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Video Drama Intervention on Knowledge of Breast Cancer and Practice Intention of its Early Detection Methods

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Abstract. The rising incidences of breast cancer, high mortality and morbidity rates, and poor knowledgeability level of the disease and low practice intentions of its early detection methods among rural women is constituting serious health challenge in Nigeria. These conditions are often blamed on inadequate infrastructures and poor enlightenment avenues. Consequently, these observed situations demand for planned education in favour of the rural women. Therefore, the study examined the effects of video drama intervention on the knowledge of breast cancer and practice intention of its early detection methods among Aboh Mbaise women of Imo State, Nigeria. A quasi-experiment was conducted on 100 women; (Amaasa, experiment and Ngwuru-Nweke, control). The Aboh-Mbaise women at reproductive age constituted the population of the study. The participants were recruited using simple random sampling by balloting. Data was retrieved using validated questionnaire at pre-test and post-test evaluation with reliability confidence of 0.799. Health belief model and attitude change theory underpinned the study. Data was analysed using paired sampled t-test. The findings showed that the intervention significantly improved participants' knowledge of; breast cancer ($\bar{x}$=42.02 experimental and $\bar{x}$=26.02 control), early detection methods ($t(49)=22.74$, $p=0.000<0.05$) and intention to practice the methods ($t(49)=19.50$, $p=0.000<0.05$), with a significant difference of ($t(49)=1.95$, $p=0.057>0.05$). It was concluded that frequent exposure to health based video drama is effective means of enlightening the rural women on breast cancer concerns, while recommending it application on regularly basis.

Keywords: Breast Cancer, Early Detection Methods, Practice Intention, Video Drama Intervention.

1. Introduction

In recent times, breast cancer incidences have drastically increased in Nigeria, as breast cancer has become the leading cause of cancer related deaths in the Nigerian society and the world over (Erhabor, Abdulrahaman, Retsky, Forget, Vaidya, Bello, Adias, Dagana, Egenti, Mainasara, Sahabi, Rilwanu, Ahmed, Hassan, Ajayi, Okara, Lori, Ibiang, 2016). The rising incidences, high mortality rates, and poor knowledgeability level of the disease demand urgent and timely attention, specifically in the area of improved health education on the disease among the nation's citizenry particularly, the women of reproductive age, who are highly susceptible to the disease (Bray, Ferlay, Soerjomataram, Rebecca, Torre, & Jemal, 2018). Such education remains imperative in the fight against breast cancer and all other types of health challenges. Highlights from previous studies exposed various debates among medical scholars regarding whether cancer can be cured or not, which curative or management methods are safe for victims, as well as what the victim should know, when, and how (Hendricks-Sturrup, 2017; Ikechukwu, Nnenna, Nwimo, & Onwunaka, 2015; Nelson, Kehinde, Oyero, Wiliams, & Soola, 2014; Nwaneri, Osuala, Okpala, Emesowum, & Iheanacho, 2017). Hassanpour and Dehghani (2017) reported existence of about 277 types of cancer which are capable of attacking different organs of the body. Based on these debates, World Health Organization [WHO] (2018) maintained that all cancer types including female breast type are not just preventable but are curable. In line with this submission, various research reports insisted that possession of accurate, recent, and comprehensive information on early detection methods as well as performance of the methods could impact breast cancer prevention and cure (Allo, Edewor, & Imhonopi, 2018; Ginsburg et al., 2020; Tayo, Allo, Amoo, & Olonade, 2019;

Wagner, Hibbard, Greenlickh, & Kunkel, 2018). More so, research reports affirmed that detecting breast cancer at advanced stage remains highly dangerous, destructive, and deadly to human society including Nigeria (Ginsburg et al., 2020; Carol Milgard Breast Cancer 2020; Schliemann, Donnelly, Dahlui, Loh, Ibrahim, Somasundaram, & Su, 2018; Hendricks-Sturrup, 2017; Erhabor et al., 2016; Jedy-Agba, Curado, Ogunbiyi, Oga, Fabowale, Igbinoba, & Adebamowo, 2012).

