



**HEALTH
COMMUNICATION
INTERVENTION: A
CATALYST FOR
WOMEN'S UNDERSTANDING OF
BREAST CANCER EARLY DETECTION
AND PREVENTIVE PRACTICES**

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Abstract

In recent years, health communication has made significant progress in the areas of citizens' education and behavioural change through a variety of intervention programmes, including in Nigeria. The said achievements are interpreted through improved knowledgeability level of audience members of the programmes towards the background information, origins of the health issue, its risk factors, preventive practices, early detection methods, management options and curative procedures available to the audience which generally encourages strict adherence to positive lifestyles for behaviour change. The paper conducted a desk research study to gain insight on the influence of health entertainment-education on the women's'

understanding of breast cancer early detection methods and prevention practices. It was found that properly articulated health interventions

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improves knowledgeability level and elicit positive attitude toward adoption of anti-cancer behaviours. Following the established impact of health education on the women's knowledge of breast cancer early detection methods and prevention practices, the study therefore recommended that

women should constantly receive health message on breast cancer disease at all levels of the society from the change agents of public health, mass media, government and non-governmental organizations. Also, that such intervention should be appropriate, reliable and recent in content and that said health content is to be delivered through the participants' preferred source of information, as well as the local language(s).

INTRODUCTION

Cancer is one of the ailments commonly found around the globe in the contemporary times. It is capable of attacking any organ of the human body, particularly as the body is made up of different tissues and organs. For this reason, every individual is susceptible to cancer attacks irrespective of the; sex, age, race, and status, as the case maybe. Cancer victims are evidently seen within and around human society, whether it be in the rural or urban settings. Recent global cancer records confirmed cancer to be one of the leading causes of death, especially as there are about 277 types of the disease in existence; female breast inclusive (Hassanpour & Dehghani, 2017).

Currently, the female breast, commonly known as breast cancer, is one out of the two leading types of cancer across the globe in terms of number of new cases, with each of them (female breast and lung cancers) rising to approximately 2.1 million diagnoses (International Agency for Research on Cancer [IARC], 2018). More so, breast cancer in recent years is said to have consistently maintained the most common type with high malignancy in women (Erhabor, Abdulrahman, Retsky, Forget, Vaidya, Bello, Adias, Dagana, Egenti, Mainasara, Sahabi, Rilwanu, Ahmed, Hassan, Ajayi, Okara, Lori, Ibiang, 2016; IARC, 2018; World Health Organization [WHO] 2018). Accordingly, Ferlay, Soerjomataram, Dikshit, Eser, Mathers, Rebelo, Parkin, Forman, and Bray, (2015) reports cancer global annual diagnosis of over 14.1 million new cases and 8.2 million deaths in 2012, out of which breast cancer alone accounted for 1.67 million deaths with about 4.4 million women living with the disease. In 2018, IARC declares that cancer burden incidences rose to 18.1 million new cases and 9.6 million cancer deaths, making the disease currently the cause of one in every six deaths around the globe.

It has been noted that except for skin cancers, breast cancer is the most common cancer among women in the United States of America. The average risk of a woman in the United States developing breast cancer at any point in her life is currently about 13% (American Cancer Society, 2021). This means she has a one-in-eight chance of developing breast cancer and also has a 7 out of 8 chance of never developing the disease (American Cancer Society, 2021). In addition, an estimated 281,550 new cases of invasive breast cancer and 49,290 new cases of non-invasive breast cancer are predicted to be diagnosed in women in the United States in 2021 (American Cancer Society, 2021). Breast cancer mortality rates in women in the United States are higher than any other type of cancer, with the exception of lung cancer (American Cancer Society, 2021).

In most Asian countries, breast cancer is the most common cancer (Yip, 2009). Owing to changes in lifestyle and diet, the incidence rates remain low, but they are rising at a faster pace than in Western countries (Ghoncheh, Mahdavifar, Darvishi, & Salehiniya, 2016). Breast cancer in Asia differs significantly from breast cancer in Western countries. The average age at onset is lower than in the West, and unlike in the West, the age-specific incidence declines after 50 years. Since the majority of Asian countries lack a population-based breast cancer screening programme, the majority of patients present with advanced disease (Ghoncheh, *et al.*, 2016). There is a higher proportion of hormone receptor-negative patients in Asia, and there is evidence that cancers in Asia are more severe. The majority of Asian countries are low and middle-income countries with minimal access to effective healthcare (Ghoncheh, *et al.*, 2016). Women with breast cancer in Asia have a lower survival rate than in Western countries due to late diagnosis and insufficient access to treatment. In most Asian countries, improving breast health remains a problem that can be addressed with cooperation from various industries, both public and private (Fan, Goss, & Strasser-Weippl, 2015).

