

ASSESSING FACEBOOK AS A MEDIUM FOR AWARENESS CAMPAIGN ON PREVENTION AND MANAGEMENT OF PROSTATE CANCER AMONG MEN IN SELECT LGAs OF ENUGU AND EBONYI STATE

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Abstract

Prostate cancer is a significant health issue affecting men worldwide, including Nigeria. Awareness and education about prevention and management are crucial to reduce incidence and improve outcome. Given the widespread use of social media, platforms like Facebook offer a valuable medium for health awareness campaign. This study sought to investigate the effectiveness of Facebook in an awareness campaign against prostate cancer among Enugu and Ebonyi men; the level of knowledge, application and barriers which inhibit the application of Facebook messages on prevention and management of prostate cancer. A mixed method approach was employed combining quantitative survey and qualitative interviews to gather data on the reach, engagement and impact of Facebook-based awareness campaigns. The study was anchored on Health Belief Model. The findings of the study indicate that Facebook is a viable tool for health communication with high levels of user engagement and positive feedback on the informational content provided. The study highlights the importance of culturally tailored messages and interactive features in enhancing the effectiveness of social media campaigns. Based on the findings, the study recommended among other things that future campaigns should include leveraging targeted advertising, collaborating with local influencers, and integrating multi-media content to increase awareness and promote proactive health behaviours among men in these regions. This research underscores the potential of leveraging social media platforms like Facebook to address public health challenges in resource limited settings.

Keywords: Assessment, Facebook, Awareness Campaign, Prostate cancer, Prevention, Management, Benign

Introduction

Prostate cancer is the most common cancer in men, and its occurrence keeps rising in many countries (Cuzik, Thorat, Andriole et al. 2014) It is the second or third leading cause of cancer related death among men. Prostate cancer otherwise known as adenocarcinomas is a disease caused by changes in the gene of a normal prostate cell (American Cancer Society, 2019). It was first reported in 1853 by Adams J., a surgeon at The London Hospital who described the first case of prostate cancer which he discovered by histological examination (Denmeade and Isaacs, 2014).

Remarkably, 150 years later, prostate cancer has become a significant health problem. In the United States of America, it is the most commonly diagnosed cancer in men, with 180,000 new cases and about 31,000 deaths occurring annually (Greenlee, Hill-Harmon, Murray, &Thun, 2001). This dramatic increase in the number of prostate cancer cases can be attributed to several causes. First, prostate cancer was not differentiated from other types of urinary obstruction until the early 1900s. Second, the incidence of prostate cancer increases more rapidly with age than any other cancer type. The number of cases has risen as the average life expectancy has increase over the past century. Third, the increased incidence seems to be, in some way, related to the 'Western' lifestyle: the incidence of clinical prostate cancer is significantly lower in Asian populations, compared with Western populations, and it increases in men who have emigrated to Western nations, indicating some type of environmental or dietary effect (Ross &Scottenfeld in Denmeade et al (2014).

Globally, more than 1.44million cases were diagnosed in 2020 and currently, the western region of Africa has the fourth highest risk for prostate cancer mortality in the world(Le, Bin, Mengjie, Youqing, Zongping, &Lingbin, 2022). The estimated population of Nigeria in 2020 by the world bank is 206,139,587 million people occupying a total surface area of

approximately 923, 768 square kilometres(Le, Bin, Mengjie, Youqing, Zongping, & Lingbin, 2022).

Prostate cancer is unique to male because women don't have a prostate. It was initially a disease of older men above the age of 55 years (Ntekim, Folasire, & Odukoya, 2023). Of recent, there has been reports of increase in the number of young men less than 55 years with Prostate cancer. The disease in this age group has been reported to be more lethal because of aggressive characteristics and metastatic potential. Different population have different proportions of young-on set prostate cancer.

The cause of prostate cancer is not yet known but researchers have discovered that there are factors that can increase a man's risk for the disease which are age, ethnicity, family history, weight, one's racial background among others. (Patel and Brazier 2023). Apart from this, other researchers are of the view that Prostate cancer develops when specific changes occur, usually in glandular cells. When Prostate gland cells appear abnormal, a doctor may refer to these changes as prostatic intraepithelial neoplasia (PIN) (Patel and Brazier 2023). Several websites and mass media have disseminated information about Prostate Cancer and have given different instructions to their audience about ways to prevent the disease such as reducing fat intake, eating more fruits and vegetables, adding green tea and soy, avoiding charred meat that is fried or grilled at high temperatures, maintaining a healthy weight, getting regular exercise, quitting smoking, increasing vitamin D intake, staying sexually active among others.

