

Prostate Cancer Screening Media Awareness Campaign amongst Selected Men Population in North-Central Nigeria



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Abstract

This is an investigation on "Prostate cancer screening awareness amongst selected men population in North-Central Nigeria". Prostate cancer is one of the most common cancers that affects men. The prostate is found in males and it helps to transport sperm. The growth of unrestrained cells in the prostate forms what is known as prostate cancer. This growth can be prevented at an early stage. North-Central Nigeria is one of the six geopolitical zones in Nigeria and this region has cases of prostate cancer. The zone is also referred to as the *Middle Belt*. This region is made up of the following states, Benue State, Nasarawa State, Kogi State, Niger State, Kwara State and Plateau State. The occupation of men in this region is mostly farming. This region also houses well-known medical centres, such as Federal Medical Centre, Keffi, Nasarawa State. The broad objective of this study is to ascertain the influence of prostate cancer screening awareness campaigns amongst selected men in the North-Central geopolitical zone of Nigeria. It is a cross-sectional study of 427 male residents in North-Central, Nigeria. The inquiry was anchored on the Attitude Change Theory and the Health Belief Model. The Researchers adopted the descriptive survey research method. The Sample frame was taken from the areas that fall within the media, such as the State capitals in the zone. The study focused on men aged 45 years and above in the region, this is because they were in a better position to respond to the questionnaire items and prostate cancer is a disease that affects men that are 45 years and above. Results showed poor level of media awareness contributed to the spread of prostate cancer in this region. Most respondents get messages occasionally. Generally, media campaigns have significant influence on respondents' behavioural patterns if effectively demonstrated in their local dialects. Hence, the Researchers made the following recommends; early detection can address the prevalence of prostate cancer. Free and frequent examination can help cure the spread of the disease. Designing media messages in local languages can help in message interpretation. The Study recommends, attention getting devices like the local

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instruments should be used as means of communication to respondents. Including opinion leaders in message design can foster attitudinal change. Also, there is a need to train community health workers and equip nomads to properly educate respondents and tackle rising cases. The media should emphasize controversial aspects of the disease such as diet, sex, and the influence of interpersonal communication.

Keywords: *Prostate cancer, screening, management, prevention, and behaviour.*

Introduction

Prostate Cancer is one of the five most common cancers that affects men who are above 45 years old. Others are lung, liver, stomach, and colorectal cancers (American Cancer Society, 2018; WHO, 2017). Prostate cancer occurs as an abnormal growth in the prostate gland, this gland produces a fluid that helps to transport sperm. It is located under the urinary bladder.

Globally, recent studies indicated that prostate cancer has become a major public health issue. The World Health Organization's (WHO) report in 2007 indicates that there are currently more deaths from cancer than from HIV/AIDS, tuberculosis, and malaria. Also, WHO and US Centre for Disease Control and Prevention (CDC) reports in 2008 indicate that prostate cancer is the second most common cancer in men after lung cancer. It is said to be the fifth most common cause of death among men. The report further confirmed that about 1.1 million cases were recorded in 2008, which accounts for 15 percent of all cases of cancer in men.

Studies have shown that prostate cancer is common among men aged above 45 years and it gets to its peak at the age of 70 years in most of the cases (Boyle, et al., 2003; Abdulrhman, et al., 2018). A study conducted by Ifere, et al., (2012) on the Emergent trends in the reported incidence of prostate cancer in Nigeria revealed that there were high rate of prostate cancer among patients aged 60 years and above and lower rate among patients younger than 50 years. This finding is consistent with the National Cancer Survey Report in 2018 which indicates that the most commonly diagnosed cancers in Nigeria are prostate cancer for males and breast cancer for females.

The most common symptoms of prostate cancer are pain, difficulty in urinating, frequent urination (especially at night), weak or interrupted flow of urine, blood in the urine or semen, and erectile dysfunction (American Cancer Society, 2016; CDC, 2018). The contributory risk factors of prostate cancer are identified by the American Cancer Society (2016) as "advancement in age, African-American ethnicity, and family history".

