



Influence of prostate health campaign messages on knowledge, attitude, and practice among adult males in South-South Nigeria

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Received: 28 September 2025 / Revised: 17 November 2025/ Accepted: 21 November 2025/ Published online: 06 December 2025.

How to cite: Ntegwung, E. G., & Batta, H. E. (2025). Influence of prostate health campaign messages on knowledge, attitude, and practice among adult males in South-South Nigeria. *Scientific Reports in Life Sciences*, 6(4), 1–24. DOI: <https://doi.org/10.5281/zenodo.17839172>

Abstract

This study deployed the survey research technique with the questionnaire as instruments of data collection in South-South Nigeria to ascertain whether any significant correlation existed in the knowledge, attitude, and practice embedded in prostate health campaign messages. The major objectives of the study were to ascertain the extent to which adult males in South-South Nigeria were aware of/exposed to prostate health campaigns and to determine the extent to which the campaigns on prostate health influenced their knowledge, attitudes, and behaviour. The population comprised the 18,466,888 adult males living in South-South, Nigeria, while data aimed at achieving the research objectives were collected from a sample of 384 subjects determined using the Krejcie and Morgan formula and purposively selected from the three States where the campaign was done intensively. The research adopted the multi-stage sampling procedure. The primary data collected were analysed using simple percentage and weighted mean computation presented in tables, while the correlational analyses of the variables of the study were done using the Pearson Product-Moment Correlation Coefficient statistical method, commonly symbolised as r . The study revealed that more of the adult males in South-South Nigeria (138 [36%]) had little exposure to campaigns on prostate health, and a slight majority, 154 (40%), had little awareness of the campaigns on prostate health. The data also indicate that 117 adult males [31%] in South-South, Nigeria, were knowledgeable that, from 40, one should become more concerned about prostate problems. The correlational analyses of the hypothetical variables of the study showed that significant positive correlations exist between the variables at the 0.05 level, thus proving the probability that the significance

of the correlations between the variables was simply due to error or chance was found to be less than 0.1%. Therefore, the hypotheses were upheld. Among other relevant recommendations, promoters of prostate health campaigns in South-South, Nigeria, should make campaigns more demographically-intensive so as to appeal to adult males of all segments beyond age, marital status, and educational level.

Keywords: Reproductive Health, Social Marketing, Health Belief and Attitude Change Theories, Survey Research

Introduction

Prostate health is one of the many disseminated health topics attracting global attention. The prostate is a small fibromuscular accessory gland of the male reproductive system, weighing about 20.0g, and functions biologically in the secretion of small seminal fluid, which mixes with sperm when a man ejaculates (Obeagu et al., 2017). It is found only in men, and it is extremely important for male reproduction and the main component of semen that facilitates fertilisation (Sakala et al, 2020). The prostate gland is the largest accessory gland of the male reproductive system, located under the bladder and lying between the bladder and the penis, surrounding the urethral tube from the bladder through which urine flows out as males urinate. It is conical and 'walnut-shaped'. Every human male child is born with the prostate gland for reproductive function(s) later in life (Ozims et al., 2018). With the numerous functions of the prostate, it then behoves individuals to take the well-being of this all-important organ as a priority. Prostate health refers to the overall well-being of the prostate gland, and it is important for men of all ages, but it becomes increasingly important as men age. Negligence of prostate health could result in a devastating impact on the prostate, which can lead to three major problems: prostatitis (inflammation of the prostate), benign prostatic hyperplasia (BPH, enlargement of the prostate), and prostate cancer (growth of malignant cells inside the prostate). Prostatitis is the most common cause of infection in the prostate. Benign prostatic hyperplasia (BPH) is the most common disease in elderly men, especially those aged above 50 years. BPH causes symptoms that affect urine flow; pain while urinating or ejaculating, difficulty in initiating urination, dripping at the end of the urine flow, frequent urge, sensation of incomplete bladder emptying, etc. (Suresh, 2022). These symptoms, if neglected, could lead to complications such as the development of bladder stones, damage to the kidneys, blood or pus in the urine, erectile dysfunction, loss of libido, and ejaculatory disorders, which can impact the individual's mental health. Also, cancer of the prostate (CaP) is another serious disorder. It is estimated that annually, 4.04 million human lives are lost globally due to prostate cancer alone (Hariharan & Padmanabha, 2016). It is the second leading cause of death in men (World Cancer Research Fund International Report, 2020). The human race is threatened because of

the increasing susceptibility to prostate cancer. Statistics emanating from global health organisations and agencies indicate that there are over 16 million new cases of cancer globally (World Health Organisation, 2024). Prostate cancer has become a global health challenge because of its rising morbidity and mortality rates. It was classified by the World Health Organisation (WHO) in 2018 as the commonest cancer with 1.28 million cases and 26.6% incidence in Africa (Ezegwu et al., 2022). Although prostatic diseases affect only men, it is becoming evident that women also need to be informed about them. Women act as ‘family health managers’ for their partners and children (Wiafe et al., 2020), which, of course, makes them active collaborators in campaigns that advocate prostate health. Visible efforts have been made by international organisations such as the World Health Organisation (WHO), American Cancer Society, Prostate Cancer Centre (PCC), National Cancer Institute (NCI); National organisations such as the Federal Ministry of Health, Nigerian Cancer Organisation (NCO), public and private institutions among others; to increase awareness of prostatic diseases and educate the public about this malady through traditional mass media, seminars, rallies, opinion leaders, social media platforms, campaigns, social media interest groups, etc. However, it is alarming that adult males are still being affected by prostate health-related problems. It appears that prostate morbidities are on a daily rise and mainly affect older people, who are the significant demographic segment across the globe. There is, however, a rising incidence with increased mortality reported in developing countries where most prostate-related cases are diagnosed at advanced stages. This highlights the need for increased awareness, better education, and increased uptake of screening programmes in these populations (Adejumo et al., 2021). A careful study of prostatic diseases shows that it is gradually taking a prominent position as an emerging health dysfunction in Nigeria (Terwase et al., 2014). Despite the high incidence, the good news is that experts believe that this disease can be reduced through aggressive enlightenment campaigns. To this end, campaigns on prostatic morbidities have been organised, not just in South-South Nigeria, but in other parts of the country, Africa, and the world. There are workshops developed by different groups and institutions as a follow-up on the action plan by the United Nations Population Fund (UNFPA) in April 2008 at the Federal Capital Territory, Abuja. The need to preserve lives and ensure a steady decrease in the level of mortality resulting from prostate diseases has become an urgent issue to tackle. In view of this challenge, different higher institutions such as the University of Uyo Teaching Hospital (UUTH), University of Port-Harcourt Teaching Hospital (UPTH), University of Benin Teaching Hospital (UBTH), etc. have promoted different campaign projects on prostate health. Other organisations, such as United Bank for Africa (UBA) and MTN, Nigeria, through their