However, Nigeria National Cancer Control Plan (NNCCP), 2022) affirmed that Prostate cancer is the second most common cancer in men. An estimated 1.1 million men worldwide were diagnosed with Prostate cancer in 2012, accounting for 15% of the cancers diagnosed in men, with almost 70% of the cases (759,000) occurring in more developed regions. With an estimated 307,000 deaths in 2012, prostate cancer is the fifth leading cause of

death from cancer in men (6.6 of the total men deaths).

Prostate cancer is a large and ever evolving area of research. Over £22million was spent on prostate cancer research in the UK alone in 2018 (Trump and Elster, 2019). In many cases prostate cancer is a slow growing (indolent) disease. As such, survival rate in the UK are high with 85% of men surviving for 5 years after diagnosis. Many men die with Prostate cancer due to co-morbidities rather than of prostate cancer.

Prostate cancer is a gland that sits in between the bladder and the rectal region and basically is a gland that allows lubrication to some extent, and unfortunately, the vast majority of men, the older you get, the more likely for you to develop prostate enlargement and often times unfortunately develop cancer which is basically a growth within the prostate gland (Gnanapragasam, 2022).

In Nigeria, united Bank for Africa (UBA) launched a prostate cancer awareness campaign in 2011 tagged “walk, cycle and jog against prostate cancer. In Enugu State, (Sunrise FM) Radio health programmes on Radio prostate cancer in men are aired weekly. The programme stays for 30 minutes dealing on issues concerning prostate awareness and screening of male public residents who are public servants in Enugu state Nigeria.

Globocan (2012), states that there were more than 14.1 million new cancer cases, 8.2 million cancer deaths and that about 32.6 million people are living with cancer all within 5 years of diagnosis in 2012 all over the world. Information is regarded as crucial in the battle against cancer. The media are important tools for ensuring the efficient circulation of information related to cancer. One of the ways that the media can achieve this is through media campaigns.

Media campaign is usually a planned programme, it could be a series of newspaper articles, interviews, radio, television or social media programmes designed to achieve intended aim. It is a facilitated marketing

design to bolster data or opinions on product, services or general brand through a media platform. There are various social *media* health *campaigns* that have been on for a while now with the sole aim of creating awareness and improving cancer prevention behaviours. October is known nationally as prostate cancer awareness month and it is a month when more intensified campaign is done to raise awareness of the disease as well as increase research focus on its cause, prevention and treatment. The campaign is done annually. The goal of this campaign is to support those affected by prostate cancer and encourage good health behaviors. Media campaign could go a long way in providing men with clear advice on *prostate cancer* risk by encouraging men to discuss their individual risk and seek help early. According Pew Research Center. January 2018 reports more than 69% of adults using social networking sites; YouTube was the most commonly used social media platform around the world, after which we have the Facebook, Instagram, Pinterest, Snapchat, LinkedIn and Twitter.

Fox (2014) conducted a study and found that about 75% of adults who use social media, do so to talk about health. Social media provide a “socially mediated pathway” to communicate health-related information. They connect people to social networks and communities that offer integral incentives and personalized direction to form behavioral changes (Sarkar *et al.*, 2018). As a result of this, many organizations prefer to use social media to “provide users with access to valid, scientifically proven health information while also “reinforcing and individualizing messages, reach new audiences, and construct a communication foundation based on open data exchange (CDC, 2015).

Researchers have examined different issues related to prostate cancer. Ogundele and Ikuerowo (2015) carried out a study with a goal to ascertain awareness level of prostate cancer. The researchers applied descriptive survey while using questionnaire as the instrument for data collection. The researchers found that only 47% of the sample reported

awareness of prostate cancer. The implication was that 53% of the sample were not aware of prostate cancer. Gift *et al.* (2020) examined knowledge and practice of preventive measures of prostate cancer and reported that there was poor knowledge of prostate cancer as only 29% of the sample reported sufficient knowledge of preventive and management measures.

Statement of the Problem

For many years now, the popularity of Facebook has grown in Nigeria. In the past, the social media were largely referred to as the domain of the youth since the social mentality of the youth was driven by their features such as participation, openness, conversation, community and connectedness (Mayfield2006). Today, the characteristics of social media especially Facebook have made the platform useful not only to the youths but also the elderly. Rita, Nkem, Omeye and Chinweobo-Omoha (2022), assessed the influence of Prostate Cancer on disease prevention and control in Enugu State; Emeka –Ebere (2021) examined the influence of prostate cancer Campaign on Disease prevention and control in Enugu State; Didiugwu Obumneme (2018) explored the influence of prostate cancer awareness campaign on the knowledge, attitude and practices of men in South-Eastern, Nigeria. However, none of these studies to the best of the researcher's knowledge covered the effectiveness of Facebook in an awareness campaign against prostate cancer among men in Enugu and Ebonyi States. It, therefore, becomes imperative that a study evaluating Facebook as a medium for awareness campaign on prevention and management of prostate cancer be empirically evaluated.

