in early detection of breast cancer.

S/N	Items	Mean	Remarks
1.	In breast cancer early detection, regular clinical breast examination is a must for every woman.	3.11	Agree
2.	A woman needs to practice regular breast self-examination to detect any abnormal signs of breast cancer at its early stage.	2.80	Agree
3.	Itchy scaly, sore or rash on the nipple is never to be worried about**.**	2. 79	Agree
4.	A woman who discovers any little abnormal sign on her breast should patiently wait for it to develop very well before reporting to a doctor.	2.57	Agree
5.	Pulling-in or dimpling of any of the nipples or any part of the breasts may be a sign of breast cancer.	2.53	Agree
6.	Sometimes, breast cancer may come up with the sign of redness or darkening of the skin of the breast.	2.40	Disagree
7.	Breast cancer is suspected when there is painless lump in any of the breasts.	2.37	Disagree
8.	A sudden change in the size or shape of the breast can never be related to breast cancer**.**	2.36	Disagree
9.	Swelling or lump in the armpit may be a sign of breast cancer.	2.23	Disagree
10.	Nipple discharge which is new and not breast milk is a normal thing that can happen to a woman**.**	2.10	Disagree

As shown by the mean of the responses of the respondents, rural women critically need information on five (5), out of the 10 information required for early detection of breast cancer. The aspects of information needed for early detection of breast cancer include gaining more knowledge on possible signs of cancer such as; painless lump in any of the breasts (Mean = 2.37), change in the size or shape of the breast (Mean = 2.36) new nipple discharge not breast milk (Mean = 2.10), swelling or lump in the armpit (Mean = 2.23) and redness or darkening of the skin of the breast (Mean 2.40). Although the respondents seem to have exhibited moderate knowledge on such areas as; knowing that itchy, scaly sore or rash on the nipple are signs to be worried about (Mean = 2.80), knowing that pulling-in or dimpling of any of the nipples or any part of the breasts (Mean = 2.54), regular practice of breast examination (Mean = 2.81) and not patiently waiting for any abnormal sign to develop before reporting to a doctor (mean = 2.58), they still need more information. Of the 10 areas of information need for early detection of breast cancer listed, the respondents are highly knowledgeable about the need for regular clinical breast examination for every woman (Mean = 3.11) and may need little or no information on that.

Table 2

Existing awareness of breast cancer among the rural women.

S/N	Items	Mean	Remarks
1.	Elderly women need to go to hospital at least once every year to have their breast examined by a doctor.	2.63	Agree
2.	Breast cancer is mostly difficult to treat at its early stages of development.	2.62	Agree
3.	Drinking alcohol helps to prevent breast cancer.	2.53	Agree
4.	Any abnormal look or feel in the shape or size of the breast may be an early warning sign of breast cancer.	2.32	Agree
5.	Breast cancer can kill a woman only when it is not detected early and treated in hospital.	2.19	Agree
6.	Every woman has a chance of getting breast cancer at any age.	2.14	Agree
7.	It is not advisable for young women to regularly go to hospital and have their breast examined by a doctor or nurse**.**	1.86	Disagree
8.	It is not advisable for young women to personally examine their own breasts for signs of breast cancer.	1.83	Disagree
9.	As a woman's age increases, her chances of getting breast cancer also increases.	1.76	Disagree
10.	Gaining a lot of weight in adulthood can increase a woman's chance of getting breast cancer.	1.76	Disagree
11.	It is not necessary for every woman to become familiar with how her breasts normally look and feel.	1.66	Disagree
12.	It is not possible for any woman on her own to detect any abnormal sign of breast cancer in her breast.	1.60	Disagree
13.	Any woman who avoids breast feeding may likely get breast cancer.	1.44	Disagree
14.	It is good for any woman who notices any abnormal sign in her breast to go to a chemist and buy drugs to cure it fast.	1.38	Disagree
15.	A woman should only report any abnormal signs she discovered in her breast to doctor if she feels like.	1.23	Disagree

From the mean response of the respondents, rural women have sufficient awareness of six out of the 15 information on breast cancer, as their mean ratings were 2.00 and above. The six areas include: every woman having a chance of getting breast cancer at any age (mean = 2.14), abnormal size of breast as a possible sign of cancer (Mean = 2,32), risk of death if cancer is not detected on time (mean = 2.19), drinking of alcohol as not being a preventive measure for breast cancer (mean = 2.53), breast examination for signs of caner as necessary for the elderly (mean = 2.63), and lack of difficulty of the treatment of cancer in early stage of development (mean = 2.62

Table 3

Media through which rural women access breast cancer information.