Breast cancer (BC) is the most common cancer in Sub-Saharan Africa (SSA), with incidence rates in Uganda and Zimbabwe on the increase. Most African countries, however, are unaware of the significance of these growing

trends in premenopausal and postmenopausal women (JokoFru, JedyAgba, Korir, Ogunbiyi, Dzamalala, Chokunonga, & Parkin, 2020). The rapid rise in breast cancer incidence in Sub-Saharan Africa in recent years has been attributed to a "westernisation" of lifestyles, which includes the effects of changing reproductive patterns, such as delayed age at first birth, fewer children, and shorter breastfeeding duration, as well as changes in diet, alcohol consumption, and body weight, among other things (Eberle, Sandler, Taylor, & White, 2020). Other determinants specific to African-American women have been proposed, including the use of skin lighteners and increased sensitivity to hormone modulators in skincare and hair products, all of which are commonly used by African-American women (Brinton, Figueroa, Ansong, Nyarko, Wiafe, Yarney, & Vanderpuye, 2018). Female breast cancer is a leading cause of morbidity and mortality in Nigeria, with an incidence rate ranging from 36.3 to 50.2 per 100,000 live births (Adebayo, Olaogun, Loto, Kolawole, Alabi, Ajao, & Solarin, 2019; Amin, Ewunonu, Oguntebi, & Liman, 2017). However, data on breast cancer mortality is sparse. The factors that contribute to breast cancer mortality have been the subject of extensive study and debate in the scientific community. However, most resource-poor countries, including Nigeria, lack details on the incidence of breast cancer mortality. Most African workers' data on breast cancer are limited to prevalence, risk factors, and complications rather than mortality (Amin, Ewunonu, Oguntebi, & Liman, 2017).

However, various scholarly reports explain the importance of adequate knowledge of breast cancer early detection methods such as; breast-self-examination (BSE), clinical breast examination CBE and mammographic examination as well as indelible contributions of prevention practices in form of adoption of healthy lifestyles, regular performance of the early detection methods, positive health seeking behaviours and abstinence from all known modifiable risk factors of the breast cancer disease (American Cancer Society [ACS], 2021; Carol Milgard Breast Center, 2021; Erhabor et al., 2016; WHO, 2018). Consequently, acquiring sufficient knowledge of these early detection concepts, and practice the known prevention requirements

remain highly vital because, human breast is delicate in nature and can be utterly destroyed internally, especially as the disease is not easily observable with an ordinary eye at the early stage (Erhabor et al., 2016). Based on the facts, Screening examinations like; breast self-examination, clinical breast examination and mammographic examination, in line with acquisition of healthy lifestyle have been strictly recommended various research reports as highly effective means of curbing the menace as caused by breast cancer disease (Carol Milgard Breast Center, 2021; McKenzie, Zietsman, Galukande, Anele, Adisa, Parham, Pinder, Cubasch, Joffe, Kidaaga, Lukande, Offiah, Egejuru, Shibemba, Schuz, Anderson, Silva, & McCormack, 2017).

Consequently, that breast cancer is curable remains a fact (WHO, 2018). But to attain curable level of the disease, members of the society are to be equipped with adequate information about the rudiments of early detection and prevention practices. To achieve this, health communication agents are required to play a greater role in favour of both individual and the society for there to be a collective development. They are to provide technical balanced information on breast cancer health challenges (Sixsmith, Doyle, D'Eath, & Barry, 2014; Singhal, & Rogers, 1999). Corroborating this nation is Khalid & Ahmed 2014, who argues the importance of education on the citizenry of any society, particularly on health issues. This according to the authors elicited a major movement to combine media and social change in the recent time, for the purpose of combating the disease problems facing many countries of the world.

Meanwhile, a properly planned health education on the adoption of the early detection methods, positive health seeking behaviour, and acceptance of prevention practices, delivered through any acceptable communication strategy to the citizens of any society, can possibly reduce, prevent or eradicate breast cancer burden (WHO, 2018). In line with the above observation, the American Cancer Society (2021) believes that 5-year relative survival rate of about 99 percent in the case of breast cancer is only guaranteed through regular performance of early detection methods, particularly when breast cancer situation is observed while still at the localized stage. Furthermore, beside the known fact that breast cancer has

taken the second position among most diagnosed cancers in women globally, the disease is found in one out of every eight women even in the United State of America (USA), even though the treatment options are readily available, particularly when detected early enough (Carol Milgard Breast Center, 2021). The paper therefore examines the influence of health education, otherwise known as entertainment-education on the women's understanding of breast cancer early detection methods and prevention practices.