foundations, have organised awareness and sensitisation initiatives on prostate disorders. Public-spirited individuals have also used their foundations tagged 'Men on Blue' to facilitate campaigns on prostate disorders in Nigeria. Despite the reported increasing awareness and campaigns on prostate health, so many men still suffer from the disease. It then explains the fact that accessibility of these campaigns, attitudes, and practices is still far-fetched, as statistics of prostate diseases keep increasing. Also, with the reported increase in awareness of prostate health among high-risk populations in Nigerian communities, barriers such as ignorance, poverty, absence of screening programmes, lack of health education, inadequate diagnostic facilities, and assumptions that lower urinary tract symptoms are part of the normal aging process prevent men from early screening, hence late presentation with advanced diseases (Ikuerowo et al., 2013). This then means that accessibility to campaigns, awareness and knowledge, level of risk factors, attitude towards campaigns and practices are questionable. If men were aware and exposed to campaigns, whether or not they practice what they know, was a determinant of the level of success of these campaigns. One of the most efficient ways to promote good health in society is through employing good communication campaigns aimed at informing and educating the public about healthy habits and good health care (Oyama & Okpara, 2017). Communication campaigns are designed to produce specific goals, outcomes, and impact by targeting a sizeable number of people within a particular time frame through a series of activities. Campaigns are therefore designed to increase public knowledge, change behaviour, and modify attitudes on issues relating to health. As many advocates of prostate health continue to stress the need to educate and enlighten adult males about the prostate, identifying the most appropriate and effective means of doing so is pertinent because prostatic diseases can be prevented and cured if detected early through screening (Mbugua et al., 2021). Thus, the efficacy of campaign messages on prostate health, with the view to raising awareness, leads to greater knowledge and, invariably, early detection and a greater survival rate. This study, therefore, assessed the influence of prostate health campaign messages on knowledge, attitudes, and practice (KAP) of adult males in South-South, Nigeria.

Related Literature

Prostate Health

Virtually every human male is born with the prostate gland for reproductive function(s). The other structures in the male reproductive system include the testes, the vas deferens, the seminal vesicles, the penis, and Cowper's gland. The prostate gland is not big; it is about the size of a walnut and weighs approximately 26.0g at the end of puberty (Ejike, 2011), but its location

virtually guarantees problems if something goes awry. The prostate gland is located below the bladder (the hollow organ where urine is stored) and in front of the rectum (the last part of the intestines) (www.health.harvard.edu, 2023). It also wraps around the upper part of the urethra, the tube that carries urine from the bladder out of the body. It secretes prostatic fluid, the main component of semen. The prostate contains muscles, secretory glands, and fibrous tissues, and functions biologically with a small fluid that mixes with sperm when a man ejaculates (Obeagu et al., 2017). The fluid produced by the prostate's secretory glands is alkaline in nature and neutralises the acidic nature of the vagina to make the sperm cells motile and resilient. This increases the chances of a sperm fertilising the ovum. The cell functions of the prostate are influenced and regulated by the male hormone- a type of testosterone called dihydrotestosterone (DHT) (Ozims et al., 2018). However, the prostate can give rise to health-related problems when it enlarges. Hyperplasia most often involves the transitional zone (periurethral zone), which affects both the glandular and stromal tissues. Although it is important, when not taken care of adequately, many men suffer from prostate inflammation and even cancer (Suresh, 2022). The prostate provides some of the seminal fluid, which carries sperm from the testicles when a man ejaculates (Bandukwala, 2022). That means prostate problems can affect urination and sexual functions. As one ages, the prostate can become larger because it is a normal part of aging for most men. By age 40, a man's prostate might have gone from the size of a walnut to the size of an apricot. By age 60, it might be the size of a lemon.

