

THE IMPACT OF BREAST CANCER AWARENESS PROGRAMMES AMONG WOMEN IN BIDA LOCAL GOVERNMENT AREA OF NIGER STATE

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Abstract

This study seeks to investigate the impact of breast cancer awareness programmes among women in Bida Local Government Area of Niger State. A quantitative survey design was implemented to gather data and investigate the research problems through the administration of structured Breast Cancer Awareness & Impact Questionnaire" (BCAIQ) to collect primary data from a population of 41,362 and a sample of 380 consisting of women of childbearing age residing in 14 different wards within the Bida local government area in Niger State. Krejcie and Morgan (1970) sample determination method was used to select the study's sample. Pearson Product Moment Coefficient of Correlation (PPMC) was used to quantify the level of correlation and the analysis of the data revealed a correlation coefficient of 82, indicating a strong positive correlation between the responses obtained during the two-time period. The findings from the analysis of study revealed that, most women in the Bida Local Government Area of Niger State have moderate knowledge about breast cancer. Conclusively, breast cancer awareness programs have a positive and significant impact on increasing the level of breast cancer awareness among women in Bida Local Government Area. The recommendations from the study are that it is crucial for all stakeholders in the healthcare sector to actively participate in enhancing breast cancer awareness efforts, dedicated breast cancer screening centre should be established, certain medications to be included in the coverage provided by the National Health Insurance Scheme (NHIS), and, there is the need for the involvement of non-governmental organizations (NGOs) in providing medication and financial support to patients.

Key Words: Breast Cancer, Cancer Awareness, Programmes

Introduction

The global threat posed by breast cancer to women of child bearing age is becoming alarming and worrisome. Its dynamics, dimension and spread has forced governments, non-governmental organizations, corporate organizations, civil society groups, as well as individuals to make concerted efforts towards eliminating or at least reducing the scourge. Consequently, annual public time, financial and human resources are specifically set aside to help tackle this menace.

Global annual death as at 2020 resulting from breast cancer is put at 685,000 and half of all breast cancer occur in women just as 0-5% of these cases occur in men (Global Breast Cancer Initiative, 2020). Similarly, 3.8 million women were diagnosed of cancer in 2022 consequently; the World Health Organization's Global Breast Cancer Initiative plans to reduce the rate of global annual breast cancer mortality by 2.5% thereby averting 2.5 million deaths between 2020 and 2040 (GBCI-WHO, 2022).

Kolo (2019), lamented the low uptake of breast and cervical cancer screening programs by the RAISE Foundation. According to him, "Screening uptake is still very poor despite massive awareness campaigns. The current awareness creation strategy has not been able to create the needed demand for the available screening services.

The World Health Organization (WHO, 2021); and Global Cancer Observatory (Globocan, 2021) reported that breast cancer was the second-highest number of new cancers among all sexes (22.7%) and the highest in females (37%). Report by Ferley (2020) shows the incidence of breast cancer varies across the world from 27 per 100,000 in Middle Africa and East Asia to 92 per 100,000 in Northern America.

Statistical figures on Cancer generally and breast cancer in particular in Nigeria seems to be low perhaps due to underreporting since many in Africa fail to go to the hospital to present their cases. An average cancer patient is either stigmatized or perceived from the angle of superstition and spirituality. They are not seen by the medical establishment nor captured by official statistics, resulting in seeming lower incidences. The outcome of this is a far higher proportion of breast cancer afflicted women than reported and the underreporting misleads world statistics to believe we have a lower incidence. In Niger State, such homegrown NGOs appear to be absent. Apart from the RAISE foundation, there appears not to be any other non-governmental body pursuing the pink cause in Niger State. The government that should be doing that appears preoccupied with other issues instead. It has relegated itself only to speeches, rhetoric and signing MOUs with all comers claiming to support breast cancer awareness and services. Even at the national level, but for Project YES, and RAISE foundation, others appear to pay only lip services to breast cancer.

The fundamental concern of this study is the seeming lack of breast cancer awareness and support services in Niger State beyond that of the RAISE foundation. It is surprising that in spite of the level of education among the female elites who attends hospital and mingles; ideas with regards to awareness event or educational program pertaining to breast cancer are rarely discussed or debated. Yet there are claims by government officials of "massive breast cancer awareness" efforts. It is on this backdrop that this study seeks to investigate breast cancer awareness programs of both governments and NGOs in the Bida Local Government Area with a view to ascertain what programs are present, who are the program organizers and what awareness they provide.