Statement of the Problem

Whereas good health for most people in the world is the ideal, the rising incidence of breast cancer-related morbidity and mortality in contemporary societies of the world is an exigent public health burden, especially because the disease has become ubiquitous, particularly among women. In 2018, about 2.1 million people were diagnosed of the disease across the globe. Even though there were few functional cancer registers in Nigeria, from 2000 to 2012, it was noted that breast cancer caused 34.2 per cent of all cancer death in Nigeria (Ferlay, *et al.*, 2015). In 2016, it caused about 16 per cent of all cancer-related deaths in Nigeria, with victim's five-year survival rate at just 10 per cent (Erhabor *et al.*, 2016). By 2019, four out of every five cancer patients in Nigeria died (Muanya & Ogune, 2019). Also, the population of women at risk of breast cancer in Nigeria, which rose from about 24.5 million in 1990 to about 40 million in 2010 was projected to rise to over 50 million cases by 2020 (Akarolo-Anthony *et al.*, 2010). Although extant literature have shown that both males and females are prone to the disease. Also, women's susceptibility of the disease ranks higher and remains a serious concern (Aboriginal Health & Medical Research, 2010; Hejimadi, 2010; Erhabor *et al.*, 2016; Salmaso, Pacifici, Taranto, & the Organization for Economic Co-operation and Development [OECD], 2014; Thomas & Daviesy, 2007).

Meanwhile, some scholars like McKenzie *et al* (2018) and Adeloye *et al* (2018) believe that conditions like misconception and improper prognosis of the disease, inadequate health infrastructure, lack of awareness

campaign, incomplete vital registration, delayed health-seeking behaviour, low-level education and empowerment of women, hinder many people from having holistic and balanced understanding of breast cancer. This condition has promoted the rising prevalence of the disease and its related challenges. For instance, extant literature reveals that most Nigerians have negative behaviour towards breast cancer early detection and prevention practices such as; routine mammography screening, monthly breast self-examination, and regular clinical breast examination (Adeloye *et al.* 2018; McKenzie *et al.*, 2018). They often resort to self-management of the symptoms, or engage in traditional and locally informed treatment (Erhabor *et al.*, 2016). To date, many Nigerians still associate breast cancer symptoms to spiritual attacks, which have led to numerous records of late presentation of the disease and the inevitable deadly consequences (Adeloye *et al.*, 2018; Nwaneri, Osuala, Okpala, Emesowum, & Iheanacho, 2017; Abazie & Oluwatosin, 2014). Accordingly, extant proofs noted that limited knowledge of breast cancer risk factors relating to diet, disease, environment, and occupation, which manifest through consumption of, or undue exposure to, harmful substances like aflatoxin, alcohol and tobacco, as well as limited fruit and vegetable intake, chronic infections from hepatitis B virus (HBV) and human papillomavirus (HPV) are major causes of its prevalence in Nigeria and Africa as the case may be (Aboriginal Health and Medical Research 2010; Adeloye *et al.*, 2018; Erhabor *et al.*, 2016; Hejimi 2010; Nwaneri, *et al.*, 2017; WHO 2018).

The foregoing scholarly claims indicate that breast cancer can be avoided, cured, or managed. In light of this, the most meaningful interventions should begin with awareness campaign for educating the masses, especially the women about the disease, in terms of holistic understanding of its causes, symptoms, risk factors, early detection methods, and prevention practices and the adoption of the methods. The paper therefore, examined the influence of health communication or entertainment-education on the women's understanding of breast cancer early detection and prevention practices.

Theoretical Framework

Underlying the paper is the diffusion of innovations theory, which explains the influence of health education on the women's understanding of breast cancer early detection methods and prevention practices.

Diffusion of Innovations Theory

Diffusion of Innovations theory was propounded by Everett Rogers (1931-2004) through his publication titled: *Diffusion of Innovations* in 1962, which was an attempt to explain how and why new ideas and technologies spread, as well as the rate of the spread. Rogers (1962) used the concept of “diffusion” to depict the process by which an innovation is communicated over a period of time among the participants in a social system. On the other hand, he used the concept of innovation to refer to the evolving, fresh, or novel ideas, creative thoughts, and imaginations which can be in the forms of device or method. The concept of innovation was used by Rogers to depict the discovery and application of better methods of finding solution to varied forms of societal problems. Furthermore, another key concept used by Rogers (2003) in the development of this theory is “adoption” which implies the decision to fully embark on the use of an innovation, especially after considering it as the best course of action that is available for use at a particular time.

Conversely, Rogers (2003) used the concept of “rejection” to imply the decision to refuse to adopt an innovation as an acceptable means of solving societal problem. Jean-Gabriel De Tarde came up with the idea of diffusion of innovation when he observed certain generalizations which he later published as the book titled *The Laws of Imitation* in 1903. In this book, Jean-Gabriel De Tarde (1903) explained that diffusion of innovations was absolutely the fundamental basis for explaining human behaviour change. According to him, “invention” and “imitation” are the basic social acts in every relationship (Rogers, 1983). Based on the a-fore explained understanding, the theory assumes that: Certain conditions can either increase or decrease the likelihood that a new idea, product, or practice (i.e. innovation) will be adopted by members of a social group. It also presumes

that the media and inter-personal contacts consist of channels through which information are provided for influencing the opinion and judgment of any individual or social group. Furthermore, the theory believes that the information received through inter-personal contacts, the media or both of them actually influence the opinion and decision of members of any social group. Again, that the opinion leaders, change agents, and gatekeepers are useful influences especially on the aspect of information flow.