Men's Knowledge of Prostatic Diseases and Screening

It is not yet certain what causes prostatic diseases, but medical aetiology has attributed the cause to certain genetic/hereditary indices, environmental factors, and lifestyle. Happily, prostate diseases can be prevented, and an individual's actions play a vital role in lowering risks. Knowledge about prostatic disease is essential and requires a good understanding of the epidemiology of the disease. The level of knowledge about prostatic diseases has the power to influence men's decisions to seek early screening and treatment for the disorders. Studies document high levels of knowledge about prostate disease, for example, a study conducted among male staff of the University of Nigeria, Nsukka, on knowledge, attitudes, and perceptions reported favourable results (Adibe et al., 2017). The study revealed that more than half (60.8%) of the respondents had positive and appropriate knowledge regarding prostate screening and treatment. However, the level of education was found to have had a positive influence on prostate disease screening and treatment (Egbera, 2015). Similarly, a study conducted among men living in the Southern Italian Peninsula revealed that 79.2% of the

respondents reported knowing about prostate disease prevention programmes, while 59% knew of risk factors associated with prostate disease (Mirone et al., 2017). Most men in developed countries have adequate knowledge about prostate disease risk factors, screening services available, benefits and risks for early detection, and treatment as compared to men in developing countries (Bray et al., 2012; Trevor, 2020). Therefore, knowledge about prostate health, its screening, and treatment services have an influence on men's attitudes and decisions towards prostate screening and treatment.

Men's Attitude to Prostate Health Campaigns

Prostatic disease screening is an effective means for early detection and successful treatment of prostate cancer, BPH, and, of course, prostatitis, thus reducing mortality and morbidity rate (WHO, 2016). It helps to detect prostate disease before any symptom occurs. Having positive attitudes and participating in screening lead to early detection and treatment. Sadly, negative attitudes and poor participation lead to diagnosis of the disease at an advanced stage, and complication during treatment leads to death (Loud & Murphy, 2017). Attitude about prostate screening is an enduring confluence of beliefs, feelings, and behavioural tendencies towards socially significant objects, groups, events, or symbols (Tachin & Itodo, 2022). It is a psychological tendency that is expressed by evaluating a particular entity with some elements of favour or disfavour. When people become aware of the essence of regular check-ups for screening and the early detection of growth in the prostate, it enhances their positive attitude toward screening. However, when people harbour careless attitudes about prostate health, it makes them have a negative perception of screening. A study in developed countries reported positive attitudes toward screening for prostate diseases among men (Trevor, 2020). Morlando et al. (2017) conducted a study on prostate cancer among men and found that a greater percentage of men had positive attitudes and were willing to undergo prostate screening. Also, Baaitse (2018) conducted a study in South Africa (Johannesburg) on knowledge, attitudes, and practices of men concerning prostate cancer and found that 72% of the respondents had positive attitudes towards prostate cancer screening. A study conducted in Lagos State, Nigeria, yielded relaxed results where about 58.4% showed positive attitudes towards prostate cancer (Onyeodi et al., 2022). Also, a study conducted in Edo state, Nigeria, revealed that 71.3% of men showed positive attitudes to prostate cancer, which suggests that the media have contributed to changing men's perspectives and opinions (Acha et al., 2023). There are also negative attitudes toward prostate screening, especially from developing countries, where there is an inadequate level of knowledge about prostatic diseases. A common belief prevalent among men in

developing nations that states, “what you don’t know cannot kill or harm you,” has also contributed to the negative attitude towards prostate screening. So, going for prostate screening when one has not been diagnosed or is not having symptoms is like looking for a problem where there is none (Tachin & Itodo, 2022). There is also the issue of a high level of erroneous beliefs about the aetiology of prostate diseases, with positive history of sexually transmitted diseases being the most common misconception (Ojewola et al., 2017). The study also shows results on knowledge, attitudes, and screening practices regarding prostate diseases in Nigeria. The report indicated that 55.7% of respondents showed negative attitudes towards prostate disease screening. The level of knowledge about prostatic diseases is dependent on age, education, occupation, and socio-economic status, which invariably influence an individual’s attitudes towards prostate disease screening.

Prostate Health Screening Behaviours (Practices)

Prostate screening helps to find unsuspected cancers, and may lead to more invasive follow-up tests such as biopsy, with cell samples taken for closer study (American Cancer Society, 2009). The primary goal of this screening is for early detection of men with clinically significant cancers, resulting in a reduction or overall morbidity and mortality associated with this disease. There is a high level of participation in prostate screening services in developed countries (WHO, 2015). A study conducted in Brazil, South America, revealed that 86.3% of respondents have undergone Prostate Specific Antigen (PSA) testing, for example (Paiva et al., 2010). Another study conducted among Italian men also revealed that 29.6% of respondents had undergone a PSA test and 54.4% of respondents were willing to do so in the future (Morlando et al., 2017). It was observed that the willingness to undergo screening exercises in the developed countries may be due to high levels of education, health insurance, and access to adequate health care services and information. In contrast, prostate cancer screening in most developing countries was abysmally low, probably due to low levels of awareness about prostate cancer, screening and treatment (WHO, 2016). In Nigeria, a study conducted among male students of Benue State University showed that screening behaviours contributed only 10.8% influence to prostate screening (Terwase et al., 2014). Equally, Ojewola et al. (2017) in a study among Nigerian men, found that only 10.2% of the respondents had ever carried out PSA screening. In another study conducted among men in an Urban Community in Lagos, Nigeria, only a few of the respondents had ever been screened (Onyeodi et al., 2022). This is similar to various Nigerian-based studies, such as those in Oyo State, where one-fifth had been screened, and in Anambra, just slightly over 5% had undergone screening in the preceding year

(Oladimeji et al., 2010; Oranusi et al., 2012). It is also reported that the Nigerian male population is one of the most unscreened groups in the world regarding prostate health (Akinremi et al., 2014).