According to WHO (2013) statistics for 2000 to 2012, a total of 69,200 cancer related deaths in males and females occurred in Nigeria; 30,400 for the former and 38,800 for the latter, out of which breast cancer alone accounted for 13,270 (34.2 percent) of all deaths, while the remaining 25,530 were observed among other cancer types. Also, the work of Erhabor et al. (2016) explained that breast cancer alone accounted for about 16 percent of all cancer related deaths, with a five year survival rate of dismal 10 percent of the Nigeria victims, as against over 85 percent five year survival rate in the United States. More recent and further observation made by Muanya and Ogune (2019) declared that four out of every five people diagnosed of cancer in Nigeria have usually died, while only one manages to survive. Moreover, this situation unfortunately, presents the opposite of the experiences among Nigeria's counterparts within the developing world (such as, India). Implying that Nigeria's cancer situation is comparatively worse compared to those of many other developing countries. The above statistics indicate very serious threats imposed on the Nigerian society by breast cancer. The reports indicate that the severity of the disease within the Nigerian society has not started to abate, but seems to have maintained a steady upward rise.

Meanwhile, the variation found in the earlier reported percentages could have resulted from lack of functional cancer registers, poor record keeping, misdiagnosis in some peripheral hospitals and none reported data; particularly on the side of traditional medicine practitioners (Erhabor et al., 2016). Consequently, Nwaneri et al. (2017) acknowledged existence of only two functional cancer registers – Abuja and Ibadan Centres in Nigeria, while doubting the effectiveness of only two registers for the whole Nigeria nation based on the large population and geographical spread. On the other hand, while WHO (2018) report aligns with that of Ferlay, Soerjomataram, Dikshit, Eser, Mathers, Rebelo, Parkin, Forman, and Bray (2015) that the observed increase in death rate resulted from; low knowledgeability level of breast cancer early detection methods (breast-self examination (BSE), clinical Examination (CE), and routine mammographic screening) poor practice intention of the methods and diagnosis at advanced stage, Erhabor et al. (2016), attributed the constant rise in breast cancer cases within Nigeria to possibly changing demographic profile of acquisition of western lifestyle, changing socio-economic profile, environmental pollutions that have directly affected both the urban and rural areas of Nigeria, inadequate/ineffective control measures or diversion of global attention to HIV/AIDS and tuberculosis in the country.

Since poor knowledge level of breast cancer imposes dangerous health conditions to the rural Nigerian women, and only the knowledgeable who practice the early detection methods of cancer detect breast cancer early enough to seek medical aid (WHO, 2018), efforts made to remedy any breast cancer condition detected at advance stage might yield no positive result. Hence, reducing or eradicating the rising incidences of breast cancer at the rural level in Nigerian States remains a serious public health burden. More so, limited studies exist on applying video drama intervention as an information technique especially in developing countries (Abazie & Oluwatosin, 2014; Anaeto & Solo-Anaeto, 2010; Ferlay et al., 2015). Thus, in search of a reliable means of alleviating the foregoing breast cancer burden through improved communication, this research examined the influence of video drama health education intervention, on the knowledge of breast cancer, its early detection methods and the practice intentions among Aboh-Mbaise women of Imo State.

2. Conceptual Review

2.1 Concept of Breast Cancer

WHO (2018) defined breast cancer as a diseases which has the potential of creating abnormal cells in the tissues of the breast and thereby attacking or infecting the human breast and its surrounding regions. Also, breast cancer "...is a disease in which cells in the breast grow out of control...", and it sometimes grows beyond its boundaries to infect other organs of the body (Centre for Disease Control and Prevention, 2018:1). In the opinion of Eggert and Kasse (2010) breast cancer like all other types, results from the faulty or abnormal genetic expression informed by changes in the deoxyribonucleic acid (DNA), a kind of substance which carries organism's genetic information. Consequently, breast cancer constitutes unbearable public health concern as its

annual diagnoses is over 1 million new cases, leading to about 400,000 deaths per year, while about 4.4 million women live as victims of the disease. Various research reports have estimated that one in every eight women will develop breast cancer in their life time, and that the disease is the leading cause of cancer related deaths globally including Nigerian (Erhabor et al., 2016; Ferlay et al., 2012; WHO, 2018; International Agency for Research on Cancer [IARC], 2018).

According to National Breast Cancer Foundation [NBCF] (2019), breast cancer disease occurs in at least three varied forms depending on the part of the breast in whose cells it develops. Therefore, breast cancer can develop in any of the three main parts of the breast which are the lobules (such as, the glands that produce milk), the ducts (which are the tubes that carry milk to the nipple), and the connective tissue (such as, the fibrous and fatty tissue that surrounds and holds every part of the breast together). However, breast cancers often start from the ducts or lobules before spreading to other parts of the breast and beyond. In a similar vein, breast cancer is a type of cancer which occurs in the form of development of malignant cells in the tissues of the breast, and can spread to the surrounding tissues and beyond Eggert and Kasse (2010). From the foregoing definitions, not every disease or abnormality in or on the breast can be referred to as breast cancer. Thus, an infection of the breast can be perceived as breast cancer only if it results from or into an abnormal growth of breast cells and tissues which affects the structure and functioning of the breast with the tendency of spreading to neighbouring cells and tissues, causing them to malfunction (NBCF, 2019).