Consequently, the said influence of the opinion leaders, change agents, and gatekeepers acts as the determinant for the acceptance or rejection of any innovation (entertainment-education) programme by the participants. Additionally, the theory holds that every innovative programme aiming to educate people for behaviour change, should be patterned after a certain communication process and run over a period of time for meaningful impact on a target individual or social group, especially because different people and groups accept and adopt innovations at different times, following the time of conviction about the effectiveness of the innovation. Finally the diffusion of innovation takes place in five stages, which are: the awareness stage, which avails the participants of the innovation programme the opportunity to have full knowledge of the message; the interest stage, in which the participants have understood the crusade of the innovation and are interested in it; the evaluation stage, in which the receivers of the innovation message give critical and logical reasoning to such message in order to consider it for acceptance and implementation; the trial stage where the receivers of a message for innovation convincingly try to test the usefulness of the message for further conviction for adoption of the innovation embedded in the message; and finally the adoption stage in which the receivers of a message of innovation finally get convinced of the information contained in the message and thereby adopt the inherent innovation (Rogers, 1983). The diffusion of innovations has been discovered to be highly “...applicable to the complex context of healthcare, for both explanatory and interventionist purposes” (Dearing & Cox, 2018. P. 183).

Breast Cancer Disease

Few decades ago, the global village started experiencing strange health challenge caused by cancer disease. From the inception of this experience till date, the disease manifested its attacks on human health in different forms. Meanwhile, various scholarly findings insist that cancer burden is

highly complex. The growth rate, especially the multiple abnormal growth in the cells of the body, its ability to infect other organs, and the existence of about 277 types of cancer including breast type remain serious public health challenge to all and sundry people (Hassanpour & Dehghani, 2017). Against these backdrop, the public health discipline which is responsible for human health in conjunction with other health-care agents have struggled to understand the epidemiology, prognoses, and possible solution to this deadly disease. Accordingly, various scientific exploits have reported a strong and useful connection between balance understanding of cancer disease, adequate communication of the knowledge of it, and adoption of the recommended anti-cancer practices (Carol Milgard Breast Cancer 2020; Ginsburg, Yip, Brooks, Cabanes, Calef, Dunstan, Gyawali, McCormack, McLaughlin, Anderson, Mehrotra, Mohar, Murillo, Pace, Paskett, Romanoff, Rositch, Scheel, Schneidman, Unger-Saldana, Vanderpuye, Wu, Yuma, Dvaladze, Duggan, & Anderson, 2020).

Meanwhile, many scholarly views about the disease exist. Although cancer is just one ailment or disease, its ability to attack different organs of the body has uniquely diversified its operations on human body. The disease has been classified into different types depending on the body organ it attacked. However, this study focuses on breast cancer which has to do with the cancer attack on human breast and it surrounding parts. According to the Centre for Disease Control and Prevention (2018), a disease is said to be breast cancer when there are abnormal growths in the cells of the breast and it surrounding regions. Such growths usually occur in at least three varied forms, depending on the part of the breast in whose cells they develop. Breast cancer can develop in any of the three main parts of the breast which are the lobules – the glands that produces milk, the ducts, which is known as the tubes that conveys milk to the nipple for human consumption, and the connective tissue that serves as the fibrous and fatty tissue, that connects the protection of all parts of the breast together. Often times, the formation of the disease begins from the ducts or lobules and then escalates to the surrounding areas of the breast such as the armpit and others.

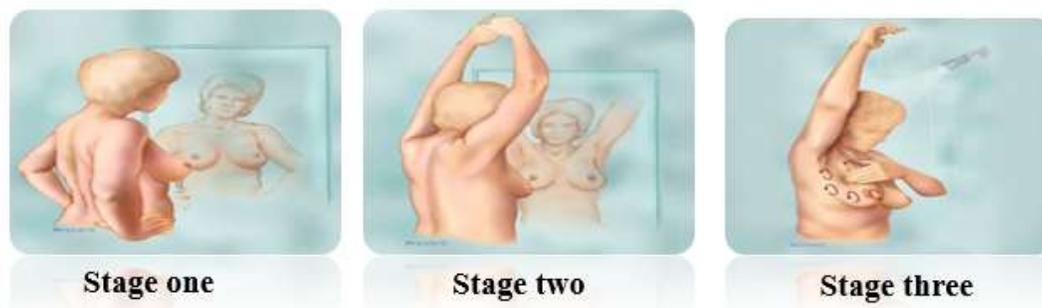
At the development stage of breast cancer, the victims' body experiences varied symptoms and signs which may not necessarily be easily observable in the physical. Corroborating the above stated opinion about breast cancer disease is the view of National Breast Cancer Foundation (2019), which is in tandem with the opinion that the disease is the type that develops malignant cells in the tissues of the breast, while it multiplies and attacks the breast and the surrounding tissues over time. From the foregoing definitions, not every disease or abnormality in or on the breast can be referred to as breast cancer. However, there are other diseases which affect the breast but are not cancerous or cancer-related. Cancer related attacks on the breast can only be identified through application of early detection measures. Performance of these measures will expose the signs and symptoms. By this observation the experts will review the risk factors, and advice for care option necessary for prevention or management while advising for the adoption of the recommended practices.