Influence of Health Communication on Public Knowledge, Attitudes and Behaviour

Health communication is a preventive aspect of health, where health messages are disseminated using media technologies and organisations for the purpose of creating awareness about diseases and ailments. Therefore, journalists and media organisations should treat diseases that are statistically proven to be more devastating and frequently occur with a high mortality rate, such as prostate diseases, with lots of attention by ensuring that frequent health messages and health promotional campaigns are continuously disseminated in the media. Health communication campaigns are strategic, organised efforts designed to disseminate health-related information with the aim of influencing public health behaviours positively (Odongo, 2024). These campaigns leverage a variety of communication channels, including mass media, digital media, and direct community outreach. Meanwhile, in every sphere of society, the media act as tools for the dissemination of information as well as educating society by bringing to the people's knowledge the happenings in society, whether good or bad. Apart from the roles of information, sensitisation, and education carried out by the media, they are also deployed by agencies, organisations, and government to campaign against diseases and to ensure the well-being of people (Acha et al., 2023). The media, either electronic, print, or social media, play a major role in ensuring a better knowledge of prostate health, especially when utilised accordingly. The media exposes people to a new way of life and makes them aware of certain diseases with their risk factors, and how to live a disease-free life. The media, as the fourth estate of the realm, are saddled with the responsibility of sensitising the public about government policies, new ideas, cultural orientations, health campaigns, and awareness. Different media such as radio, television, newspapers, magazines, and social media have been playing different roles in the fight against diseases. Prostatic disease is one of the diseases that has attracted the attention of the media to ensure that men who suffer from these diseases are well informed and educated. Some of these messages are geared towards motivating the men to have regular medical check-ups in the health institutions, and the need for early screening, because it is curable when detected early. The media (print, broadcast, and new/social) are advocacy groups that have an impact on human life, especially in the health sector. The media have carried out several campaigns against diseases such as Malaria, HIV/AIDS, COVID-19 pandemic, Tuberculosis, sickle cell anaemia, measles, diabetes, and other serious medical/clinical maladies across the globe. Therefore, it is the duty and responsibility of the

media to gather information from the environment (surveillance function), interpret this information (correlation function), and mobilise the people (mobilisation function) against an issue, situation, or a movement, and even using entertainment devices (entertainment function) (Oyama & Okpara, 2017). Media campaign, however, is usually a planned programme which has gone a long way in providing men with concrete and clear advice on Prostate health risk. It also encourages men to discuss their individual risk and seek help early. The electronic media have positively impacted the lives of people, especially in South-South Nigeria, by the use of campaigns on different health-related messages which have exposed the negative effects of such diseases by way of changing health attitudes and values, and the establishment of new health behaviour. Media reports on various health issues can have demanding effects on the populace over time. Many health communication studies have investigated this domain and found that health information in newspapers affects the health behaviors of newspaper readers (Wakefield et al., 2010), (cited in Ezegwu et al., 2022). Shittu & Kamara (2001), as cited in Olusegun et al. (2020), observed that in order to raise awareness and create the right attitude by encouraging men to do prostate health screening in Nigeria, media professionals have produced and disseminated messages on the morbidity and mortality of the health conditions generally among the people. The mass media are equally seen as the most accessible, pervasive, and influential sources of information about health conditions in society. The Nigerian media have been instrumental in designing, championing, and supporting campaigns of health in the areas of malaria, immunization, HIV/AIDs, prostate reproductive health, Ebola, general disease prevention, and healthy living practices (Odurume, 2015). The importance of the media in health (as in other spheres of life) could be understood in their pervasiveness in every aspect of society and attributes that could be better leveraged for community and public health (Olusegun et al., 2020). The nature of health communication is changing globally as more people are relying on the internet for health information (Gallant et al., 2011), in Batta & Iwokwagh (2015). However, social media platforms such as Facebook, YouTube, Instagram, Twitter, Pinterest, and WhatsApp have become effective media of communication with the populace (Kubheka et al., 2020). The use of social media platforms has been shown to positively influence awareness of public health behavioural changes, as seen in the current Coronavirus disease 2019 (COVID-19) pandemic (Al-Dmour et al., 2020). Fox (2014), in Emeka-Ebere et al. (2022), conducted a study and found that about 75% of adults who use social media do so in order to talk about health issues. Social media provides a “socially mediated pathway” to communicate health-related information. Social media also connects people to social networks and communities that offer integral incentives and personalised

direction to form behavioural changes (Sarkar, 2018). As a result of this, many organisations prefer to use social media to “provide users with access to valid, scientifically proven health information”. The use of social media for public health campaigns has been increasing due to its ability to remove physical barriers that traditionally impede access to health care support and resources. Central to social media is ‘interactivity’, which facilitates greater information sharing and opportunities for community building through an internet-mediated dialogue that allows users to create their own content (Stellefson et al., 2020). This content, in turn, can become invaluable for health education specialists who are seeking formative research to design, adapt, and evaluate programmes and campaigns with priority audiences. Social media consequently hosts opportunities for consumers to exchange strategic health messages on popular social media handles/channels. Evidence has also shown that social media interventions can effectively promote health behaviour change (Mahar et al., 2016).

Statement of the Problem

It is irreconcilable that with the myriad of prostate health campaigns carried out in the media and otherwise, prostatic diseases are still prevalent. There are thousands of contents in the form of posts, pictures, videos, messages, articles, features, stories, etc., with many professionals, non-governmental organisations (NGOs), institutions/hospitals distributing general prostate health content and many focusing on specific prostatic diseases, providing material resources, useful information on screening, hence, promoting health maintenance attitudes and behaviours. These organisations have continued to intensify their support in the fight against prostate problems. However, despite these campaigns and even the strong support system from women in helping their partners navigate the challenges that come with diagnosis and treatment, there is a dearth of research in examining the impact of these campaigns on the knowledge, attitudes, and practices of adult males in South-South, Nigeria. Also, the mortality and morbidity rates of prostatic diseases are still on the increase in South-South Nigeria, which may not be unconnected with poor awareness and attitudes towards early screening. One is uncertain whether to attribute this increase in death rate to inefficiency in campaign message delivery, or timing for the target audience in campaign slots, or to blame the situation on audience predispositions towards vital instructions and teachings adopted during the campaigns, or even erroneous beliefs by the audience. Also, it is not certain whether the campaigns have met the required results. It is for these reasons that it became imperative to examine the exposure of adult males in South-South, Nigeria, to prostate health campaign

messages and to ascertain if the campaigns have improved their behaviours and attitudes towards prostate screening practices.