Objectives of the Study

The general objective of this study is to assess Facebook as a medium for awareness campaign on prevention and management of prostate cancer among men in selected LGAs of Enugu and Ebonyi state.

While the specific objectives were to:

1. Determine the extent to which men in Ebonyi and Enugu state have knowledge of Facebook campaign on prevention and management of Prostate Cancer
2. Ascertain the extent men in Ebonyi and Enugu state are applying Facebook messages for the prevention and management of Prostate Cancer.
3. Examine the barriers that inhibit the application of Facebook messages for the prevention and management of Prostate Cancer.

Research Questions

1. To what extent do men in Ebonyi and Enugu state have knowledge of Facebook campaign on Prostate Cancer?
2. To what extent are Ebonyi and Enugu men applying Facebook messages on prevention and management of Prostate Cancer?
3. To what extent do barriers inhibit the application of Facebook messages on prevention and management of Prostate

Significance of the Study

The study will be of theoretical and practical benefit to the general public, social media users especially men in their middle age that happens to be the most vulnerable of prostate cancer. This study basically contributes to existing literature on awareness creation of facebook campaign on prevention and management of prostate cancer. The study is also of great use to mass communication students who intends to take up similar studies.

Scope of the Study

The study focused on how effective facebook could be used to sensitize residents of Enugu and Ebonyi states, especially men in their late

50s, on prevention and management of prostate cancer. The choice of the men in Enugu and Ebonyi ensures comprehensive regional perspective on men's health issues thereby enhancing the generalizability of the findings.

Review of Related Literature

Conceptual Review

Prostate cancer

When we talk about prostate cancer, we mean the ability of the genes at the lower abdomen of men's prostate to mutate. According to Morrison, Chen, Torres, Wehner and Linos (2019), when mutation occurs or begin to form inside the prostate gland (which is about the size and shape of a Walnut) and starts replicating, it leads to prostate cancer. It therefore means that prostate cancer is an illness that starts or occurs when men's prostate gland is invaded by mutated cells which starts to spread to the underneath of the bladder and makes it impossible for the seminal fluid that carries sperm to circulate properly. prostate cancer affects only males and does not affect females since its occurrence starts from the prostate gland within the male reproductive organ.

Prostate Cancer in Nigeria

Globally, Prostate cancer is the second most commonly diagnosed cancer and the fifth leading cause of cancer death among men worldwide, with an estimated 1,414,000 (Le, Bin, Mengjie, Youqing, Zongping and Lingbin, 2022) Among the African countries the number of cases ranged from 20 in the Gambia (1997-1998) to 3,432 in South African blacks (1989-1992) Chu, Ritchey, Devesa, Quraishi, Zhang and Hsing (2011). According to the authors, the reason for this is that of geographical variations in rate within Africa, quality of medical care systems among others.

The International Agency for Research on Cancer (IARC) reported that in Nigeria, prostate cancer constituted 29.1% of all male cancers in 2018,

with an age-standardised (world) 1-year prevalence rate of 16.1, less than one quarter of the rate in the United States (Bosland, Netty, Phillips, Anunobi, Akinloye, Ekanem, Bassey, Mehta, Marcias, Kwast and Murphy 2021). Prostate cancer has become the most prevalent cancer among males in Nigeria (Akinremi2014).According to World Health Organisation, in Nigeria, an estimated 115, 950 cases of Prostate cancer was detected in 2018 with 70, 327 deaths recorded (PUNCH NEWSPAPER, 19th Nov, 2023). Prostate cancer is rarely diagnosed before the age of 50years, but the incidence and mortality from the disease increase exponentially thereafter.

This increased incidence has been attributed mainly to the introduction of screening techniques (especially the estimation of serum prostate specific antigen) which have enabled earlier diagnosis. The number of unsuspected carcinomas discovered in surgical specimen has diminished because of two factors-the development of non-surgical management of patients with obstructive symptoms and an emphasis on early detection using prostate specific antigen testing.

Nigeria. In retrospect, an earlier report based on analysis of data from the same registry showed a trend toward an increasing incidence of prostate cancer as in early 1973. (Ogunbiyi and Shittu, 1999).