The International Agency for Research on Cancer (IARC) reports that in Nigeria, prostate cancer constituted 29.1% of all male cancers in 2018, with an age-standardized (world) 1-year prevalence rate of 16.1, less than one-quarter of the rate in the United States. In 2004, Nigeria recorded a total death rate of 13,700 from this disease, preceded by India which recorded a total of 18,200 deaths, and the United States with a total of 35,300 deaths (Nnodimele, et al., 2010). The 2004 report of WHO cited in Nnodimele, *et al.* (2010) shows that Nigeria was rated first out of the nine African countries with the highest rate of prostate cancer in 2004. The report equally revealed that among the top ten countries in the world with the highest cases of prostate cancer, Nigeria was rated third in deaths resulting from this disease.

A WHO (2013) report estimates the number of new cancer cases recorded in Nigeria yearly to be 250,000 with approximately 10,000 cancer deaths per year. The 2015 Global Burden of Disease Study shows that total deaths due to cancer increased by 17% between

2005 and 2015. By 2030, cancer incidence worldwide is projected to rise by 68% to 23.6 million new cases every year (Globacan, 2015) if strategies are not adopted to curtail its pervasiveness.

To support this assertion, a study by Thomas (2011) reveals that the incidence of prostate cancer in men can be effectively reduced through early detection and treatment, proper diet, exercise, less alcohol intake, and less smoking. Unfortunately, research has shown that the high rate of prostate cancer could have been influenced by the lack of men's participation in screening due to factors such as culture, lack of awareness, poor knowledge, health beliefs, barriers, and relationships with primary health caregivers, among others (Woods, et al., 2004). Adequate knowledge of this disease is considered powerful in early detection, reduction, and prevention of the disease (CANSA, 2013). Unfortunately, proper knowledge of this disease is lacking in most middle and low-income countries including Nigeria, thereby making control efforts against cancer less effective (International Agency for Research on Cancer & Cancer Research, 2014).

To curtail the problem, several campaigns have been initiated by non-governmental organizations (NGOs) and government agencies around the world. Globally, November as a whole month is dedicated for public enlightenment on Prostate Cancer. The theme for the year 2022 was "Awareness and Early Diagnosis Saves Lives" (PACE Hospitals, 2022). Another example of the campaign is the Digital Rectal Examination (DRE) and Prostate Specific Antigen (PSA) level screening awareness launched by the United Bank for Africa (UBA) Foundation on June 18, 2011. Another campaign that had a national outlook was initiated by *Project PINK BLUE* was launched in 2013 as a national prostate cancer awareness campaign. It uses the slogan, 'Men on Blue.'

However, Ojewola, et al., (2017, p. 1) noted that "despite the global increase in awareness of prostatic diseases resulting from the widespread availability of screening tools, there is no proof that the knowledge, attitudes, and screening practices of Nigerian men have improved regarding prostatic diseases. Regarding knowledge of cancer in Nigeria. Ajape, et al., (2010) affirmed that there is a remarkable lack of knowledge about cancer screening among Nigerian populace.

Media messages could improve knowledge, stimulate interest, shift attitudes, and change behaviours (Gholami, et al., 2014). In line with this assertion, Tchuente and Bauch (2012) affirm that communication and mass media are central to showing the cause of an epidemic and have the potential to simultaneously change the knowledge or attitude of a large proportion of the community.

However, despite these awareness campaigns against prostate cancer, statistics still indicate that cases of prostate cancer and the number of deaths among Nigerian men (especially, in northern Nigeria) resulting from the disease continue to increase per year (Abdulrahman, et al., 2016). The issue therefore is whether the campaign messages reached the desired audience and if yes, do they created the necessary impact on awareness and knowledge of the disease. Or is it that men have a negative attitude towards prostate screening campaigns? These questions require answers.