Research Questions

The following research questions were formulated to guide the study:

- i. What is the extent of awareness and exposure to prostate health campaigns among adult males in South-South Nigeria?
- ii. To what extent has the campaign on prostate health influenced the level of knowledge among adult males in South-South Nigeria have of prostate health?
- iii. What is the attitude of adult males in South-South Nigeria towards prostate health campaigns?
- iv. To what extent do adult males in South-South Nigeria practice screening exercises as a result of their exposure to the campaigns?

Research Hypotheses

The following hypotheses were tested.

H0₁: There is no significant correlation between exposure to prostate health campaigns and the level of knowledge adult males in South-South Nigeria have of prostate diseases.

H0₂: There is no significant correlation between the knowledge adult males in South-South Nigeria have of prostate diseases and their attitude towards participating in prostate health practices.

Theoretical Framework

The Health Belief Model and Attitude Change Theory are used to explain the phenomenon under study.

The Health Belief Model (HBM)

The Health Belief Model (HBM) was developed in the 1950s by the social psychologists Rosenstock Irwin, Kemer Stephen, Hochbaum Godfrey, and Leventhal Howard working in the Public Health Services in the United States of America (Karen, 2015). It explains why individual patients may accept or reject preventive health services or adopt healthy behaviours. It is a conceptual framework used to understand health behaviours (Abraham & Sheeran, 2016) and possible reasons for non-compliance with recommended health actions. It equally provides guidelines for programme development, allowing planners to understand and address reasons for non-compliance. The model defines the key elements that influence health behaviour as to whether or not to seek medical intervention. These key elements are perceived susceptibility (individual perceived threat to sickness or disease, perceived severity (belief of consequences),

perceived benefits (potential positive benefits of action), cues to action (perceived barrier to action, exposure to factors that prompt action), and self-efficacy (confidence in ability to succeed) (Abraham & Sheeran, 2016). These key elements of the Health Belief Model can be used to understand the knowledge, attitudes, and screening practices of adult males regarding prostate health in order to plan and design campaigns for prevention intervention. Trevor (2020) identifies the basic components of the Health Belief Model as illustrated in Figure 1:

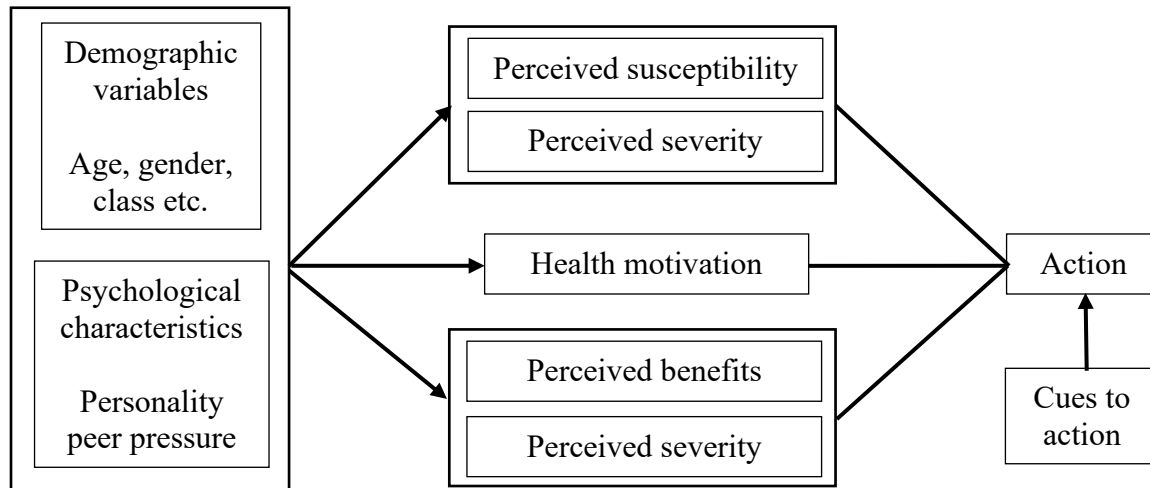


Figure 1. Components of the Health Belief Model (Karen, 2015).

This theory is relevant in this research because it aids in understanding the factors that influence adult male prostate health behaviours. Due to the heightened tension prostatic disease is causing among adult males, there is a high tendency of males to act in manners that might lead to early screening, which apparently is what the health belief model tends to suggest.

Attitude-Change Theory

According to Baran & Davies (2012), the attitude change theory emerged in the 1940s. Accordingly, in order for a targeted message to make an impact, certain preconceived notions about the target audience must be altered. In other words, people's preconceived notions can get in the way of spreading a positive message. This theory also holds that in order for people to alter their behaviours, it is necessary to appeal to their rational and emotional intelligence through carefully planned and executed channels of communication. Therefore, alteration in an individual's view is effective if only the message fulfils the individual's expectation(s). If it is related to someone admired, or if it is bound to be beneficial. Attitude change occurs when subjects receive new information from other people or media through direct experience with the object, and this forces the subjects to behave differently. The application of attitude change theory to media studies is the perspective that people need to change their attitudes towards a

particular message in the media. The media, therefore, ensure that whatever is given out to the audience is that which appeals to their conscience and also changes their thoughts about certain notions (Acha et al., 2023). In health issues, people believe that whatever they see and hear will give them a solution to their problems. The application of the theory to the study is that adult males need to change their attitude towards prostate health. The use of campaigns through the media and other means should ensure that disseminated messages appeal to the audience and also have the capacity to change their thoughts about prostate health.