2.2 Early Detection Methods and Practice Intention

The World Health Organization (2018) views breast cancer early detection methods from two different but related approaches; the early diagnosis, which is the identification of symptomatic cancer at a very tender stage, and the screening, which obviously deals with establishment of asymptomatic disease in a target population of seemingly healthy citizens (Ginsburg et al., 2020). In light of this, breast cancer screening examinations remain paramount for effective identification of breast abnormalities. More so, informed decisions on care or treatment options are likely to be taken immediately, following an individual awareness of breast cancer conditions on the breast. Scientifically, research has shown that breast cancer detected at an early stage has 93 to 99 percent survival rate in the first five years (Carol Milgard Breast Cancer, 2020; Erhabor *et al*, 2016; National Breast Cancer Foundation, 2019; Khatib & Modjtabai, 2006). Accordingly, three broad methods of early diagnosis are recognized by the global public health. They are; mammographic examination (such as, the use of low-energy x-rays) to identify abnormalities in the breast by the specialists, on yearly basis; clinical breast examination (CBE), performed on the breast of a target individual by professional health practitioners, specifically on quarterly routine; and breast self-exam (BSE), ought to be regularly performed by women on monthly basis after their menstrual cycle. However, combinations of the three processes result to better outcomes (Carol Milgard Breast Cancer, 2020; NBCF, 2019).

Consequently, taking these measures into account remains necessary for all categories of people especially women because they are often affected by the disease. For this reason, prompt referral and access to diagnosis, in the forms of cancer screening services like mammography, CBE, and BSE becomes imperative especially, as it has been discovered that there are two broad categories of breast cancer, which have been observed from different medical cases. They include the non-invasive and the invasive breast cancers (Balentine 2016; Eggert & Kasse, 2010; Erhabor et al., 2016; Ginsburg et al., 2020). These are actually different phases of breast cancer. The non-invasive type of breast cancer is the type of the disease which has not spread beyond the region of the ductal carcinoma in situ (DCIS). At this level of the development of the disease, the abnormal cells are simply contained within the ducts of the breast, of which a quick observation of the symptoms, prompt referral and access to early diagnoses through mammography, and or clinical breast examination would impact prevention and cure of such disease without serious damage Furthermore, this condition, if not promptly detected and handled, can lead to its development into invasive breast cancer (Erhabor et al., 2016; Ferlay et al., 2012; Ginsburg et al., 2020; NBCF, 2019).

2.3 Health Communication Intervention

There seems not to be an available scholarly definition for the concepts of health communication intervention and health intervention. Therefore, this review attempts to define the concept through a merger of the scholarly meanings of the concepts of health communication, intervention, and health intervention. Health communication is defined as the study and use of communication strategies to inform and influence choices people make about their health,

using health information technologies like digital tools and services which are used to enhance patients' self-care, assist in patient-provider communication, inform health behaviours and decisions, prevent health complications, and promote health equity (Community Guide, 2017; Office of Disease Prevention and Health Promotion, 2017, Rural Health Information, 2020). On the other hand, an intervention is a deliberate act of entering into a situation with the intention of influencing events to prevent undesirable consequences (The Community Guide, 2018). Accordingly, health intervention is the act of entering into a health situation with the intention of influencing events surrounding the health situation in order to prevent the occurrence of undesirable health consequences (Office of Disease Prevention and Health Promotion, 2017). It then logically follows that health communication intervention is the deliberate act of applying certified health messages to influence unwanted health situation in the society by acquainting people with carefully selected information that are necessary for influencing their health choices in order to prevent an unwanted health circumstance.

2.4 Video Tool for Health Communication Intervention

Video drama, in the context of this study, is a form of recorded audio-visual entertainment-education in which an intended message is carefully and deliberately embedded in a drama in such a way that the drama serves the dual purpose of entertaining and educating the target audience. In the process of watching the drama and being entertained, the viewer(s) also get acquainted with the message(s) embedded in it, thereby developing a greater tendency to adopt the intended behaviour change. Television programmes in the forms of soap operas, as well as other audio-visual entertainment programmes, other than video drama, fall into the category of tools and strategies that constitute entertainment-education. On a general note, Singhal and Rogers (1999) defined entertainment-education as a process in which a media message is purposively designed and implemented for both entertaining and educating audience in order to increase its members' knowledge about an education issue [*health issue in this case*] and create the intended favourable attitudes and change of behaviour in them (Singhal & Rogers, 1998; emphasis is mine).