The major objective of this work is to find out the level of awareness of prostate cancer media campaigns among men in North-Central, Nigeria.

Methods and materials

The Researchers collected data for the study by sorting out the responses of respondents. Quantitative data were collected through a questionnaire. Descriptive statistics were

done in simple percentages, while inferential statistics were done using Chi-square, Cross-tabulation method, correlation, and ANOVA. All analyses were done with the use of Statistical Package for Social Sciences (SPSS).

Data presentation

Out of the 427 respondents, 419 respondents filled and returned copies of the questionnaire that were carefully analysed.

Demographic data

Table 1: Demographic attributes of the respondents

Age	Frequency	Percent	Cumulative Percent
Valid			
18-27	49	11.7	11.7
28-37	68	16.2	27.9
38-47	93	22.2	50.1
48 -57	88	21.0	71.1
58 and above	121	28.9	100.0
Total	419	100.0	
Marital Status			
	Frequency	Percent	Cumulative Percent
Married	325	77.6	77.6
Single	57	13.6	91.2
Widowed	28	6.7	97.9
Divorced	9	2.1	100.0
Total	419	100.0	
Religion			
Islam	198	47.3	47.3
Christianity	198	47.3	94.5
Traditional Religion	23	5.5	100.0
Total	419	100.0	

The data in Table 1 above shows the age distribution of the respondents. From the data above, 49 respondents constituting 11.7% were within the age bracket of 18-27, 68 respondents representing 16.2% were within the age range of 28-37, 93 respondents constituting 22.2% fell within the age bracket of 38-47, 88 respondents representing 21.0% were of the age bracket of 48-57 and 121 respondents were within the age range of 58 and above constituting 28.9%. The implication is that respondents who were within the age bracket of 58 and above were used more in the study. This is because prostate cancer is associated with old age.

Data on the marital status of respondents shows that of the 419 respondents used in the study, 325 of them representing 77.6% were married, 57 of them representing 13.6% were singles, 28 respondents representing 6.7% were widowed and 9 respondents representing 2.1% were divorced. This implies that respondents who were married were more in the study.

Data on the religion of respondents show that out of the 419 respondents used in the study, 198 of them were of Islamic religion by 47.3%, 198 of them were of Christianity religion by 47.3% and 23 of them were of traditional religion by 5.5%. The result shows that adherents of Christianity and Islamic religion were more and equal in number in the sample studied.

Table 2: Educational Qualification, Occupation, Income and Residence of Respondents

Educational Qualification		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Tertiary	41	9.8	9.8	9.8
	Primary	98	23.4	23.4	33.2
	Secondary education	162	38.7	38.7	71.8
	NoFormal Education	118	28.2	28.2	100.0
	Total	419	100.0	100.0	

Occupation		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Civil servants	76	18.1	18.1	18.1
	Farmers	97	23.2	23.2	41.3
	Traders	53	12.6	12.6	53.9
	Students	54	12.9	12.9	66.8
	Unemployed	21	5.0	5.0	71.8
	Self-employed	32	7.6	7.6	79.5
	Artisans	76	18.1	18.1	97.6
	Others	10	2.4	2.4	100.0
	Total	419	100.0	100.0	

Income Level				Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	20-40	Thousand	Naira	139	33.2	33.2	33.2
	41-60	Thousand	Naira	108	25.8	25.8	58.9
	61-80	Thousand	Naira	69	16.5	16.5	75.4
	81-100	Thousand	Naira	58	13.8	13.8	89.3
	101	Thousand	Naira and above	45	10.7	10.7	100.0
	Total			419	100.0	100.0	

Place of Residence		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Urban areas	298	71.1	71.1	71.1
	Rural areas	121	28.9	28.9	100.0
	Total	419	100.0	100.0	

Table 2 indicates educational qualification of the 419 respondents. From the table, forty-one (41) respondents representing 9.8% indicated the option of “tertiary education, while 98 respondents constituting 23.4% had primary education, 162 respondents representing 38.7% had secondary education and 118 respondents representing 28.2% indicated no formal education.