Facebook and Campaign on Prostate Cancer

Facebook is a social media platform which connects users of social media with other users. According to Okoye (2013, p. 17) “Facebook is a social network service and website launched in February 2004 that is operated and privately owned”. It is used to build relationships online as well as used to link its users to brands of different kinds online”. Lau (2019) states that Facebook is a pretty safe bet if you want to have a presence on social media because of its ability to share images, videos, text messages and creation of contents that spark conversations and meaningful interactions between or among people.

The use of social media is increasing globally and is employed in a variety of ways in the prostate cancer community. In addition to their use in research, advocacy and awareness campaigns, social media offer vast opportunities for education and networking for patients with prostate cancer and their caregivers.

Facebook as one of the social media platforms is one of the most effective tools to encourage men to know their risk of prostate cancer, tackle health inequalities, reassure men of the openness of the health providers to render help at any point in time and to share achievement of researchers across the country. Facebook is used for awareness creation, and it is an interactive means of communication. It is used for content-creation and for sharing features. It can reach a good number of users on how best to create awareness as well as manage issues relating to prostate cancer. Among the various means through which Facebook can be used to create awareness and manage prostate cancer are to share Information about Public Health Promotion Relating to Prostate Cancer, to adopt a change of behaviour of people towards Prostate Cancer, to form individual and group opinions on how best to manage prostate cancer, to campaign for all sorts of stakeholders' contributions to reduce the incidence of prostate cancer and to know about the signs, symptoms, risk factors as well as prevention of the illness.

Morrison, et al (2019) state, that Facebook and other social media platforms have been used to influence public opinion and to promote public health. Through the use of mobile/electronic devices like; iPhones, tablets, digital cameras and other related electronic devices, information relating to Prostate Cancer can be shared among men in Enugu and Ebonyi States. Through these devices, one can use Facebook to see pictures, photos, images and other forms of online contents on what prostate cancer entails and how best to manage it.

It may be as a result of their knowledge of how a patient identified “melanoma” (a type of cancer that appears as a dark spot in form of tumour).

This can lead to early detection of the disease and immediate therapy needed to prevent it before it becomes malignant.

Through Facebook, medical terms relating to prostate cancer can be properly explained to the users of this social medium (Pepple and Acholonu 2017). The more people use Facebook contents on prostate cancer, the more they are made to be aware on how best to manage the malady, since they can connect, interact and share online information of how it can be managed.

Facebook is used to campaign for all sorts of stakeholders' contributions to reduce the incidence of Prostate Cancer. This is done by using Facebook to stage seminars, make conference video online calls, workshops, as well as other means of online information to fight against prostate cancer. According to Ugo, Francesca, Zach, Umberto, Fabio and George (2002) Traditionally, diagnosis and staging of prostate cancer (PCa) have been based on prostate specific antigen (PSA) level, digital rectal examination (DRE), and trans rectal ultra sound (TRUS) and guided prostate biopsy. This according to researchers help to use Facebook to determine how information relating to prostate cancer can be shared among Facebook users.

Morrison, et al (2019) stated that risk factors associated with prostate cancer and its prevention include when a person is over 50 years; people who have African or Caribbean heritage; people who are overweight or obese; those who eat diet filled with unsaturated fats and those who have a family history of prostate cancer

In terms of the prevention of developing prostate cancer, it is advised that men eat a healthy diet, maintain a healthy weight, always check your prostate from time to time and visit your doctor for prostate cancer screening. This according to Morrison, et al (2019) can be achieved through adequate information and Facebook cannot be left out as a medium which can supply us with information relating to prostate cancer. According to Morrison, et al (2019) treatment of prostate cancer may include: Surgery to remove the prostate gland, radiation therapy, Chemotherapy, Heat or cold therapy to

destroy cancer cells, Hormone therapy to cut off testosterone from the prostate, Immunotherapy and Targeted drug therapy.

Effectiveness of Facebook in Health Campaigns

The majority of Nigerians approximately as of January 2023 had 31.6 million active social media users with Facebook, WhatsApp, Youtube and Instagram being the most frequently used social media platforms in Nigeria (Sasu, 2023). Notably, social media sites have emerged as a significant resource for healthcare information, and among those seeking health-related content, Facebook stands out as the preferred platform (Dolan 2011). Although the emergence of new media has made information seeking and sharing more convenient and satisfying (Fox and Jones 2009), however, low health literacy remains a major problem (Berkman et al. 2011).