Material and Methods

The research design for this study was a Survey method. The population of this study was 18,466,888 and consisted of adult males in South-South Nigeria ranging between the ages of 40 years and above, irrespective of their educational level, working experience, or marital status. The Krejcie and Morgan guide was used to draw the sample size of 384 adult males used for this study. The instrument for data collection was the questionnaire. The questionnaire had structured and closed-ended questions. Face validity technique was used to ensure the appropriateness of the questionnaire. Content validity was also determined by expert judgement in order to ascertain the suitability of the research instrument. The questionnaire was tested for reliability using a test-retest method. Cronbach's alpha was used to ascertain the reliability of the instrument, which yielded a reliability coefficient of 0.82. Data for the study were analysed using simple percentage calculation, frequency tables, and mean statistics. The hypothetical constructs and variables of the study were tested using the Pearson Product-Moment Correlation Coefficient.

Results and Discussion

Data Presentation and Analyses

Data is presented in tabular format, and analyses and discussions are done on the basis of research questions. Research Question One: What is the extent of awareness and exposure to prostate health campaigns among adult males in South-South Nigeria?

Table 1. Extent of Awareness of Campaigns on Prostate Health (Field Data, 2024).

Extent of Awareness	Frequency	Percentage
A little aware	154	40
Not aware	108	28
Well aware	119	31

Total	381	100
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Data in Table 1 indicate that 154 (40%) had little awareness of the campaigns on prostate health.

Table 2. Extent of Exposure to Campaigns on Prostate Health (Field Data, 2024).

Extent of Exposure	Frequency	Percentage
A little exposed	138	36
Not exposed	120	31
Well exposed	123	32
Total	381	100

Table 2 indicates that 138 respondents [36%] had little exposure to the campaigns on prostate health. Research Question Two: To what extent have the sensitisation campaigns on prostate health influenced the level of knowledge adult males in South-South Nigeria have of prostate health?

Table 3. Campaigns on Prostatic Diseases and Increased Knowledge of Prostate Health Problems (Field Data, 2024).

Item	Nature of Responses						WMS	Decision
	SA (5)	A (4)	U (3)	D (2)	SD (1)	Total (15)		
The campaigns have increased my knowledge of prostate problems	86	102	65	64	64	381	3.21	Accepted
	430	408	195	128	64	1,225		

Since the computed value (3.21) of the weighted mean score is greater than the mean of the aggregate weighting (3.0), it is inferred that campaigns on prostatic diseases increased the knowledge of prostate health problems among adult males in South-South Nigeria. Research Question Three: What is the attitude of adult males in South-South Nigeria towards prostate health campaigns?

Table 4. Attitude to Undergoing Prostate Screening (Field Data, 2024).

Item	Nature of Responses		
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	SA (5)	A (4)	U (3)	D (2)	SD (1)	Total (15)	WMS	Decision
I consider prostate screening as necessary, even if one is healthy and fit	95	97	62	64	63	381	3.24	Accept
	475	388	186	124	63	1,236		

Since the computed value (3.24) of the weighted mean score is greater than the mean of the aggregate weighting (3.0), it implies that adult males in South-South, Nigeria, considered it a necessity for all adult males to undergo prostate screening. Research Question Four: To what extent do adult males in South-South Nigeria practice screening exercises as a result of their exposure to the campaigns?

Table 5. Frequency of Undergoing Prostate Screening (Field Data, 2024).

Frequency	Frequency	Percentage
Once (1)	138	36
Twice (2)	52	14
Thrice (3)	21	6
Never	170	44
Total	381	100

The data in Table 5 suggest that 170 respondents (44%), adult males in South-South, Nigeria, had never gone for prostate cancer screening.

Test of the Research Hypotheses

H01: There is no significant correlation between exposure to prostate health campaigns and the level of knowledge of prostate diseases among adult males in South-South Nigeria.

The Pearson Product-Moment Correlation Coefficient parametric test was used for testing the hypotheses of this study. The calculation was based on 3 degrees of freedom at the .05 level of significance. Analysis of responses on whether exposure to the campaigns on prostate health had any effect on the respondents is calibrated as 'X', while the analysis of responses on whether the campaigns on prostate health had increased respondents' knowledge of prostate problems is calibrated as 'Y'. The computation is presented in Table 6:

Table 6. Correlation Analysis between Exposure to Prostate Health Campaigns and the Level of Knowledge of Prostate Diseases among Adult Males in South-South Nigeria

N	X	Y	XY	X ²	Y ²
1	93	86	7,998	8,649	7,396
2	78	102	7,956	6,084	10,404
3	68	65	4,420	4,624	4,225
4	64	64	4,096	4,096	4,096

5	78	64	4,992	6,084	4,096
N= 5	$\Sigma X= 381$	$\Sigma Y= 381$	$\Sigma XY = 29,462$	$\Sigma X^2 = 29,537$	$\Sigma Y^2 = 30,217$

Calculated $r = .5557$

Since the calculated ' r ' .5557 is less than the value of critical ' r ' .8783 at .05 level of significance for a two-tailed test, with degree of freedom (df) = 3, the null hypothesis of the study that there is no significant correlation between exposure to prostate health campaigns and the level of knowledge of prostate diseases among adult males in South-South Nigeria was rejected.