Consequently, the acquisition of the said knowledge is made possible through health education for the masses including the women who are highly susceptible to breast cancer and are inadequately informed about the breast disease and the appropriate practices of the encouraged detection methods and prevention practices (Abazie & Oluwatosin, 2014; Balentine 2016; Dahiru, Chinanu-Akpuh, & Bello, 2020; Ikechukwu, Nnenna, Nwimo & Onwunaka, 2015; Nwaneri et al., 2017). Supporting the observed efficacy of health education is the assumption of the adoption theory for this study. The diffusion of innovations theory strongly holds the assumption that adequate education properly packaged and delivered to a social group through the appropriate channel of communication will usually lead to improved knowledge, adoption of positive behaviours capable of changing health conditions in any given society (Dearing & Cox, 2018).

Early Detection Methods

Generally, the discourse of early detection methods or measures of breast cancer centres on the steps or approaches adopted for the discovery of the presence of the disease in the body at a very tender stage. An individual can

only be said to have discovered breast cancer early enough when the disease has not spread beyond the ducts or lobules of the breast (Eggert & Kasse, 2010; Erhabor et al., 2016). For easy and successful early detection of breast cancer, women at reproductive years and above are advised to undertake routine early detection screening processes (Ginsburg et al., 2020; WHO, 2018). Scholarly reports have re-echoed the efficacy, impact and usefulness of early detection methods on the prevention and cure of breast cancer (Carol Milgard Breast Cancer, 2020; Erhabor et al, 2016; National Breast Cancer Foundation, 2019; Khatib & Modjtabai, 2006). The methods are stipulated in three categories. According to WHO, (2021) the universally recognized and acceptable early detection methods are; mammographic examination, clinical breast examination (CBE), and breast self-exam (BSE). Furthermore, mammographic examination is the subjection of the human breast to low-energy x-rays for the purpose of identifying unusual growth or abnormalities in the breast. Only experts and specialists in the concern disciplines carried out the examination interpret the result and confirm the presence of breast cancer based on the findings. Technically, women are advised to undergo through this process ones in a year due to effective reading of the machines (Carol Milgard Breast Cancer, 2020; NBCF, 2019). A second one is the clinical breast examination. It also a professional breast examination conducted on human health practitioners. It is recommended to be carried out on quarterly based since it is not mechanically aided. Last is breast self-exam. This is the process by which an individual does a careful and thorough monthly breast examination on herself after every menstrual cycle. The BSE can be perfected following five different stages as recommended by Boraas, and Gupta, (2021). The process begins with the individual taking a critical look at the breast through a standing or hanging mirror having your shoulder straight and arms placed on the hips. This action will help you to ascertain if the breast is in their normal sizes, shape, colour and are not swollen. This exercise avails an individual the opportunity to understand when there is dimpling, puckering, or bulging of the skin, and the nipple conditions.



In stages two and three, same processes are applied. The individual is advised to raise the hands in front of a standing mirror while checking for same signs. At stage four, the individual is expected to conduct a firm, smooth touch with the first few finger pads of the hand on the breasts while lying down, and then using the right hand to feel the left breast, and the left hand to feel the right breast. Afterwards, the final stage involves the feeling of the breasts while standing or sitting. It is also effective when carried out on a wet and slippery skin especially in the shower.

Breast Cancer Prevention Practices

Upholding articulated discourse on breast cancer prevention practices will only attract meaningful submissions when deeper understanding of the causes of the disease and the risk factors associated to it are carefully identified. This is vital because not until there is sound knowledge of conditions which triggered such health situation, finding absolute solution to such challenge remains difficult. In the light of this, scholarly reviews observed the following as the possible top risk factors; alcohol consumptions; chronic infections from helicobacter pylori, hepatitis B virus (HBV), hepatitis C virus (HCV), and human papilloma virus (HPV); dietary factors like lack of sufficient fruit and vegetable intake, consumption of unbalanced diets among others; environmental and occupational risks including ionizing and non-ionizing radiations; overweight and obesity; physical inactivity; and use of tobacco (Aboriginal Health and Medical Research, 2010; Hejimiadi, 2010; World Health Organisation, 2010). Furthermore, WHO (2010), classified these top risk factors into some broad categories as; dietary factors, disease factor, environmental factors, and