The emergence of social media platforms also offers increased capabilities for interactive communication and information sharing online (Kaplan and Haenlein 2010). The participatory nature and instant feedback of social media add a degree of interactivity to online advertising and marketing by facilitating consumer control and involvement in content creation and dissemination (Trusov, Bucklin, and Pauwels 2009). With this interactive potential, many corporations and organizations have turned their focus to incorporating social media elements into their marketing and promotion strategies and fostering two-way or multidirectional communication between brands and consumers (Burson-Marsteller 2010; Tuten 2008). Recognizing the power of social media marketing, the health care community has also tapped into social media tactics as part of its communication planning (Chou et al. 2009). Interactivity refers to "the condition of communication in which simultaneous and continuous exchanges occur, and these exchanges carry a social, binding force" (Rafaeli and Sudweeks 1997, p. 4). Interactivity enables social networking sites to facilitate consumers' understanding of health information (Nutbeam 2000),

increases word of mouth among interpersonal networks (Kalichman et al. 2002), and improves consumers' self-management behaviours (Guendelman et al. 2002). Of many social networking sites available on the Web, Facebook is the most popular, with more than 750 million users and 30 billion pieces of content (web links, news stories, blog posts, notes, photo albums) shared each month (Facebook 2011).

As a virtual social media platform, Facebook offers an easy, cost-effective way for both profit and nonprofit sectors to communicate health information, promote their products and services, and build brand communities. For example, an increasing number of health organizations have come up with Facebook health applications that allow users to keep track of their exercise and diet goals (Donohue 2009) and coordinate their exercise plans (Dugan 2010). Health insurance companies also have begun providing health tips and advice and send marketing messages via Facebook in an effort to interact with customers to enhance the image of the insurance industry (Terry 2011). The interactive capabilities offered on Facebook also make virtual content-sharing activities easy for users and encourage target audiences to engage in viral marketing (Thackeray et al. 2008). This type of personal recommendation is effective in getting the attention of potential consumers and influencing attitudes toward an organization and its brands (Thackeray et al. 2008). Thus, Facebook is an ideal platform for facilitating brand awareness and promoting brand engagement, because its core consists of social networking and relationship building (Tuten 2008).

A core strength of social media pertains to its potentially broad appeal, offering a wide array of features, from profiles to instant messaging to news feeds and quizzes to feedback mechanisms (Tuten 2008). The use of social media channels creates an opportunity to facilitate the flow of health information by virtue of a dynamic and evolving ecology of networks across different social media platforms (Thackeray and Neiger 2009). Effectively implementing various social media outlets may further contribute to

increasing consumers' awareness of health-related products and services advertised by health organizations by accelerating the speed of shared information.

Leveraging Social Media for Prostate Cancer Awareness and Education

Social media has emerged as a valuable tool for disseminating health information and promoting awareness about various diseases, including prostate cancer. Research by Moorhead, Hazlett, Harrison, Carroll, Irwin, & Hoving, (2013) and Taggart, Grewe, Conserve, & Gliwa, (2015) highlights the significant contributions of social media platforms to health promotion, education, and awareness. Social media platforms like Facebook, WhatsApp, Twitter, Instagram and YouTube offer exceptional opportunities to engage men in health-related discussions, share personal experience and build supportive communities.

Social media can be leveraged to raise awareness about prostate cancer, encourage men to seek medical advice, and promote health seeking behaviours. A study by Loeb, Byrne, & Auffenberg, (2018) found that social media can positively influence prostate cancer screening behaviours and increase awareness among men. By utilizing engaging contents like graphics, videos, and testimonials, social media can effectively capture audience's attention and achieve positive results in promoting prostate cancer awareness.

However, the use of social media for prostate cancer awareness also presents challenges, including the spread of misinformation and misconceptions. To overcome these challenges, careful planning, strategic communication strategies, and targeted campaigns are necessary to ensure accurate information reaches the intended audience. Despite these challenges, social media remains a powerful tool for promoting prostate cancer awareness, reducing stigma and misconceptions, and encouraging proactive health behaviours among men.

Facebook (Meta) is one of the world's richest corporations, with about 98% of its revenue generated from advertising. Beyond its utilitarian function of connecting billions of people, facebook is a global advertising machine that basically functions by commodifying users' information and monetizing their behavioural data.