S/N	Items	Frequency	%	Remarks
1.	Community library.	0	0.0	Applicable
		500	100.0	Not applicable
2.	Community health centres or hospitals	275	55.0	Applicable
		225	45.0	Not applicable
3.	Mobile campaign agencies.	0	0.0	Applicable
		500	100.0	Not applicable
4.	Women group meetings or associations.	64	12.8	Applicable
		436	87.2	Not applicable
5.	Radio broadcast	24	4.8	Applicable
		476	95.2	Not applicable
6.	Television programmes	66	13.2	Applicable
		434	86.8	Not applicable
7.	Community-based breast cancer counseling	0	0.0	Applicable
	centres	500	100.0	Not applicable
8.	Road-side posters and sign-board	0	0.0	Applicable
	information displays.	500	100.0	Not applicable

From the table above, community health centers or hospitals is the major medium through which breast cancer information is accessed by rural women as shown by percentage of respondents (55%) that endorsed it. This was followed by television programme and women group meetings or associations which were endorsed by 13.2% and 12.8% of the respondents respectively.

Table 4

Preferred media for effective propagation of breast cancer information among the rural women.

S/N	Items	Frequency	%	
1.	Community library centre.	133	26.6	Preferable
		367	73.4	Not preferable
2.	Community health centre.	115	23.0	Preferable
		385	77.0	Not preferable
3.	Community-based breast cancer	450	90.0	Preferable
	counseling centre	50	10.0	Not preferable
4.	Television programmes	362	72.4	Preferable
		138	27.6	Not preferable
5.	Radio broadcast	101	20.2	Preferable
		399	79.8	Not preferable
6.	Telephone text messages	86	17.2	Preferable
		414	82.8	Not preferable
7.	Women group meetings.	477	95.4	Preferable
		23	4.6	Not preferable
8.	Church meetings	114	22.8	Preferable
		386	77.2	Not preferable
9.	Town hall meetings	29	5.8	Preferable
		471	94.2	Not preferable
10.	House-to-house visit by information	463	92.6	Preferable
	providers.	37	7.4	Not preferable
11.	Public outreach campaigns.	434	86.8	Preferable
		66	13.2	Not preferable
12.	Road-side posters and sign-board	31	6.2	Preferable
	information displays.	469	93.8	Not preferable
13.	Handbill/flyers distributions.	16	3.2	Preferable
		484	96.8	Not preferable
14.	Daily newspapers.	13	2.6	Preferable
		487	97.4	Not preferable

From the table above, community-based breast cancer counselling centre (90%), television programmes (72.4%), women group meetings (95.4%), house-to-house visits by information providers (92.6%) and public outreach campaigns (86.8%) are the preferred media for breast cancer information propagation among rural women in Orumba South L.G.A. This is shown by the large proportion of respondents that endorsed these media as preferred media.

Table 5

Factors that hinder rural women from accessing breast cancer information.

S/N	Items	Mean	Remarks
1.	No breast cancer counseling centre in my village	3.37	Agree
2.	No public library in my community.	3.11	Agree
3.	I am not aware such information exists.	2.95	Agree
4.	Lack of community health workers.	2.83	Agree
5.	I do not listen to radio.	2.80	Agree
6.	Breast cancer is never discussed in women meetings in my village.	2.59	Agree
7.	I am not literate in English language.	2.51	Agree
8.	I did not go to school.	2.50	Agree
9.	I do not watch television.	2.26	Disagree
10.	No health centre in my community.	2.22	Disagree
11.	There is no radio in my house.	2.08	Disagree
12.	I do not have television.	2.07	Disagree
13.	I am not literate in Igbo language.	1.98	Disagree

From the mean of responses in the table above, absence of breast cancer counselling centre in the village (Mean = 3.37), lack of public library (Mean = 3.11), lack of awareness on the existence of such information (Mean = 2.95), lack of community health workers (Mean = 2.83), absence of topics on breast cancer for discussion in women meetings in the village (Mean = 2.59), insufficient use of radio (Mean = 2.80), illiteracy in English language (Mean = 2.51) and lack of education (Mean = 2.50), in this order, are the factors hindering rural women from accessing breast cancer information, having means 2.50 and above.