occupational factors. Over time, various scientific experiments have explained other details concerning breast cancer conditions. In view of this, the World Health Organization, (2021) insists that breast cancer is the leading cancer in women around the globe. The body also added that increase life expectancy, increase urbanization and adoption of western lifestyles, have greatly impacted the incidences of breast cancer. For this observation, it is acknowledged that prevention of breast cancer especially in the low and middle income regions of the world, where presentation at advance stage has remained a serious challenge, early detection based on awareness of early signs and symptoms, prompt referral to diagnosis and treatment, mammography screening although cost-effective and much feasible in countries with good health infrastructure that can afford a long-term organized population-based screening programmes, and low-cost screening such as clinical breast examination are highly recommended. Consequently, early detection in order to improve breast cancer outcome and survival remains the cornerstone of breast cancer control (WHO, 2021). Consequently, the American Cancer Society [ACS], (2021), while corroborating the above established top risk factor added few others such as genetic, non-modifiable, factors with unclear effects and disproven or controversial risk factors of breast cancer. These factors are further discussed under the following sub-headings; being born female, getting older, inheriting certain gene changes, having a family history of breast cancer, having a personal history of breast cancer, race and ethnicity, being taller, having dense breast tissue, having certain benign breast conditions, starting menstrual periods early, going through menopause after age 55, having radiation to the chest, exposure to diethylstilbestrol (des) as the case maybe.

The fore-going discourse, calls for a holistic approach as well as attention owing to the fact that the factors are so broad. Almost every woman is at risk of coming down with breast cancer in their life time. Therefore, all and sundry women need to pay conscious attention to the preventive practices of breast cancer, because till date, various empirical studies have reported poor knowledgeability level of breast cancer prevention practices and low practice intentions. The study of Lokossou, Ogoudjobi, Tognifode,

Aboubacar, Tonato-Bagnan, Komongui, Koukpo, Lokossou, & Perrin, (2018), revealed general poor knowledge of breast cancer risk factors (10%), poor appropriate practice of breast self-examination (6%), poor screening behaviour (16%) among women in Southern Benin republic which share common boundary and similar cultural characteristics with Nigeria. In 2014, Olajide, Ugboro, Habeebu, Lawal, Afolayan Mofikoya, found unfavourable attitude towards breast screening even women who were aware of the screening methods in Nigeria. Although, Tayo, Allo, Amoo and Olonade's (2019) discovered slight difference in the women's attitude toward prevention practices in their study, more than half of their participants were aware that it is preventable but only a fraction was aware of mammography.

Subsequently, the observed poor attitudes towards breast cancer prevention practices among women demand for a consolidated rethink among the concerned public health experts for the purpose of behaviour change in favour of healthy society. Tremendous contributions have been made by experts towards breast cancer prevention practices. Whereas wrong lifestyle such as western lifestyle plays a critical role in impacting breast cancer incidences, reversal of such lifestyle through natural diet or positive lifestyle is expected to improve the condition and aid breast cancer prevention (Dresden 2019; Hubala 2020). Furthermore, regular and moderate consumption of leafy green vegetables, citrus fruits, fatty fish, berries, fermented foods, allium vegetables, peaches, apples, and pears, cruciferous vegetables, beans, herbs and spices and adequate water intake, reduced sugar, and avoidance of alcoholic beverages will be beneficial. Additionally, indulging in aerobic exercise has a number of benefits, including; increased stamina and endurance, improved bodily function, better sleep, reduced stress and others (Cronkleton 2017; White 2015).

Health Education for the knowledge of Breast Cancer Early Detection and Prevention Practices

Definition of Entertainment-Education

The concept of “entertainment-education is referred to as any health communication approach which incorporates education subtly, but effectively, into entertainment to foster positive behaviour change” (de Fossard, Lande, Bernstein, Cho, Reis, Short, & Rinehart, 2008). It is a communication strategy that intentionally seeks to reinforce or change

attitudes, values, beliefs, or social practices by integrating educational content into entertainment productions (Brown, 2017). In the view of Khalid, Ahmed, (2014), the concept of entertainment-education is viewed as the process and articulated plan to intentionally design, implement and evaluate media messages, in order to entertain, educate, and increase audience member's knowledge about any given educational issue, create favourable attitudes, shift social norms and change overt behaviour. Furthermore, the entertainment-education is defined as the media which incorporate an educational message or information of value to in order to increase audience members' knowledge about an issue, create favorable attitudes, and change overt behavior (Singhal, & Rogers, 1999; Singhal, & Rogers, 2002; Singhal, Cody, Rogers, & Sabido. 2004. Meanwhile, Chatterjee, Sangalanga, & Cody, (2017), maintain that entertainment-education is media message designed to both entertain and educate, intentionally weaving important health and social issues into powerful storytelling that draw in viewers by the millions.