Statement of the Problem

The poor management of breast cancer and related issues in Nigeria has raised a lot of questions as to the justification for government's claims of humongous expenditure on the fight against breast cancer through information and patients' management, treatment, public awareness, enlightenment and sensitization. The efforts by the government in creating awareness, funding and support for breast cancer sufferers has not made significant impact as expected. Even the emergence of local NGOs like the RAISE Foundation has not ameliorated the problem of poor awareness and ignorance of the cancer menace. According to Obajietal., (2013) "the knowledge and care-seeking attitude for breast cancer management is so low that majority of the affected patients present late in the hospital the situation is almost irredeemable." What is responsible for the low level of awareness of breast cancer? What is the government doing to change the attitude of people towards breast cancer management? How has the effort of government and other stakeholders in the management of breast cancer reduced the scourge? These are some of the questions still begging for answers. This study therefore, seeks to ascertain what programmes on breast cancer awareness are ongoing in Niger State in general and Bida Local Government Area in particular so as to know how these programmes have impacted breast cancer patients.

Research Questions

- i.) What is the level of awareness of breast cancer and what is the impact of the women's educational qualification on their breast cancer awareness level in Bida Local Government Area of Niger State?
- ii.) What is the level of participation in breast cancer awareness programs among the health sector stakeholders and how effective are the current breast cancer awareness programs in Bida Local Government Area, Niger State?

Objectives of the Study

- i.) To determine the level of awareness of breast cancer and find out the impact of the women's educational qualification on their breast cancer awareness level in Bida Local Government Area of Niger State.

- ii.) To know the level of participation in breast cancer awareness programs among the health sector stakeholders and how effective are the current breast cancer awareness programs in Bida Local Government Area, Niger State.

Research Hypothesis

For this research null hypothesis is used;

H_{01} : Breast cancer awareness programs do not have a significant impact on the level of breast cancer awareness among women in Bida Local Government Area of Niger State.

Literature Review

Concept of Cancer and Cancer Awareness

Cancer is the uncontrolled growth of abnormal cells anywhere in the body. These abnormal cells are termed cancer cells, malignant cells, or tumor cells. These cells can infiltrate normal body tissues. Many cancers and the abnormal cells that compose the cancer tissue are further identified by the name of the tissue that the abnormal cells originated from (for example, breast cancer, lung cancer, and colorectal cancer). When damaged or unrepaired cells do not die and become cancer cells and show uncontrolled division and growth - a mass of cancer cells develop. Frequently, cancer cells can break away from this original mass of cells, travel through the blood and lymph systems, and lodge in other organs where they can again repeat the uncontrolled growth cycle. This process of cancer cells leaving an area and growing in another body area is termed metastatic spread or metastasis. For example, if breast cancer cells spread to a bone, it means that the individual has metastatic breast cancer to bone (Kumari, 2020).

Breast cancer is a type of cancer that starts in the breast. It can start in one or both breasts. Breast cancer occurs almost entirely in women, but men can get breast cancer (Global Breast Cancer Initiative, 2021).

Breast Cancer Awareness: Breast Cancer Awareness (BCA) includes public health, professional medical education and all other sensitization and enlightenment programmes and projects designed and executed to create, exchange, communicate and disseminate information on the risk factors, symptoms of breast cancer and the importance of seeking medical evaluation for breast cancer as well as management and preventive measures that can be taken against the scourge. Breast cancer awareness efforts targeted to women and their communities can augment early diagnosis efforts and increase participation in early detection screening programs. Involving breast cancer survivors or women undergoing breast cancer treatment in breast cancer awareness planning can provide insight into effective messages and help identify barriers to breast cancer early detection; including breast cancer survivor stories in awareness messages can provide hope to women who suspected they have breast cancer, and encourage women to participate in early diagnosis or early detection screening programmes (Union for International Cancer Control, 2020; World Health Organization, 2021; Breast Health Initiative, 2020).

Review of Empirical Studies

Ammar&Alsater (2018) conducted a study to find out predictors of screening visits at the Jordanian, King Hussein Cancer Foundation and Center (KHCF & KHCC) early detection clinic in October 2015 to evaluate the effect of the campaign and to find the screening rate among women at KHCC early detection clinic. It was a cross-sectional study, using a self-administered questionnaire, carried out in October 2015 and a follow-up was completed in August 2016. Results: 291 women responded to the questionnaire, they were categorized into two groups; screening and diagnostic. The screening rate was 57.8% (N=166). In women above 40 years old, 69.3% (N=113) were in the screening group and 30.7% (N= 50) in the diagnostic group. There was no statistically significant difference in the average ages between the two groups (49.49 years, 47.82 years, P = 0.218). Positive family history of BC in a first-degree relative was found to

be a strong predictor for mammogram screening in comparison with the screening group (65.4% vs 16%, $P = 0.05$); other screening behaviours like commitment to the self-breast exam, clinical breast exam and attending an educational lecture about BC did not significantly affect screening rates. In addition, screened women were more likely to complete their investigations and follow-up procedures. In this sample, five women were diagnosed with BC; two were in advanced stages among the diagnostic group 4%, ($N=50$) with a mean age of 54.5 years, and three were in early-stage among screened group 2.7%, ($N=113$) with a mean age of 50 years. They concluded: First-degree family history of BC is a strong predictor of BC screening. Awareness activities might lead to higher screening rates among women in general. However, the research was limited by the low size of the sample. They recommended further studies need to be conducted on a larger scale to confirm the results of this study.