Discussion

The result obtained for Research Question 1 indicates that rural women exhibited moderate knowledge in some aspects of breast cancer early detection facts, unlike the findings of Oluwatosin and Oladepo (2006), which indicated that rural women possessed a very low knowledge of such information. Probably, the disparity between the two findings is due to the variation in both the geographical areas and years of such findings.

The result however, further reveal that although rural women exhibited such knowledge in some aspects like the need for both breast self-examination (BSE) and clinical breast examination (CBE), need for prompt reporting of abnormal signs to a doctor, change in the size of the breast as being early warning signs, they still have an outstanding need for more information on early detection, particularly in the aspect of breast cancer early warning signs, as they are still unable to identify most of the specific early warning symptoms that are associated with it. This result is consistent with the findings of Simonian, Sanders, Murillo, Marks, Brown, Kidd and Garcia (2007), which affirmed that women need all round, comprehensive, accurate, timely and relevant breast health and breast cancer information.

Therefore, the findings of this study is relevant, as it has provided further evidence that rural women in particular, still lack or have need of appropriate information on breast cancer and its early detection measures.

The result obtained for Research Question 2 also reveals that rural women have very low awareness on general facts about breast cancer. This is because they were only aware of just six, out of fifteen information on breast cancer presented to them on the risk factors associated with breast cancer as well as on the possible preventive and curative measures. This implies that there is an urgent need to create general awareness on breast cancer among the rural

populace. This result is in line with that of Amosu, Degun, Thomas, and Babalola (2011) who discovered that rural women had a low level of awareness about breast cancer and are in need of aggressive health promotion intervention designed to increase awareness. However, the findings of Kayode, Akande, and Osagbemi (2005) who on the contrary, ascertained a high level of breast cancer awareness among female secondary school teachers in Ilorin significantly suggests that rural women characteristically seem to differ from non-rural and educated women in terms of their awareness on breast cancer. Therefore, the finding that rural women's awareness on breast cancer is evidently low is not misleading.

The findings for Research Question 3 shows that community health centre as well as hospitals is the major gateway through which rural women access information on breast cancer, followed narrowly by television programmes and women group meetings. Opposed to this, the findings of Simonian, Sanders, Murrillo, Marks, Brown, and Kidd (2007) showed that women accessed breast cancer information through television, radio, written and print media, multiple media, telephone, women magazines, outreaches and public awareness campaign. The present finding may be different from that of Simonian, Sanders, Murrillo, Marks, Brown, and Kidd because, it studied women from rural part of a developing country while the latter studied women from an urban area of a developed country. Hence, the finding that the media through which rural women access breast cancer information is mainly through community health centres or hospitals is convincing.

The result of Research Question 4 reveals that rural women of Orumba South Local Government Area, preferred above others, the following media such as women group meetings or associations, house-to-house visits by information providers, community-based breast cancer counseling centre, public campaign outreaches, and lastly television. Notably, community health centre or hospital which is the major existing media for such information among them is not among their list of preference. Their list of preferred media comprised more of face-to-face or interpersonal information channels with the exception of television, which is a mass media and although their reasons for such preference which is outside the scope of this study, were not ascertained Mtega (2012) observed that face-to-face channels of communication are mostly preferred by rural women because it is cheap, easily accessible, better understood and calls for stronger social ties.

The result of Research Question 5 reveals the various factors which hinder rural women from accessing breast cancer information. These factors are related to ignorance, absence of functional library services, negligence of government responsibilities to its citizens, inaccessibility of the rural areas by non-governmental organizations, lack of adequate and efficient information mechanisms, poverty, language barrier and illiteracy. These were reflected in the responses of the rural women whose claims were:

Lack of awareness of the existence of such information, no public library, lack of community health workers, no breast cancer counseling centre in the village, no publicity of such information in the village, not being educated, not having information transmission gadgets and facilities, inability to read in English language and even Igbo language. Together but differently, American for Libraries Council (2005), Aina (2008), Saleh and Lasisi (2011), Addai and Wiafe (2012) concurred that these factors constitute a hindrance to rural women's access to health information generally.