The table also shows that 76 respondents representing 18.1% were Civil servants; 97 respondents constituting 23.2% were farmers; 53 respondents representing 12.6% were traders, 54 respondents constituting 12.9% were students, 21 respondents constituting 5.0% were unemployed, 32 respondents representing 7.6% were self-employed, 76 respondents representing 18.1% were artisan while 10 respondents constituting 2.4% were into other things. The analysis indicates that farmers were more in number than other respondents in the occupational distribution.

Furthermore, 298 respondents lived in urban areas 71.1% whereas 121 respondents representing 28.9% lived in rural areas. This implies that there were more urban area residents than rural area residents. Data from Table 4.2 also shows that 139 respondents (33.2%) earned between 20-40 thousand naira monthly, 108 respondents (25.8%) earned 41- 60 thousand naira monthly, 69 respondents (16.5%) earned 61-80 thousand naira monthly, 58 respondents (13.8%) earned 81-100 thousand naira monthly while 45 respondents (10.7%) earned 101 thousand naira and above. The result shows respondents that who earned 20-40 monthly were more in number than other levels of income.

Table 3: Access to media

Access to Radio		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	417	99.5	99.5	99.5
	No	2	.5	.5	100.0
Total		419	100.0	100.0	

Access to TV		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	322	76.8	76.8	76.8
	No	97	23.2	23.2	100.0
Total		419	100.0	100.0	

Access to Newspaper/Magazines		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	201	48.0	48.0	48.0
	No	218	52.0	52.30	100.0
Total		419	100.0	100.0	

Data in Table 3 shows 417 respondents had access to radio set (99.5%); 2 respondents had no access to radio. The implication is that, as expected, almost every one of the

respondents had access to radio. Data also shows that the majority of respondents had access to television (322 respondents or 76.8%). Out of 419 respondents, 201 respondents constituting 48.0% read newspaper/magazines, 215 respondents constituting 51.3%, had no access to newspapers/magazines while 3 respondents picked the option 'can't say'. The result shows that those who do not read newspapers/magazines are more in number than those who read newspapers/magazines in number.

Table 4: Prostate cancer awareness

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	374	89.3	89.3	89.3
	No	43	10.3	10.3	99.5
	Can't say	2	.5	.5	100.0
	Total	419	100.0	100.0	

Data from Table 4 shows respondents who have heard of prostate cancer. The data shows that 374 respondents had heard of prostate cancer, 43 respondents had not heard of prostate cancer and 2 respondents picked the option 'can't say' if they had heard of it or not. The implication is that those who heard of prostate cancer were more in number than those who had not heard of prostate cancer.

Table 5 Frequency of exposure to the campaigns

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Always	29	6.9	6.9	6.9
	Often	56	13.4	13.4	20.3
	Occasionally	161	38.4	38.4	58.7
	Rarely	129	30.8	30.8	89.5
	Have Never heard	44	10.5	10.5	100.0
	Total	419	100.0	100.0	

Data from Table 5 shows how often respondents got information about prostate cancer screening from the chosen medium/channel. The data above shows that 29 respondents got information about prostate cancer screening from the chosen medium/channel, 56 respondents often did so often, 161 respondents occasionally, 129 respondents, while 44 respondents had never heard of prostate cancer from the chosen medium. The implication is that people occasionally get information about prostate cancer screening from the chosen medium/channel.