Consequently, video tool, be it drama, film, game or home video has recently gained its ground in the Nigeria society (Abiodun, Olu-Abiodun, Sotunsa, & Oluwole, 2014). Accordingly the authors noted that video is known as a communication strategy or tool for attracting its audience to real life events, operations and practice of any given subject of interest. Scholars have opined that video drama is a prestigious, credible, and highly persuasive medium for encouraging people to adopt new lifestyles, because it has the ability of arousing interests, clarifying notions, aiding retention, and stimulating the quest for additional knowledge due to its audio-visual quality (Anaeto & Solo-Anaeto, 2010; Borchers, 2002). It is also a scholarly knowledge that video drama aids deeper understanding of any subject on which its message may be based at any point in time. Moreover, this is made easier because of its usual play-back feature (Chignell, 2014). This play-back feature is part of the reasons why Abiodun et al. (2014) perceive video drama as an irreplaceable information medium with high level effectiveness for all types of health intervention. Furthermore, video messages are specifically attractive, colourful, and can be watched in any given environment, and the messages can be appropriately packaged following the cultural characteristics of the target audience (Nwadigwe, 2018).

3. Empirical Review

A number of studies have been carried out on the examination of breast cancer early detection methods among the study participants. In Nigeria, a study by Ikechukwu, Nnenna, Nwimo and Onwunaka (2015) revealed that women in Ebonyi State generally had average knowledge of all the components of breast cancer (symptoms, risk factors, prevention, and treatment options) except for treatment centres where women demonstrated high level of knowledge. The findings reveal, however, that the overall awareness of women about breast cancer was average. This outcome conflicts with the common belief that women have low awareness of the disease in developing countries such as Nigeria (Badar, Faruqui, Ashraf & Uddin, 2007; Okobia, 2003). Fregene and Newman (2005) noted that breast cancer awareness in their list of health care priorities continues to be relatively poor, even among the most affluent Nigerians. The results also disagree with those of Oluwatosin and Oladipo (2006), which indicated that women were ignorant of critical breast cancer issues and early detection measures.

Tayo et al. (2019) study found that almost all respondents in the study area in Ogun State, Nigeria have heard about breast cancer, and more than half knew that it is preventable with just only a fraction knowing of mammography. Even with the majority of the women not knowing what mammography is,

an appreciable number of them have a favourable attitude towards it. This result is not in agreement with Olajide, Ugburo, Habeebu, Lawal, Afolayan, and Mofikoya (2014) who found that there was an unfavourable attitude towards breast screening even among those who were aware of the screening methods. In other similar studies, no association was found between breast screening, age, educational attainment, profession and marital status (Adebamowo & Ajayi, 1999; Allo et al., 2019). A work by Heather, Huang, Sheila, and Thomas (2008) on entertainment-education in a media-saturated environment on two primetime TV programs, found that the individual ER and Grey's Anatomy storylines were similarly effective in the number of outcome variables they impacted.

4. Theoretical Framework

The assumptions of health belief model by Lewin (1951) and Yale's approach of attitude change theory by Hovland, Janis, and Kelley (1953) were synthesized in relation to the paper's main concepts particularly knowledge of breast cancer. Its early detection methods and practice intention of the methods which explain audience' acceptance of the messages and dispositions toward the intervention health messages as enumerated by according to Abraham and Sheeran (2016).

Health Belief Model is an attempt to clarify the relationship between belief, attitude, and behaviour of humans in relation to health matters. Its origin can be traced to a group of Social Scientists at the United States Public Health Services in the 1950s, who maintained a concern on designing health belief psychological models for enhancing the effectiveness of health education programmes (Abraham & Sheeran, 2016). Lewin (1951) significantly enumerated the relationship between health beliefs and behaviours, using the idea of 'valence' with the explanation that beliefs can make behaviours more or less attractive, thereby promoting expectancy-value model of belief-behaviour relationships that make events appear more or less positive or negative to different individuals (Abraham & Sheeran 2016). Health belief model claims that belief is necessary for laying the foundation for attitude which leads to taking certain position and leading to a specific kind of behaviour. The model exists as a combination of stimulus-response theory and cognitive theory, as well as a blend of the concepts of classical conditioning and instrumental conditioning which attempts to explain human social behaviour under conditions of uncertainty (Lordo, 2018).