H0₂: There is no significant correlation between the knowledge of prostate diseases among adult males in South-South Nigeria and their attitude towards participating in prostatic health practices.

The Pearson Product-Moment Correlation Coefficient parametric test was used for testing the hypothesis here; the calculation was based on 3 degrees of freedom at the .05 level of significance. Analysis of responses on whether the campaigns on prostate diseases have encouraged respondents' participation in prostate health practices is calibrated as 'X', while the analysis of responses on whether the campaigns on prostate diseases increased respondents' knowledge of prostate problems is calibrated as 'Y'. The computation is presented in Table 7:

Table 7. Correlation Analysis between the Knowledge of Prostate Diseases among Adult Males in South-South Nigeria and Their Attitude towards Participating in Prostatic Health Practices.

N	X	Y	XY	X ²	Y ²
1	77	86	6,622	5,929	7,396
2	106	102	10,812	11,236	10,404
3	68	65	4,420	4,624	4,225
4	59	64	3,776	3,481	4,096
5	74	64	4,736	5,476	4,096
N= 5	$\Sigma X= 381$	$\Sigma Y= 381$	$\Sigma XY = 30, 366$	$\Sigma X^2 = 30, 746$	$\Sigma Y^2 = 30,217$

Calculated $r = .936$

Since the calculated ' r ' .936 is greater than the value of critical ' r ' .8783 at .05 level of significance for a two-tailed test, with degree of freedom (df) = 3, the null hypothesis of the study that there is no significant correlation between the knowledge of prostate diseases among adult males in South-South Nigeria and their attitude towards participating in prostatic health practices was upheld.

Extent of Awareness and Exposure to Prostate Health Campaign Messages among Adult Males in South-South Nigeria

From the findings in Tables 1 and 2, it can be inferred that adult males in South-South, Nigeria, were not adequately exposed to the campaigns on prostate health and, consequently, had

insufficient or little awareness of the knowledge that emanated from prostate campaign messages. The correlation analysis computed on Table 6 showed a significant relationship between exposure to prostate health campaigns and the level of knowledge adult males in South-South Nigeria had about prostate disease. The implication of the finding of this study that adult males in South-South, Nigeria, had little or inadequate exposure to or awareness of prostate health campaigns suggests that they have little or inadequate knowledge of prostate morbidity. The level of knowledge about prostate disorders in the male population is instrumental in influencing the decision to seek early screening, diagnosis, and treatment of the disease. Trevor (2020) also affirms that knowledge about prostate disease is an independent predictor of health-seeking behaviour against the disease. This presupposes that knowledge of the disease was essential to staying safe, healthy, and preventive lifestyle that may put one at risk of prostate disease. Hence, knowledge gained through exposure to and awareness of prostate health campaigns is necessary for improved health behaviour to prevent, cure, or manage the disease. Lack of awareness, poor knowledge, poor attitude towards early diagnosis, lack of periodic practice of early detection methods, factors such as Prostate Specific Antigen (PSA) testing, radiation, and other screening methods are some of the reasons for the increase in prostate morbidity and mortality. This is as a result of the abysmally low level of awareness about prostate malady, screening, and treatment (WHO, 2016). Furthermore, Yeboa–Asiamah et al. (2017) maintain that poor knowledge about prostate cancer screening remains one of the reasons the majority of prostate disease prospects report late for prostate screening and treatment. This has implications for the rising incidence in prostate mortality reported in developing countries, where most prostate-related victims are diagnosed at advanced stages. This highlights the need for robust awareness campaigns, improved prostate health education, and increased uptake of prostate screening programmes (Abdulkadir et al., 2017).

The extent to which Campaigns on Prostate Health Messages influence the Level of knowledge of Adult Males in South-South Nigeria about Prostate Health

Data in Table 3 shows that campaigns on prostate health influenced the knowledge of prostate health among adult males in South–South Nigeria to a great extent by reinforcing what they knew about prostate health through requisite enlightenment regarding prostate health themes. The implication of this finding is that in any health intervention programme, knowledge is a precursor to behavioural and attitudinal changes. The level of knowledge that adult males in South-South, Nigeria, had of prostatic health was significantly influenced by exposure to sensitisation campaigns on prostate cancer, which has implications for the level of awareness

they had of the perceived severity of the disease and their chances of either being a victim or not, given their current lifestyles and behavioural practices. Amachere, et al., (2023) study shows a correlation between knowledge of prostatic disease and behavioural intentions of adult males towards engaging in prostate health screening helps in early detection and improvement of chances of recovery. Based on the tenets of Health Belief Model (HBM), being knowledgeable about the perceived susceptibility to the threat of prostate disease and perceived severity of the disease, it conditions individuals' behavioural intentions and attitude towards the disease. Scholars are of the opinion that having adequate knowledge about prostate disease risk factors, screening services available, benefits, and risks for early detection, and treatment has an influence on men's attitudes and decisions towards prostate screening and treatment (Adibe et al., 2017; Mirone et al., 2017; Awosan et al., 2018; Onyeodi et al., 2022; Trevor, 2020). Attitude Change Theory holds that for people to change their attitude and behaviour, knowledge about the subject of behavioural change is necessary. In order for people to alter their pre-existing behaviours and imbibe new behaviours, it is necessary to appeal to their rational and emotional intelligence through carefully planned and executed communication messages. Therefore, an alteration in an individual's view can only be effective if the message fulfils the individual's expectation(s). Attitude change occurs when subjects receive new information through direct experience with the object, and this forces the subjects to behave in a way different from past behaviours (Baran & Davies, 2012; Acha et al., 2023). This underscores the necessity for intensive enlightenment and education campaigns to reduce the high incidence of prostate diseases. This is premised on the consideration that when concerned individuals become aware of the essence of regular check-ups for screening and the early detection of an enlarged prostate. These enhance the positive attitudes to screening and chances of fighting the disease.