Deducing from the above varied but similar opinions is the fact that, while some scholars defined entertainment education as communication strategy, others saw the concept as educative approach for improvement. However, despite each of the observed approaches, the core of entertainment-education is improvement of recipients' knowledge of the subject matter be it health or any other social issue, while the entertainment aspect of it logically offers the said participants of such programmes the required conducive emotional relaxation to absolve embedded health or social education. Therefore, entertainment-education is a critical, effective but interesting communication strategy, available to all health and social change experts to improve level of understanding about a given subject with the aim of causing behaviour change among audience members.

The origin of Entertainment-Education

Tracing the origin of entertainment-education, Brown (2017) journeyed the memory lane to articulate the different phases of entertainment-education activities. While discussing its various forms and programmes, the author

determined that dates back to the inception of the organized societies. In the late 20th century, the concept took the form of *pro-social* entertainment, to educate and improve the audience members' knowledge of various social values *at another time it featured as pro-development entertainment, edutainment, infotainment, and enter-educate drama* as the case maybe. However, the dawn of 1999, ushered in the idea of entertainment-education (E-E) following scholarly reviews of the use of entertainment for education at different times (Brown, 2017). Since 1999 till date, the entertainment-education communication strategies have been adopted for different education programmes on health and social development with tremendous outcomes (Banerjee, Orozco-Olvera, & Ferrara, 2019; Luciani, Vardy, Paci, Adewole, Sasco Calvacante, & the ICC-3 Session C Group 2009; de Fossard & Lande 2008).

Benefits of Entertainment-Education

Basically, the media strategy – entertainment-education uses two broad approaches for the delivery of its messages to the audience members. First, entertainment approach, which incorporates emotional treatment that creates enabling mental environment in the minds of the participants of the programme, encourage relaxation with easy and trigger submissive attention toward the entertainment-education messages, while persuading the audience to accept the message of the cruse. On the other hand, the education perspective, which packages the health or social change messages meant to gradually improve the audience members' baseline knowledge of the subject matter. Consequently, entertainment-education programmes present true life situations, guide the audience members to reflect on their way of life and lead them into making informed healthy choices (Chatterjee, Sangalanga, & Cody, 2017). Entertainment-education narratives help to guide audience members through a change process; it helps to development self-confidence derived from desirable characters of the programmes.

Essential elements to the entertainment-education communication strategy

According to brown Brown, (2017), there are some essential elements for the actualization of any given entertainment education programme. They are:

1. It uses entertainment to educate and persuade the audience into new ideas, product or practice
2. Entertainment-education provides information which is convincingly influential irrespective of the status of the audience members.
3. Overtime, entertainment-education has been theoretically grounded, and validated.
4. Entertainment-education presents its messages through high-quality entertainment for the audience members' easy leaning and adoption of overt behavior.
5. It blends entertainment values with educational content for the audience members to learn during entertainment.
6. It adopts every available media and arts, such as film, theater, music, folk art, street drama, television programs, radio programs, live performances, documentaries among others.
7. Also the concept of entertainment-education remains a research-based communication strategy which can be adopted in various studies at all level of the society.
8. It involves formative research with potential audience members before a media or arts product or performance is created, followed by a summative research to measure the effects of entertainment-education messages on their participants.
9. Evidently, entertainment-education requires collaborative efforts between media practitioners and change agents such as health communication experts, media scholars, public health professionals and social change agents who are meant to collaborate for the purpose of creating educational and social change messages, in order to achieve desired outcomes.

Evidence-Based Entertainment-Education Programmes

Historically, massive successful records have been reported in favour of health communication discipline via entertainment-education for over eight decades (Banerjee, *et al.*, 2019; Luciani, *et al.*, 2009; de Fossard & Lande, 2008; Sodeinde, Adekoya, & Ajilore, 2019).

By implication, the said success records accrued from articulately combined interdisciplinary efforts of the mass media and public health experts, as well as other change agents across the globe, who at various time, adopted different communication strategies such as; music, talk shows, jingles, animated cartoons, dramas, documentaries and others for their intervention message delivery tools (Banerjee, *et al.*, 2019; Brown, 2017; Chatterjee, Sangalanga, & Cody, 2017), Pertinently, the above listed communication formats in addition to many others, are designed to engage peoples' emotions, educate them while entertaining the citizenry, in order to achieve proposed change of attitudes, behaviour, and social norms (de Fossard & Lande, 2008).