Conclusion

Based on the analysis and discussions of results of this study, the following conclusions were drawn with reference to the research questions:

- Rural women of Orumba South Local Government Area of Anambra State, Nigeria lack and are in critical need of specific information on breast cancer early warning signs and its early detection measures that could guide and enable them fight against late detection and eventual death. Although the women are not completely unaware of the disease, they still lack comprehensive, all-round or appropriate breast cancer information. Hence, they do not possess the sufficiently required awareness to be able to effectively play the vital role expected of them in early detection.
- The finding that the major medium through which they possibly access breast cancer information is community health centre, which indicates also that they lack adequate information mechanisms through which such vital information need could be met.
- The women prefer more of face-to-face or interpersonal media, which are not yet fully obtainable in their various communities, instead of the already existing media, which is community health centre. They have no preference for written or print media.
- The numerous factors that hinder the rural women from accessing breast cancer information are all related to inadequate or total lack of information facilities, agencies and media as well as inability to read and understand written or print publications due largely to poor or complete lack of education.

Implication of the Study

Some educational implications are derived from the results of this study and they include the following:

- It has empirically proved that rural women lack appropriate breast cancer early detection information. This strongly suggests an inadequate propagation of such crucial information by health care providers as well as inadequate enforcement of such policy by the Federal Government, through the health care delivery system.

  Also, it has proved that the women's general awareness for breast cancer is very low, even though they are not utterly ignorant. This implies that they are not capable of participating in the all-important crusade for early detection, which is the key to effective treatment and survival since they lack the requisite information to guide and enable them for such.
- The study has revealed that community health centre is the major medium through which the rural women access breast cancer information. The implication is that they lack adequate information mechanisms and so, have limited access to such vital information.

  As the study has also revealed that the women prefer certain media for the effective propagation of breast cancer information to them, among which community health centre, being the functional medium is not included, it implies that if the preferred media are neglected, the possibility of adequately reaching these women with the required information cannot be satisfactorily achievable through the community health centre alone. Hence, the need for diversified information media, which inevitably include well, equipped functional public libraries.
- Finally, the study has proved that there are certain factors which hinder the rural women from accessing breast cancer information. This implies that they can only have the desired access to such information if such hindrances are given due attention by the government and through the voluntary efforts of non-governmental organizations.

Recommendations

The recommendations that are proffered with regards to the findings and conclusion drawn from this study are as follow:

The Federal Government of Nigeria should ensure that information on breast cancer both for early detection and cure is integrated into the primary, secondary and tertiary information care package of Nigeria. Greater percentage of women and children live in rural areas and they are mainly the agrarian population of the nation. A committee, specially designed to strategically implement the Sustainable Development Goals of such information propagation should be established to ensure that women's all-round information need in this regards is adequately met to promote early detection. Also, the government, in collaboration with non-governmental organizations, should strategically utilize breast cancer awareness programs such as the National Breast Cancer Awareness Month (NBCAM) which internationally takes place every month of October, to reach and mobilize the women for early detection, using key dates, symbols, pictorial displays, lectures, seminars, counseling and other awareness talk shows on breast cancer.

Breast cancer awareness campaigns and outreaches should be frequently organized and conducted in the rural communities by both the state and local government, to reinforce breast cancer awareness among the women. Non-governmental organizations should also collaborate with both government and help to set up agencies that can voluntarily visit the rural communities on a frequent time schedule.

Apart from community health centre, a variety of information media should be established by both the state and local government as well as non-governmental agencies, to provide the women with due and unrestricted access to breast cancer information. This should essentially include functional public library, which like every other library, has the sole responsibility to provide the right information to the right user at the right time and in the right way.

Breast cancer information should be propagated to the rural women through the media that are most suitable to them. Such, among others include, face-to-face media like the women group weekly, monthly, or August meetings. The federal, state and local government, Health care workers, librarians and non-governmental agencies should take good note of such suitable media and ensure they reach the women to achieve maximum effectiveness.

A concerted effort by all the government, health care workers, librarians and non-governmental organizations should be tailored to urgently alleviate the factors which hinder the rural women from the desired access to breast cancer information.

Key messages

Through breast cancer information propagation, rural women could be mobilized and motivated to participate in the practice of early detection of breast cancer.

Breast cancer information propagation to rural women needs to be mandated by the Federal Government of Nigeria through the health care delivery system.

Community libraries could be better equipped to become good mediums of breast cancer information propagation to the rural women.

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