Basically, the model strongly assumes that an individual's course of health-related action will often depend on his or her perception of the benefits and barriers associated with the intended health behaviour and that unless the perceived benefits outweigh the perceived barriers; the individual will not likely adopt the intended behaviour change. Thus, health intervention can only be effective enough to lead to change in behaviour when the message of such promotions justify perceived susceptibility, perceived severity, perceived benefits, barriers to action, cues to action, and self-efficacy. Accordingly, Yale's approach of attitude change theory on the other hand assumes that information meant to cause change of attitude should be credible, trustworthy, recent, importance and should originate from experts, while the process of presented of such messages should be in attractive conditions to the target audience (Hovland et al., 1953). It assumes also that the characteristics of the members of a target audience to whom a specific message is to be delivered, with the hope of bringing about a change of attitude in them, must be specially considered in the preparation of the message before it is delivered to them. This paper influenced change of attitude in the target audiences by filling the health messages with authentic and reliable information. Moreover, the paper's style of the communication process incorporated evidence based, well-informed audio-visual plays (video drama) to convincingly convey the necessary health messages meant to persuade the participants of the need to adopt and maintain a healthy lifestyle. The features of the message tallied with the characteristics of the target audience which the researcher already determined during the pre-research investigation.

5. Methodology

5.1 Study Design and Location

A quasi-experimental design was adopted for the pre- and post-tests of the study. The choice of the study's design was influence by recommendations of numerous survey and exploratory studies conducted in various areas of the Nigerian nation. Such as, a study conducted by Abiodun, Olu-Abiodun, Sotunsa, and Oluwole (2014) on the need for cervical cancer screen among Odogbolu and Ikenne Local government women of Ogun State, Nigeria. The locations of the study consisted of Amaasa (intervention) and Ngwuru-Nweke (control) communities of Aboh-Mbaise Local Government Area (LGA) of Imo State in Nigeria. The two locations of the study were very similar in every consideration. They are both in the remote areas of the LGA, with limited supply of social

amenities/infrastructure like accessible road networks, electricity, and health facilities. Consequently, the people living in these communities experience similar levels of difficulty in accessing necessary health information and care.

5.2 Sampling

The sample size for the study was derived from an estimation made using Katz (2006) formula for experimental studies, with the aim of achieving 95% confidence interval, 80% power, and 0.05 degree of accuracy. The formula produced a group sample size of approximately 43 participants, which was rounded up to the nearest tens to expand the scope of data that could be retrieved from the field. Thus, the overall sample size (intervention + control) was 100 participants. This sample size was considered appropriate following Creswell and Creswell (2018) counsel that experimental studies which aim at measuring the effects of health intervention programmes need small sample sizes. Fifty participants were randomly selected from each community from among the agreeing women of the reproductive age (15-55 years). This group of women were selected because they are the most susceptible to breast cancer.

5.3 Data Collection Instruments

Field data was gathered with the use of a structured questionnaire on a five-point Likert type scale (strongly agreed = 5, agreed = 4, disagreed = 3, strongly disagreed = 2, undecided = 1), administered by the researchers. The data gathered with this tool included demographic characteristics of the research participants, knowledge of breast cancer (including its symptoms and risk factors), breast cancer early detection methods, and the intention to practice breast cancer early detection methods. The questionnaire was translated to Igbo language (the local language) and re-translated to English to establish its content validity.

5.4 Pre-Intervention Activities

At this stage, the researchers obtained the necessary permissions for the study from the authorities at the Aboh Mbaise LGA headquarters and the traditional rulers in each of the two communities. In the first week, the researchers created necessary awareness, sought the consent of eligible women for participation, trained two research assistants, carried out pre-tested on the sample of 100 women from the two communities in a base-line survey.

5.5 Intervention Activities

During this stage, participants of the intervention group (selected from Amaasa) were exposed to video health messages (acted with Igbo language), of six different episodes (fifteen minutes each), for six consecutive weeks at the Amaasa Town Hall. The participants asked questions after each day's episode of the serial programme. Meanwhile during this session, the researchers concluded each day by offering in-depth and detailed explanations to all their questions. On the other hand, members of the control group (selected from Ngwuru-Nweke) were not exposed to the video health messages on breast cancer. Rather, researchers interacted with the respondents of control group and discussed issues concerning HIV/AID, which has nothing in common with the intervention subject at pre-test and post-test meetings respectively.

5.6 Post-Intervention Activities

At the end of the intervention programme, a post-test appraisal was conducted to ascertain the impact of the health messages. A post-test examination was administered using the same questionnaire on the sample of 100 women from both the experimental (50) and control (50) groups, to determine the levels of increase in the knowledge of breast cancer, and other factors associated with the disease in the rural area of Imo State.