Table 6: Exposure to different media on prostate cancer messages

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Television	51	12.2	12.2	12.2
	Radio	103	24.6	24.6	36.8
	Newspaper	46	11.0	11.0	47.7

Magazine	3	.7	.7	48.4
Internet/Social Media	31	7.4	7.4	55.8
Health Care Providers	28	6.7	6.7	62.5
Banners and Posters	22	5.3	5.3	67.8
Friends and Relatives	66	15.8	15.8	83.5
Seminars/Workshops	3	.7	.7	84.2
Schools	4	1.0	1.0	85.2
Worship centres	21	5.0	5.0	90.2
Market	2	.5	.5	90.7
At Workplace	39	9.3	9.3	100.0
Total	419	100.0	100.0	

The majority of respondents got the most information about prostate cancer screening through radio (24.6%); 66 respondents through friends and relatives (15.8%) and 51 respondents got the most information about prostate cancer screening through television (12.2%). The analysis indicates that people get most information about prostate cancer screening through the radio channel of communication.

Table 7: Agreement on actions taken towards screening, friends, and symptoms due to the Campaigns

I attend screening regularly (3 months)		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	10	2.4	2.4	33.9
	Agree	24	5.7	5.7	86.4
	Undecided	142	33.9	33.9	88.8
	Disagree	220	52.5	52.5	94.5
	Strongly Disagree	23	5.5	5.5	100.0
	Total	419	100.0	100.0	
I encourage friends to go for early screening		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	11	2.6	2.6	36.0
	Agree	20	4.8	4.8	88.3
	Undecided	151	36.0	36.0	90.9
	Disagree	219	52.3	52.3	95.7
	Strongly Disagree	18	4.3	4.3	100.0
	Total	419	100.0	100.0	
I will report symptoms to doctors very promptly		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	150	35.8	35.8	35.8
	Agree	220	52.5	52.5	88.3
	Undecided	12	2.9	2.9	91.2
	Disagree	19	4.5	4.5	95.7
	Strongly Disagree	18	4.3	4.3	100.0
	Total	419	100.0	100.0	

Out of 419 respondents, 362 respondents were either undecided or disagreed that they go for screening every three months because of prostate cancer campaign, 34 either agreed. These results show that the majority of the respondents do not go for screening every three months because of prostate cancer campaign, especially the older men.

Out of 419 respondents, 370 respondents were either undecided or disagreed that they encourage friends and family members to go for the screening because of prostate cancer campaign they were exposed to. Eleven respondents agreed while 18 respondents strongly disagreed. The implication is that those who encouraged friends and family members to go for the screening because of the prostate cancer campaign they were exposed to were in the minority.

From the data above, 370 respondents agreed or strongly agreed that they would promptly report symptoms to a doctor. Twelve respondents were undecided. This analysis shows that the majority of the people of North-Central will run to the hospital if they see any of the symptoms mentioned because of the prostate cancer campaign.

Results/Discussions/Conclusion

There have been various campaign messages on prostate cancer in North-Central, Nigeria. This followed an expected high level of exposure to all the conventional mass media used in running the flagship campaigns. The findings showed that, despite the high awareness level in the present study, most of the respondents hear about the campaigns occasionally. Majority of the respondents have low-level knowledge of the key messages of the campaigns. On the factors influencing prostate cancer awareness campaigns, the study found that culture and religion do not significantly influence responses to prostate cancer campaigns among the majority of the respondents. The majority however agree that literacy level is an important factor in responses to prostate cancer messages.

Conclusively, the awareness level of prostate cancer is poor because the majority of the respondents are not educated. There is a need to have aggressive media awareness on the prevention and management of prostate cancer in this region.

Recommendations

Based on the result of this study, the researchers made the following recommendations:

- The campaigns against prostate cancer need to continue with more emphasis on the benefits of early screening devoid of unnecessary fears. Despite the high level of awareness, close to 15% of the respondents still indicated not having ever heard of the disease.
- The media should emphasize controversial aspects of the disease such as diet, sex, and the influence of interpersonal communication.
- Given the low rate of the influence of the campaign on behaviour, prostate cancer campaigns should stress the screening procedure and time to encourage those who may wrongly or ignorantly see the procedure as tedious.

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