Also, Agodirin et.al. (2017), reviewed available studies on breast cancer awareness in order to assess what still constitutes poor breast cancer awareness in Nigeria in order to suggest how to allocate resources to reverse the paradox. Studies conducted on the Nigerian populace from 2000 to date were reviewed systematically. They reviewed Fifty-one eligible (48 descriptive surveys, 3 al ones) studies. They included 19,598 respondents (98.5% females; 43% rural dwellers). 17,086(87.2%) were laypersons in various walks of life; 2,512(12.8%) were healthcare professionals. There were high levels of awareness of breast cancer entity, BSE, knowledge of fatality and the benefit of early detection (weighted percentages 80.6%, 60.1%, 73.2% and 73.9% respectively). The weighted percentage of knowledge of symptoms/signs was 45.1%. Weighted percentages of sense of susceptibility and performance of BSE were low-26.8% and 22.9% respectively. They found "Generally, rate of performance of screening did not vary with changes in the level of awareness/knowledge of concepts." They concluded low awareness of breast cancer may not be the direct and foremost driver of persistent late presentation in Nigeria.

Similarly, Jedy-Agba, (2017) conducted a systematic review and meta-analysis of the stage of breast cancer diagnosis in SSA to examine trends over time and possible sources of variation across the region. Random-effects meta-analyses were performed to investigate between-study heterogeneity in the percentage of late-stage disease (stage III/IV) breast cancer and meta-regression analyses were carried out to identify possible sources of variation. Percentages of Black women with late-stage breast cancer in SSA were compared with equivalent estimates for US Black and White women using the Surveillance, Epidemiology and End Results Database. (ii) To design and conduct a study, the Nigerian Integrative Epidemiology of Breast Cancer (NIBBLE) study, (iii) to investigate determinants of late-stage breast cancer diagnosis and diagnostic delays at six tertiary and secondary health facilities in Nigeria. He found: there was wide variation in the percentage of late-stage (median 74.7%, range 30.3-100%, $I^2=93.3\%$ $p<0.0001$). The late stage at diagnosis was notably higher in Black vs non-Black women in SSA and higher for populations from mixed (urban and rural) settings than from urban settings. The percentage of women with late-stage breast cancer decreased over time but it was still higher than in US White and Black women 40 years previously. **The conclusions of the study were:** although the stage of breast cancer diagnosis improved over time in SSA, it is still a common feature.

Theoretical Framework

The study adopted by this study is the socio-ecological theory. The Socio-ecological theory appears to be the most comprehensive theory for health promotion and is selected to provide an overarching theory broad enough, system view to enable a much wider examination of factors facilitating or retarding awareness of breast cancer. It avoids the narrow focus of the older biomedical and behavioural change theories like the Health Behaviour model, The Principle of Planned Action and Social Cognitive Theory. Socio-ecological theory demands attention to not only the biomedical and individual actions but the contextual and social determinants of health

(Panter-Brick, 2006). It lets us exercise the sociological imagination by seeing the individual troubles of the milieu and connecting these with the structural issues of the system while paying attention to the interplay between the two.

Golden & Earp (2012), noted that the socio-ecological theory: "recognizes individuals as embedded within larger social systems and describes the interactive characteristics of individuals and environments that underlie health outcomes". Stokols (1996), an early pioneer of the socio-ecological theory noted "Social ecology is viewed as an overarching framework, or set of theoretical principles, for understanding the interrelations among diverse personal and environmental factors in human health and illness." He argues that the social, physical, and cultural aspects of an environment have a cumulative effect on health. He thus posited "that the environment itself is multilayered since institutions and neighbourhoods are embedded in larger social and economic structures, and that the environmental context may influence the health of individual people differently, depending on their unique beliefs and practices. Creating sustainable health improvements, therefore, is most effective when all of these factors are targeted simultaneously."