5.7 Data Analysis

All data retrieved with the use of the questionnaire were computed and analyzed using Statistical Package for Social Sciences (SPSS 21.0) software. Field data was coded for analysis based on the five-point Likert type scale of the questionnaire (strongly agreed = 5, agreed = 4, disagreed = 3, strongly disagreed = 2, undecided = 1). The demographic data were analysed using simple percentage count, but the data on knowledge of breast cancer (its symptoms and risk factors), early detection methods, and the intention to practice breast cancer early detection methods were analysed using mean scores and paired samples t-test. The following decision rules were applied regarding the mean scores. If: $\bar{x} \leq 1.49$, the acceptable response is undecided; $1.5 = \bar{x} \leq 2.49$, the acceptable response is strongly disagree; $2.5 = \bar{x} \leq 3.49$, the acceptable response is disagree; $3.5 = \bar{x} \leq 4.49$, the acceptable response is agree; $4.5 = \bar{x} \leq 5.0$, the acceptable response is strongly agree; the post-test $\bar{x}$ (for the experimental group) > the post-test $\bar{x}$ (for the control group), the acceptable response is effective intervention; the post-test $\bar{x}$ (for the

experimental group) < the pre-test $\bar{x}$ (for the experimental group) and or the post-test $\bar{x}$ (for the experimental group) ≤ the post-test $\bar{x}$ (for the control group), the acceptable response is ineffective intervention. For the test of hypothesis, if $p \leq 0.05$, then the null hypothesis should be rejected, but if $p > 0.05$, the null hypothesis should not be rejected

5.8 Ethical consideration

The paper adherence to ethics of research was strictly followed regarding confidentiality, anonymity, respect for human dignity, and non-falsification of data, non-data manipulation was applied in the data collection and collation process. In addition, sources obtained from the studies of other scholars were duly acknowledged.

6. Discussion of Findings

Table 1 indicated that the majority of the research participants in the experimental groups at the pre-intervention stage did not agree that they knew about breast cancer ($\bar{x}$ = 3.24). But they strongly affirmed their knowledge of breast cancer at the post-intervention stage ($\bar{x}$ = 4.62). Similarly, at the pre-intervention phase, majority of the participants did not know that breast cancer is a type of cancer that attacks the breast and the areas of the human body around it ($\bar{x}$ = 2.98). However, at the post-intervention stage, they strongly agreed that breast cancer is a type of cancer that attacks the breast and the areas around it ($\bar{x}$ = 4.68).

Table 1 further indicated that at the pre-intervention stage of the research, most of the participants in the experimental group disagreed to the fact that the types of breast cancer are the invasive and the non-invasive types ($\bar{x}$ = 2.72), but conversely agreed to the notion at the post-intervention stage ($\bar{x}$ = 4.58). Improvement in the participants' knowledge of breast cancer within the experimental group is obvious in their post-intervention affirmation of the facts that some diseases could make someone to become easily infected with breast cancer ($\bar{x}$ = 4.54); bad lifestyle such as excess consumption of alcohol, sugar, and inadequate exercise could lead someone to become infected with breast cancer ($\bar{x}$ = 4.56). Cancer has many signs like persistent sores, unexplained bleeding or bruising of the breast, and unexplained muscle and joint pains ($\bar{x}$ = 4.72); cancer could be treated or prevented through adjustment in lifestyle and orthodox medicine ($\bar{x}$ = 4.70).

Table 1: Participants' Knowledge of Breast Cancer

Variables	Groups	Time of Test	Mean
Had prior knowledge of breast cancer	Experimental	Pre-intervention	3.24
		Post-intervention	4.62
	Control	Pre-control	2.96
		Post-control	2.84
Breast cancer is a type of cancer that attacks the breast and the areas around it	Experimental	Pre-intervention	2.98
		Post-intervention	4.68
	Control	Pre-control	2.60
		Post-control	2.66
The two types of breast cancer are the invasive and the non-invasive types	Experimental	Pre-intervention	2.72
		Post-intervention	4.58
	Control	Pre-control	2.60
		Post-control	2.58
Some diseases can make someone to become easily infected with breast cancer	Experimental	Pre-intervention	2.80
		Post-intervention	4.54
	Control	Pre-control	2.34
		Post-control	2.50
Bad lifestyle like excess consumption of alcohol, sugar, and inadequate exercise can lead someone to become infected with breast cancer	Experimental	Pre-intervention	2.78
		Post-intervention	4.56
	Control	Pre-control	2.34
		Post-control	2.42
Cancer has many signs like persistent sores, unexplained bleeding or bruising of the breast, and unexplained muscle and joint pains	Experimental	Pre-intervention	2.80
		Post-intervention	4.72
	Control	Pre-control	1.98
		Post-control	2.32
Cancer can be treated or prevented through adjustment in lifestyle and orthodox medicine	Experimental	Pre-intervention	2.96
		Post-intervention	4.70
	Control	Pre-control	2.16
		Post-control	2.42