Numerous studies have shown that social media campaigns can effectively raise health awareness and promote positive health behaviours. For instance, Ogundele and Ikuerewo (2015) found that many individuals were unaware of prostate cancer. Highlighting the need for awareness campaigns, Moorhead, Hazlett, Harrison, Carroll, Irwin, & Hoving, (2013) demonstrated that social media interventions can increase knowledge, change attitude, and promote health behavior change. Other studies have also highlighted the existence of myths and misconceptions surrounding prostate cancer, emphasizing the need for accurate information dissemination. Emeka-Ebiere, Orogbu, Omeye, Chinweobo-Onuoha (2022) found that many respondents have limited knowledge of prostate cancer and did not prioritize messages about the disease. However, social media has also been shown to be an effective platform for health awareness creation, particularly when targeted to specific populations. Neiger, Thackeray, Wagenen, Hanson, West & Barnes (2012) found that participants who engaged with a diabetes-focused facebook group reported improvement in their self-care behaviours and diabetes self-efficiency.

While social media offers immense potential for health awareness, there are also challenges and limitations associated with its use. Fox (2014) noted that many adults use social media to discuss health topics, but Laranjo, Arguel, Neves, Gallagher, Kaplan & Ferre (2015) warned about the potential for misleading health information to circulate on social media platforms. To address these challenges, it is essential to ensure that accurate and reliable health information is shared on social media platforms.

Empirical Review

Chinazo, Nkem, Omeje and Onuoha (2022) “examined the influence of prostate cancer campaign on disease prevention and control” A survey research design was used while multistage sampling technique was utilized to select a sample size of 300. A quantitative method of analysis was utilized to analyse available data in order to answer the research questions and draw inference for the study. Finding showed that many of the respondents are not fully aware of prostate cancer. Other respondents opined that prostate cancer is a strange illness, hence do not want to talk about it. The study revealed that radio is the leading source of information on prostate cancer among men. The study equally showed that many respondents have less knowledge of prostate cancer and do not attach importance to message on prostate cancer. The study recommended, among others, that radio should be used as a main communication tool in campaigns to create awareness on prostate cancer.

The study is related to the present study because it focused on prostate cancer campaign. However, the context is different because it failed to accommodate the social media. It is too general because it did not target any particular media but behaviour, hence the need for this study.

Ugo, Francesca, Zach, Umberto, Fabio & George (2022) conducted a study on the topic “Prostate cancer biomarkers: A practical review based on different clinical scenarios”. The study objective was to describe available prostate cancer biomarkers and examine their use in clinical practice. The study made use of secondary sources of literature review. The findings revealed that digital rectal examination and transrectal ultrasound when combined with proper awareness campaign can go a long way to help in the management of prostate cancer among men. The study recommended that constant information about prostate cancer is needed in the management of the disease by those who suffer from it. This study is relevant to ours because it has shown that information which may come through Facebook will play an important role in awareness and management of prostate cancer.

In another study conducted by Mamello, Keamogestswe, Paballo, Lemohang, Ayodeji and Samson (2022) entitled prostate cancer review: Genetics, diagnosis, treatment options and alternative approaches”, the research objective was to provide a holistic overview of prostate cancer, including the diagnosis of the disease, its mutations and treatment options, etc. The study found out that men who relapse or present metastatic prostate cancer receive androgen deprivation therapy and chemotherapy. The study recommended that the use of traditional medicine, the application of nanotechnologies, and gene therapy, as well as the reduction of adverse effects that come with current treatment option should be adopted to reduce the spread of prostate cancer. This study has also shown that adequate knowledge and awareness of the management of prostate cancer is needed through social media like Facebook in order to manage the disease.

In their study of “Facebook advertising for cancer prevention: A pilot study”, Morrison, et al (2019) had their objective to determine how Facebook advertising can be used in cancer prevention and management. The study made use of secondary data from Facebook posts in form of videos to create awareness on cancer management and prevention. It was revealed that Facebook is an active medium to educate the masses on cancer prevention and management.

Theoretical Framework

This study was anchored on Health Belief Model. This model was first developed in the 1950s by social psychologists Hochbaum, Rosenstock and Kegel who were working in the United States Public Health Services (Ogbuoshi, 2020, p. 197). According to those who developed the model, it attempts to explain and predict health behaviours by focusing on attitudes and belief of individuals' preventive health action. It is based on the understanding that a person will take a health –related action if that person feels that a negative health condition can be avoided, has a positive

expectation that by taking a recommended action, he/she will avoid a negative health condition, etc. Relating this to our study, it becomes necessary to say that when men who are suffering from prostate cancer visit Facebook sites that teach how to know, manage and prevent their chances of developing the disease, it will go a long way to help them to prevent being killed by prostate cancer. It is based on the above that this study was anchored on health belief model (HBM).

Research Design

To elicit the information needed, the researcher adopted descriptive survey research for the study. The reason for this method is because survey is used in examining attitudes, behaviours, and perceptions across a defined population.