Attitude of Adult Males in South-South Nigeria towards Prostate Health Campaigns

Data in Table 4 reveal that adult males in South-South, Nigeria, considered it a necessity to undergo prostate screening with different attitudes towards prostate health campaigns. The attitudes they exhibited toward the health campaigns on prostate cancer can be thematically categorised as negative, affirmative, non-superstitious, science-based, and self-susceptible. From the above thematic categorisation of the attitude of adult males in South-South Nigeria towards prostate health sensitisation campaigns, it can be summarised that they exhibited multi-dimensional attitudes toward the health campaigns. The attitudes were considered multi-dimensional as they ranged from their consideration of some of the aspects of the campaigns

as embarrassing to their predispositions towards staying healthy amidst their vulnerability/susceptibility to the disease. In fighting prostate diseases, attitude is pivotal. Attitudinal predisposition of a population has a way of making or marrying chances of improvement or engagement in acceptable practices that could yield positive results. Having a positive attitude towards participation in prostate screening leads to early detection and treatment. Sadly, negative attitudes and non-participation lead to the diagnosis of the disease at an advanced stage, and complications during treatment lead to death (Loud & Murphy, 2017). Attitude about cancer screening is an enduring confluence of beliefs, feelings, and behavioural tendencies towards socially significant objects, groups, events, or symbols (Tachin & Itodo, 2022). Positive attitude towards prostatic health improves outcome of prostate cancer treatment (Morlando et al., 2017; Baaitse, 2018; Onyeodi et al., 2022; Acha et al., 2023).

Extent to which Adult Males in South-South Nigeria Practice Screening Exercise as a Result of their Exposure to the Campaigns.

Data in Table 5 indicate that most adult males in South-South, Nigeria, had not participated in any prostate cancer screening test before. This may be as a consequence of their low exposure to and awareness of campaigns on prostate health, or perhaps because they considered prostate disease screening tests as being embarrassing. Hence, adult males in South-South, Nigeria, did not practice prostate cancer screening exercises, perhaps due to their limited exposure to the campaigns on prostate health. Therefore, exposure to or awareness of the health campaigns on prostate health among adult males in Southern Nigeria did not equate with the practices espoused in the campaigns, especially as such pertains to prostate screening. The implication of this is that the perceived knowledge gained from the campaign on prostate health may be at variance with the attitude towards the disease and subsequently practices promoted in the campaigns among adult males in Southern Nigeria. The correlational analysis done (Table 7) to test the relationship between the knowledge adult males in Southern Nigeria had of prostate disease, and their attitude towards participating in prostatic health practices, shows that no statistical significance existed between the variables. Therefore, there is no significant correlation between the knowledge of prostate disease and their attitude towards participating in prostatic health practices such as prostate screening. This finding is different from the findings in Amachere et al.'s (2023) study, where it was found that the knowledge and attitude of the adult males towards prostate health influence the practice of prostate disease prevention. However, the finding of this study agrees with the findings of Ojewola et al. (2017), where it was found that a poor level of knowledge and a negative attitude towards prostate health

negatively influenced screening practices for prostatic diseases. Practice of prostate health is an indication that knowledge acquired on the subject has conditioned the desired attitude, thereby culminating in behaviour change from pre-existing attitudinal and behavioural patterns. Thus, knowledge of prostate disease and prostate screening play an important role in cancer screening utilisation (Ebuehi & Otumu, 2010). Practice of desired prostate health behaviour, such as prostate cancer screening, is an attempt to find unsuspected cancers, and follow-up tests such as biopsy, with cell samples taken for closer study (American Cancer Society, 2009). The primary goal of screening is for early detection of men with clinically significant morbidities, resulting in a reduction or overall illness and death associated with this disease

Conclusion

From the analysis of this study, empirical validation has been established that adult males in South-South, Nigeria, were not adequately exposed to the campaigns on prostate health and, consequently, had insufficient awareness of the behaviours specified in the campaign messages. The place of knowledge in modifying health-related attitudes and behaviour cannot be overemphasised. Attitude Change Theory conveys that for individuals to change their attitudes and behaviour, knowledge about the subject of behavioural change is necessary. Also, based on the tenets of the Health-Belief model, being knowledgeable about the perceived susceptibility to the threats of prostate morbidity and perceived severity of the disease it conditions individuals' behavioural intentions and attitude towards the disease. Hence, to modify individuals' attitudes and change their behaviours, knowledge provided on the subject of change should be sufficient and adequate in accomplishing such tasks.

Recommendations

Based on the findings of this study, the following recommendations were made:

- i. Promoters of prostate health campaigns in South-South, Nigeria, should engage in extensive education and intensive campaigns in order to address the multidimensional attitudes that would be encountered during the campaign. They should roll out more extensive enlightenment and education campaigns to create adequate knowledge needed to modify attitudes and change the behaviours of adult males in engaging in desired practices that could help reduce the high incidence of prostate cancer.
- ii. Health authorities should emphasize frequent prostate screenings, which should be organised regularly by the government through the Ministry of Health and other NGOs. In the same vein,

governments are encouraged to make screening free or subsidize the cost of screening to break the barriers to prostate screening utilisation imposed by costs.

- iii. Prostate health campaigns in South-South, Nigeria, should leverage the affordances of social and interactive media in driving their campaigns to wider communities of interest across the South-South region. The interactivity of social media would be beneficial in mining feedback of the targets for impact assessment or study of the campaigns to know areas for subsequent adjustments and modifications likely to yield the needed impact.

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