Source: *Field Survey 2020*

Furthermore, Table 2 showed that at each instance, the post-test mean score ($\bar{x}$) of the experimental group is greater than the post-test mean score ($\bar{x}$) of the control group. The summary of these results, as indicated in Table 3, showed that the overall post-intervention mean of the experimental group ($\bar{x}$ = 42.02) was higher than that of the control group ($\bar{x}$ = 26.02), which further confirmed the fact that the video intervention was effective in enhancing participant's knowledge of breast cancer.

Table 2: Descriptive Statistics on knowledge of Breast Cancer

Variable	Maximum Scale Point	Experimental Group		Control Group	
		Pre-intervention	Post-intervention	Pre-intervention	Post-intervention
Knowledge of Breast Cancer	50	$\bar{x}$ (SE)±SD = 28.62(0.47)±3.34	$\bar{x}$ (SE)±SD = 42.02(0.38)±2.68	$\bar{x}$ (SE)±SD = 25.28(0.52)±3.69	$\bar{x}$ (SE)±SD = 26.02(0.49)±3.47

Source: Field Survey 2020

$\bar{x}$ = Mean; SE = Standard Error; ±SD = Standard Deviation

Table 3 indicated that participants in the experimental group, at the pre-intervention stage of the research process, largely disagreed that they knew breast cancer signs to include unexplained bleeding of the breast, feeling of lump in the breast, hardening of the breast, and general body pains, especially around the breast ($\bar{x}$ = 2.28), but at the post-intervention stage, they affirmed knowing the signs of breast cancer ($\bar{x}$ = 4.70). Also, the participants' knowledge about the symptoms that aid breast cancer early detection improved at the post-intervention stage in that they were able to identify additional signs of early onset of breast cancer to include loss of hairs, sudden dryness of the skin of the breast and the surrounding areas, strong feeling of tiredness, and progressive weight gain or loss (pre-intervention: $\bar{x}$ = 2.22; post-intervention: $\bar{x}$ = 4.24). The research participants further gained knowledge on breast cancer early detection by realising and affirming that the disease can be detected early enough, through its signs and symptoms, before it begins to spread to other parts of the body (pre-intervention: $\bar{x}$ = 2.74; post-intervention: $\bar{x}$ = 4.56).

Table 3 also showed that respondents in the experimental group at the pre-intervention stage did not agree that doing self-breast examination regularly is very useful in detecting breast cancer early enough before it develops fully and begins to spread ($\bar{x}$ = 2.70). Their stance, however, changed at the post-intervention stage where they strongly agreed with the statement ($\bar{x}$ = 4.62). The research participants' knowledge about breast cancer early detection practices also improved at the post-intervention stage in the following ways: They agreed that they knew that it is important for every woman to go for clinical breast examination (CBE) as soon as she notices conditions on or in her breast that she cannot understand or explain (pre-intervention: $\bar{x}$ = 2.06; post-intervention: $\bar{x}$ = 4.64); that it was good for every woman to go for yearly mammographic examination to detect breast cancer at its early stage (pre-intervention: $\bar{x}$ = 2.76; post-intervention: $\bar{x}$ = 4.62); that breast cancer could be cured if it is detected early enough before it spreads (pre-intervention: $\bar{x}$ = 2.62; post-intervention: $\bar{x}$ = 4.68); and that breast cancer is better handled to reduce the pain it causes for the patient and for reducing its spread if it is detected early enough (pre-intervention: $\bar{x}$ = 2.72; post-intervention: $\bar{x}$ = 4.62). From Table 4, it is obvious that at every point of the analysis, the post-intervention mean of the experimental group surpassed the post-intervention mean of the control group. Therefore, the video intervention on knowledge of breast cancer early detection practices was effective in improving the participants' knowledge of the usefulness of breast cancer early detection practices.