Stokol (1996) provided the basic tenets of socio-ecological theory:

1. A recognition of the interrelations among environmental conditions and human behaviour and well-being. The theory argues that in addition to considering individual knowledge and behaviours, socio-cultural issues of values, norms, beliefs, fears(say of death and excruciatingly painful therapy without palliation), the social construction of disease, the role of community involvement and awareness, social support, the economics of accessibility and affordability and institutional/system issues and limitations like funding, policy framework, administrator's attitude, provider delay and access are equally important in examining the health.
2. Environmental settings have multiple physical, social, and cultural dimensions that can influence a variety of health outcomes, including physical health status, developmental maturation, emotional well-being, and social cohesion.
3. Human health is influenced not only by environmental circumstances, but also by a variety of personal attributes, including genetic heritage, psychological dispositions, and behavioural patterns.
4. Social-ecological analyses emphasize the dynamic interplay between situational and personal factors rather than focusing exclusively on environmental, biological, or behavioural determinants of well-being."

Methodology,

A quantitative survey design was implemented to gather data and investigate the research problems through the administration of structured Breast Cancer Awareness & Impact Questionnaire" (BCAIQ) to collect primary data from a population of 41,362 and a sample of 380 consisting of women of childbearing age residing in 14 different wards within the Bida local government area in Niger State. Krejcie and Morgan(1970) sample determination method was used to select the study's sample. Pearson Product Moment Coefficient of Correlation (PPMC) was used to quantify the level of correlation and the analysis of the data revealed a correlation coefficient of 82, indicating a strong positive correlation between the responses obtained during the two-time period.

Test of Hypothesis

H_0 : Breast cancer awareness programs do not have a significant impact on the level of breast cancer awareness among women in Bida Local Government Area of Niger State.

Table 1. Regression model; Dependent Variable: Level of breast cancer awareness among women

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	1.121	.125		8.984	.000
Breast cancer awareness programs	0.508	.062	0.397	8.210	0.000

Source: Field survey, 2023

The regression model provided presents important findings regarding the impact of breast cancer awareness programs on the level of breast cancer awareness among women in Bida Local Government Area of Niger State. The standardized Beta coefficient of 0.397, accompanied by a significant value of 0.000, indicates that breast cancer awareness programs have a positive and statistically significant impact on increasing the level of breast cancer awareness among women in the area. The coefficient of 0.397 suggests a moderate positive relationship. This means that for every one-unit increase in breast cancer awareness programs, the level of breast cancer awareness among women in Bida Local Government Area is expected to increase by approximately 0.397 units.

The significance value (sig) of 0.000 indicates that the relationship between breast cancer awareness programs and the level of awareness is statistically significant. When the significance value is below a predetermined threshold (often set at 0.05), it indicates that the relationship is unlikely to occur by chance. In this case, the sig value of 0.000 suggests a strong basis for rejecting the null hypothesis implying no relationship between breast cancer awareness programs and the level of awareness.

Results and Discussion

The findings from the analysis of study's objective one revealed that most women in the Bida Local Government Area of Niger State have moderate knowledge about breast cancer. These findings are consistent with earlier empirical studies conducted by Agodirin et al., (2017).

The second findings of this study demonstrate that an increase in educational attainment among women in Bida Local Government Area of Niger State is associated with higher levels of awareness of breast cancer. This finding is consistent with a similar study conducted by Erbil & Balukbas (2014).

The third findings of this study highlight the critical role of NGOs as the major means of obtaining breast cancer awareness information for women in Bida Local Government Area of Niger State. This finding is consistent with the research conducted by Ammar and Alsater (2018).

The last findings of this study as presented by the regression output support the assertion that breast cancer awareness programs have a positive and significant impact on the level of breast cancer awareness among women in Bida Local Government Area of Niger State. This outcome corresponds with the research conducted by Prihartrio et al. (1995).

Conclusively, breast cancer awareness programs have a positive and significant impact on increasing the level of breast cancer awareness among women in Bida Local Government Area. The results support the effectiveness of these programs in raising awareness and educating women about breast cancer, its symptoms, prevention strategies, and available support services. Majority of women in Bida Local Government Area have a moderate level of knowledge about breast cancer. However, increase in educational attainment among women in Bida Local Government Area and continuous education and sensitization among women is needed to improve

women awareness of breast cancer awareness empowered them to take proactive measures for early detection and prevention.

Recommendations

The recommendations from the study are:

- i.) It is crucial for all stakeholders in the healthcare sector to actively participate in enhancing breast cancer awareness efforts and a dedicated breast cancer screening centre should be established in Bida and the surrounding areas to facilitate the prevention and early detection of prevalent cancers.
- ii.) Also, considering the exorbitant costs of cancer treatments, it is essential for certain medications to be included in the coverage provided by the National Health Insurance Scheme (NHIS).
- iii.) More so, there is the need for the involvement of non-governmental organizations (NGOs) in providing medication and financial support to patients, as they have demonstrated significant support thus far.

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