Population of the Study

The men residing in Enugu and Ebonyi State have a combined population of 842,000 (National Bureau of Statistics 2009 and National Population Council 2006). Enugu and Ebonyi States are made up of 17 and 13 local government areas respectively. The sample size of 400 was therefore determined using Australian calculator with 95% confidence level. Multi stage sampling was adopted in selecting the sample for the study.

Table 1: Population of men in various local Government Areas in Enugu and Ebonyi State

Local Government Area	Male Population
Enugu	
Enugu City	279,089
Nsukka	138,500
Awgu	54,889
Ebonyi	
Abakaliki	73,605
Ezza North & South	140,075
Afikpo North & South	155,842
Total	842,000

Source: National Population Commission, Nigeria 2006.

Determination of Sample size

The sample size for this study was determined using Australian calculator with 95% confidence level. The use of this formular was informed by its consistency in yielding a sample size that was sufficient for use in carrying out a study of this nature. Hence, the researcher worked out the sample size for this study thus:

Table 2: Australian Sample Size Online Calculator

Confidence Level	95%
Population Size	842000
Proportion (p)1	0.5
Confidence Interval : p +	0.04900
Upper	0.54900
Lower	0.45100
Standard Error	0.02500
Relative Standard Error	5
Sample Size	400

Source: online 8:30am April, 2024.

Validity of the Instrument

The instrument was validated by two communication experts in the department of Mass Communication, Ebonyi State University, Abakaliki. Validation was done to ensure that the items in the instrument addressed the research questions and thus, were able to measure what they were expected to measure.

Reliability of Measuring Instrument

To ensure reliability of the instrument, a test-retest method was employed. The researcher first administered 30 respondents with the proposed questionnaire. Their responses were collected and analyzed by the researcher and the result were recorded. After two weeks interval, the process was repeated on the same respondents and the responses were collected, analysed and the results obtained from the second exercise were compared to the result obtained from the first.

Method of Data Collection

The instrument of data collection used in this study was questionnaire. The questionnaire was developed by the researcher to elicit information from the respondents.

Method of Data analysis

The frequencies of the demographic details and main questions in the questionnaire were analysed using percentages, tables and frequencies.

Presentation and Analysis of Data

The researcher adopted personal approach in the administration of the copies of the questionnaire, the entire 400 copies were administered while 386 were duly completed and retrieved by the researchers. The table below present the data generated and the findings of the research.

Frequency Table

Table 3: Bio-data of the respondents

Frequency	Range	No of respondents	Percentage%
Age	35-44	94	24.3
	45-54	103	26.6
	55-64	107	27.7
	65-74	82	21.2
Total		386	100
Marital status	Single	128	33.1
	Married	258	66.8
Total		386	100
Educational qualification	No Education	14	3.6
	Primary Edu.	128	33.1
	Secondary Edu.	189	48.9
	Tertiary	55	14.2
Total		386	100

Source: research work 2023

The table shows that those within the range of 54 – 74 years of age constituted 85.2% of the total respondents. Those who are below and within 54 years are 14.8 percent respectively. The implication is that the respondents are fully mature to respond to the questionnaire.

Table 4: Effectiveness of Facebook Campaign in creating awareness on prevention and management of Prostate Cancer

Effectiveness	frequency	Percentage
Not effective at all	97	25.1
Somewhat effective	99	25.6
Neutral	74	19.1
Effective	57	14.7
Very effective	59	15.2
Total	386	100

Source: Author's field survey, 2024

Table 4 illustrates the effectiveness of facebook campaign in raising awareness about prostate cancer. A considerable 25.6 % of participants consider the campaign to be “somewhat effective” suggesting a moderate level of awareness. Additionally, 25.1% view the campaign as “not effective” indicating that some respondents perceive limited access to Facebook messages. A notable 14.7% find the campaign effective

highlighting their positive influence. Conversely, 15.2% believe that the campaign are “very effective” indicating a strong impact in application of Facebook messages in the prevention of Prostate Cancer.

Table 5: level of knowledge about Facebook campaign on Prostate Cancer

S/N	Statement	Frequency	Percentage
1.	Guide from newly diagnosed patients of Prostate Cancer on Facebook can help one find answers and have peace of mind	62	15.9
2.	Through Facebook, information can be shared about symptoms of Prostate Cancer	74	19.2
3.	Facebook can promote risk-reducing behaviours and practices through its campaign	79	20.3
4.	Prostate Cancer is poison	82	21.0
5.	Prostate Cancer is more spiritual than physical	55	14.1
6.	Prostate Cancer is punishment from the gods	37	9.5
Total		389	100

Source: Author’s field survey 2024

Data in table 5 illustrates the knowledge level of men about Facebook campaigns on Prostate Cancer. The data depicts that all the items have affirmative responses below the 50% benchmark. This simply means that a greater percentage of men in Enugu and Ebonyi state lack adequate knowledge of Facebook messages on Prostate Cancer but believe that it is poison.