Constant and regular exposure to health entertainment-education programmes effectively improves participants' knowledge about the subject matter of the programmes. The increase in the knowledgeability level serves as rider to change of attitudes, following the law of cause and effect in attitude or behaviour change (Banerjee, Orozco-Olvera, & Ferrara, 2019). For Luciani, *et al.*, (2009), information acquired from health education campaigns are not only effective, but have usually offered adequate understanding on how best to execute such activities as breast cancer early detection methods, prevention practices, and routine breast cancer screening exercise, which are particularly pivotal in the fight against cancer and can heavily impact cure or eradication of cancer burden in the rural and semi-rural setting of low and middle income continents of the world. Also, Muthoni & Miller, (2010) reveals huge divide between rural and urban based, low and middle-income women's knowledge of breast cancer early detection measures. Their report proves that urban women and middle income earners are better informed and equipped financially to encourage effective prevention practices, while, rural women who are low

income earners are found to be comfortable in their unimproved knowledge level, but only get better where there is health intervention programmes of various sorts. Generally, several survey reports assert that every educational attainment or additional information about breast cancer early detection causes significant increase on the knowledge of breast self-examination (BSE), clinical examination (CE) and interest to receive mammographic services (Abazie & Oluwatosin 2014; Nwaneri, *et al.*, 2017). Corroborating this is Gangane, Anshu, Nawi, Hurtig and Sebastián, (2016), which attributed most breast cancer patients who experienced delay before the first presentation, to old age and lack of knowledge of EDMs (odds ratio = 4.9, 95 per cent confidence interval = 1.3-18.0).

Invariable, lack of information on breast cancer early detection methods and prevention practices constitute and will continue to result to unbearable breast cancer burden. Meanwhile, entertainment-education programmes will always record improved knowledge level through properly packaged programmes, which adequately put into consideration necessary factors such as; recipients preferred language(s), appropriate communication tools, acceptable characters, among others (World Health Organization, 2018). Goover, Prorok, Berg & Hartge 2009 affirmed a strong association between age at menarche (first menstrual experience of a woman), and menopause and breast cancer. This by implication brings to fore, the serious need for health education targeting the women at all age brackets, as motherhood activities between age at menarche and menopause are challenged with natural and unpredictable situations in connection with child bearing. Given credence to the above observation, health education with special reference to general information on breast cancer, becomes expedient, particularly for the rural, low-income and uneducated women, who may not at any time read and understand articles and tips available in the concerned subjects both on the internet and hard copies because only the educated person can read understand and interpret meanings.

Methodology

This paper adopted qualitative research design incorporating desk research method. Data for the study were systematically retrieved from secondary sources including; publications, grey literature and internet materials

relating to the concepts such as entertainment-education, health communication, breast cancer, early detection methods, and prevention practices among others. Special attention was given to the studies which revealed the influence(s) of health communication intervention(s) on the knowledge of breast cancer early detection methods and prevention practices, particularly the recently conducted ones. Through this process, the paper had a logical conclusion which gave rise to the under listed recommendations.

Conclusion and Recommendations

Evidently, various empirical and theoretical reports validating the efficacy and effectiveness of adequate and properly channelled health entertainment-education messages on breast cancer early detection methods and prevention practices exist. Also, from the reviewed scholarly submissions, any form of additional health information introduced to audience members following the right processes which encourages learning impacted and improved the participants' baseline understanding about the subject matter. Therefore, as humans learn through acquisition of new pieces of information, health messages with convincing facts brought to women through reliable sources of information will usually be accepted and adhered to by them, particularly in the rural areas. Example of such programmes could be found in a professionally and culturally based packaged video and or radio drama on breast cancer early detection methods and prevention practices delivered through health intervention in a rural setting. Such messages will not only educate the participants but will lead to the acceptance of the new messages, as well as encourage positive behavioural change. Supporting this is the extant theoretical proofs which shown strong and significant relationship that have existed between entertainment-education health messages and improved knowledge of breast cancer early detection methods and prevention practices which led to survival of breast cancer attacks.

Therefore, imbibing the entertainment-education culture on breast cancer will evidently educate the direct recipients of the health messages, and also

aid the education of their family members since women are usually at the helm of homes' consumable affairs. Again, women are also reliable sources of information in their homes therefore; educating them with new health issues and ideas such as breast cancer will invariably mean educating her entire household. Achieving this will bring about good and quality health for the people and nation's development. In line with the above explained findings, the paper recommended the following points below:

1. That health communication experts including; public health, mass media and government and non-governmental agents are encouraged to ensure various programmes for different rural women of every given community, through the most affordable but preferred source of information using the local languages.
2. Policies which will encourage individuals, various groups and organizations to undertake health communication campaigns on breast cancer issue should be put in place to avoid fear of ethical offences.
3. Women generally should be courageous especially to partake in any breast cancer programmes available to them because constant involvement in such endeavours will build their courage to accept new ideas and adopt positive attitudes and healthy lifestyle while encouraging others to do same with them.

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