Table 3: Participants' Knowledge of Breast Cancer Early Detection Methods

Variables	Groups	Time of Test	Mean
Bleeding of the breast, feeling of lump in it, its hardening and feeling of pain around the breast are breast cancer signs	Experimental	Pre-intervention	2.28
		Post-intervention	4.70
	Control	Pre-control	2.52
		Post-control	2.52
Breast cancer causes hair loss, sudden dryness of the skin of the breast and the surrounding areas, strong feeling of tiredness, and progressive weight gain or loss	Experimental	Pre-intervention	2.22
		Post-intervention	4.24
	Control	Pre-control	2.28
		Post-control	2.40
Breast cancer can be detected early enough, through its signs and symptoms, before it begins to spread	Experimental	Pre-intervention	2.74
		Post-intervention	4.56
	Control	Pre-control	2.54
		Post-control	2.54
Regular self-breast examination helps in early detection of breast cancer before it fully develops and begin to spread	Experimental	Pre-intervention	2.70
		Post-intervention	4.62

	Control	Pre-control	2.58
		Post-control	2.58
Every woman should go for clinical breast examination (CBE) as soon as she notices unusual conditions on/in her breasts	Experimental	Pre-intervention	2.06
		Post-intervention	4.64
	Control	Pre-control	2.14
		Post-control	2.14
Every woman should go for yearly mammographic examination to detect breast cancer at its early stage	Experimental	Pre-intervention	2.76
		Post-intervention	4.62
	Control	Pre-control	2.56
		Post-control	2.56
Breast cancer can be cured if it is detected early enough before it spreads	Experimental	Pre-intervention	2.62
		Post-intervention	4.68
	Control	Pre-control	2.32
		Post-control	2.32
Early detection of breast cancer is useful for better handling of the pain it causes for the patient and for reducing its spread	Experimental	Pre-intervention	2.72
		Post-intervention	4.62
	Control	Pre-control	2.56
		Post-control	2.56

Source: *Field Survey 2020*

Table 4 indicated that there was a significant difference in the pre- and post- health message intervention levels of knowledge of breast cancer early detection practices among the research participants ($t(49) = 22.74$, $p = 0.000 < 0.05$). The mean difference at the pre- and post- intervention stages was 20.32 (i.e. 46.08 – 25.76), implying that at the post-intervention stage, the knowledge of breast cancer early detection practices among the research participants significantly improved. Furthermore, the analysis of the control group showed that there was no significant difference in the knowledge of breast cancer early detection practices among the participants ($t(49) = 1.95$, $p = 0.057 > 0.05$), which obviously is because the control group did not receive the adopted interventions.

Table 4: Paired Samples T-test Analysis of Difference in Participants' Pre- and Post- Intervention Knowledge of Breast Cancer Early Detection Methods

Groups	Time of Test	N	Df	Mean	SD	T	p-Value
Experimental	Post-intervention	50	49	46.08	3.92	22.74	0.000
	Pre-intervention	50		25.76	5.00		
Control	Post	50	49	24.82	3.15	1.95	0.057
	Pre	50		24.70	3.25		

Source: *Field Survey 2020*

Table 6 depicted that there was a significant difference in the pre- and post- health message intervention levels of the participants' intention to practice breast cancer early detection methods among those exposed to video drama health messages ($t(49) = 19.50$, $p = 0.000 < 0.05$). The mean difference at pre- and post- intervention stages was 20.84 (46.16-25.32), implying that at the post-intervention stage of the research, the participants' intention to practice breast cancer early detection methods significantly improved. The control group also had a significant difference in intention to practice breast cancer early detection methods ($t(49) = -4.341$, $p = 0.000 < 0.05$). However, the magnitude of the difference in terms of mean score suggests that the intervention was effective for the experimental group.

Table 5: Paired Samples T-test Analysis of Difference in Participants' Pre- and Post- Intervention Intention to Practice Breast Cancer Early Detection Methods

Groups	Time of Test	N	Df	Mean	SD	T	P
Experimental	Post-intervention	50	49	46.16	3.58	19.50	0.000
	Pre-intervention	50		25.32	7.17		
Control	Post	50	49	25.58	2.47	-4.341	0.000
	Pre	50		26.08	2.72		

Source: *Field Survey 2020.*

7. Conclusion

Based on the foregoing findings of the study, it was concluded that frequent exposure to health based video drama is effective means of enlightening the rural women of Aboh Mbaise on breast cancer, its early detection methods, and for boosting their intention to practice the early detection methods which can help them avoid the menaces of the disease. This study therefore recommends that following:

- There is need to constantly prepare well-packaged breast cancer and related messages for frequent enlightenment of the rural women of Aboh Mbaise Local Government Area, and other places where this method may be effective in delivering the required messages for behaviour change.
- The study should be replicated in other locations especially rural areas in developing countries to further broaden the importance of applying video drama intervention as an information technique in enlightening women in rural areas on breast cancer and other health issues.

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