Table 6: Actual performance towards applying Facebook messages

Actual Performance	Frequency	Percentage
Improve your diet	72	18.5
Maintain a healthy lifestyle	59	15.2
Get regular exercise	52	13.3
Stay sexually active	86	22.1
Stop smoking and drink less	75	19.2
Maintain regular screening	45	11.6
Total	389	100

Source: Author’s field survey 2024

Table 6 illustrates the extent of applying Facebook messages on prevention and management of Prostate Cancer. The data presented on this table shows that the respondents who maintain regular screening are 11.6% which is below the yardstick. This indicates that the level of application is low.

Table 7: Barriers that inhibit the application of Facebook messages

Response Category	Frequency	Percentage
Cultural barrier	61	15.7
Income barrier	94	21.2
Technological barrier	39	10.0
Language barrier	52	13.4
Misconception	68	17.5
Illiteracy	75	19.3
Total	389	100

Source: Author's field survey, 2024

Data in table 7 indicated that income of individual is a major barrier not to modify the existing behaviour of men in Ebonyi and Enugu at 21.2%. The data depicts that all the items affirmative responses below the 50% benchmark.

Discussion of Findings

Knowledge level of Men about Facebook Campaigns on Prostate Cancer

The findings reveals there is inadequate knowledge and poor attitude about prostate cancer among males and this limited knowledge and misconceptions about prostate cancer among males can have serious consequences. This is in line with the finding of Maladze, Maphula, Malueke, Makhado (2023), who affirm that inadequate knowledge and poor attitude about prostate cancer negatively affect early screening practices among males.

Furthermore, the study found that many men in the region believe that prostate cancer is “poison” rather than a treatable medical condition. The misconception highlights the need for targeted health education and awareness campaigns to correct such misconceptions and promote accurate knowledge about prostate cancer.

The finding of this study highlights the need for improved knowledge and awareness about prostate cancer among men in Enugu and Ebonyi

states. The low level of knowledge and misconceptions about prostate cancer underscores the importance of targeted health education and awareness campaigns

The study's implications and recommendations can inform the development of future health awareness campaigns and improve the use of social media in promoting behaviour change.

Utilization and impact of Facebook messaging and prostate cancer awareness among Ebonyi and Enugu men

The research discovered the underutilization of Facebook messages in promoting prostate cancer awareness and screening. Enhanced digital strategies and collaborative efforts are crucial to bridge knowledge gaps and foster improved health outcomes. Dunn, Mardi and Coiera (2018) discovered that social media can be used to target messages towards specific geographical regions or demographic groups, such as those who are known to have poor knowledge of cancer symptoms or encounter more barriers to assessing cancer screening. With these, social media interventions may be more able to address health inequalities than traditional interventions. The finding emphasised the need for innovative digital solutions to tackle prostate cancer challenges, bridging knowledge gaps and fostering improved health outcomes.

Barriers that inhibit the application of Facebook messages

The findings also shows that income of individual is a major barrier not to modify the existing behaviour of men in Ebonyi and Enugu. This findings, therefore, aligns with Latha, Meena, Madhuporna and Chaturved (2020) who maintained that with the continuous expansion of technology and other factors influencing social media, it is necessary to understand the information needs of various segments of the population, effective health promotion message and the need to connect more people through social

media for more health information exchange. That shows that with technology, men with higher incomes are more likely to undergo routine prostate-specific antigen (PSA) testing, which facilitates early detection of prostate cancer.

Conclusion

Based on the findings the study concludes that Facebook offer vast opportunity for education and networking of patients with Prostate Cancer and also engage patients in championing their own health. This implies that outsourcing Facebook messages can infuse positive attitude on men in Ebonyi and Enugu state towards prevention and management of Prostate Cancer.

Recommendations

Sequel to the findings from the study, the following recommendations were made

1. The study recommended that media organizations should employ other strategies like the use of television alongside radio to develop future health awareness campaigns and as well as improve social media use in promoting behaviour change.
2. There is need for targeted health education and awareness campaigns. So media experts should employ other strategies like disseminating message on Prostate Cancer in religious centres like churches, mosques etc.
3. Due to the financial barrier that hinder men from going for early screening, policy makers and healthcare providers should collaborate towards ensuring equitable access to prostate cancer prevention and treatment services across different income groups.

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