

## Research Article

# Attitude of a Discrete Group of Nigerian Male Doctors Towards Prostate Cancer Screening

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### Abstract

**Introduction:** Prostate cancer is the commonest cancer among Nigerian males [1]. Screening for prostate cancer is a topical issue among doctors as some studies have not conclusively shown higher survival rate among patients who had their pathology detected early. Taking into consideration the uncertainty surrounding prostate cancer screening, coupled with the fact that doctors are most of the time overwhelmed with solving the problems of their patients while neglecting their personal health. This study assesses the attitude of a discrete group of Nigerian doctors towards prostate cancer screening. **Objective:** To assess the attitude towards prostate cancer screening of male medical doctors in public hospitals in Benin City, Nigeria. **Methodology:** This was a cross-sectional study carried out over a period of six months at the University of Benin Teaching Hospital (UBTH) and the Central Hospital Benin City. It involved all male doctors, 40 years and above. Data were collected using a well-structured self-administered questionnaire, collated and subjected to statistical analysis. **Result:** The study involved 214 male doctors. One hundred and fifty two of them practice in UBTH, while 62 of them practice in Central Hospital. The mean (standard deviation) age of the respondents was 48.5 (6.3) years. Ninety five percent (205) of the respondents had positive attitude towards prostate cancer screening. The main factors indicated by the respondents that affect individual decision to undergo prostate cancer screening were: the cost of screening [151 (70.6%)], lack of awareness [138 (64.5%)], fear of being stigmatized [97 (45.3%)] and fear of having a positive test [91 (42.5%)]. The least indicated was cultural barriers [42 (19.6%)]. **Conclusion:** The attitude of the respondents for prostate cancer screening is good despite the challenges with recommendation against community screening by international health management system. The main factors identified by respondents as militating against screening should be given proper attention in order to reduce the scourge of this highly prevalent pathology among Nigerians.

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**Keywords:** prostate cancer, screening, attitude, male doctors, Benin City

## 1. Introduction

When the hair greys and the eye dims, the prostate gland enlarges. Prostate gland is a walnut-shaped gland located in the space between the bladder neck and the membranous urethra. The prostate gland can be afflicted by various pathologies such as prostatitis, benign and malignant enlargement. Carcinoma of the prostate (CaP) is common among men in their sixth decade of life. Globally, prostate cancer is the fourth most common cancer in both sexes combined and the second most common cancer in men [2]. The incidence and mortality rates vary markedly among and within different countries. In Nigeria, a recent study done in 2013 revealed a prevalence rate of 1046 per 100,000 men [3]. Data on cancer morbidity and mortality in Nigeria are unavailable due to the poorly kept national cancer registry. However, a review of cancer morbidity in adults from Ibadan, Southwest Nigeria, showed that CaP was the most common cancer in males [1].

Early detection and refinements in the treatment of prostate cancer could lead to theoretical cure of this potentially disabling and deadly condition. Prostate-specific antigen assay together with digital rectal examination (DRE) is today the main tool used to identify men with a high probability of harbouring prostate cancer and thus indicating the need for a prostate biopsy to confirm the disease.

The attitude of doctors to their personal health is poor as they engross themselves with solving patient's problems while neglecting their personal healthcare [4]. Increased knowledge does not always translate to positive change in behaviour and attitude concerning one's health as seen in a study [5] among 100 Saudi female physicians that revealed that the overall health status, lifestyle and attitude of these physicians towards their own health is suboptimal. The recommendation of the study was that even physicians need to improve their lifestyle behaviour and attitude towards their own health [5].

This poor attitude of doctors to their personal health and more specifically for prostate cancer may be compounded by the controversy surrounding prostate cancer screening with regards to the validity of the screening tool and paucity of evidence with regards to reduction in mortality from prostate cancer following early diagnosis and intervention.

Doctors are seen in the society as well-enlightened people especially when it comes to issues of health. They are seen by the public as role models who should be emulated when it comes to personal health care; however, they are usually occupied with the

maintenance of the health of the population rather than theirs. Their attitude to personal health care is very poor despite the presumed high medical knowledge among them [5].

## 2. Methodology

The study included all male medical doctors in UBTH and Central Hospital Benin, aged 40 years and above. The age 40 years and above was chosen as it is the recommended cut-off age for prostate cancer screening [53].

Currently, the total number of male medical doctors aged 40 and above in all the departments of UBTH [51, 54] and Central Hospital [52] is 257. A total population sampling was employed due to the small size of the population and the availability of a sampling frame.

A self-administered questionnaire adapted from a previous similar study [4] was used. The questionnaire comprised of both open- and close-ended questions. The questionnaire was divided into six parts: Bio data, knowledge of prostate cancer, knowledge of prostate cancer screening, attitude towards prostate cancer screening, practice of prostate cancer screening and the factors affecting prostate cancer screening.

After data collection, the questionnaires were appraised and answers to open-ended questions were coded. Analysis was done using the SPSS software statistical package version 21.0. Data was presented in the form of frequency tables and cross tabulations; charts and graphs were used where applicable. Unadjusted associations were analysed using the Chi-square and fishers exact test. Adjusted associations were analysed using a regression model. The level of significance was set at  $p < 0.05$ .

## 3. Results

A total of 214 out of 257 male medical doctors participated in the study. The response rate for the study was 83.9%.

One hundred and fifty two (71.0%) respondents practice in the University of Benin Teaching Hospital, while 62 (29.0%) practice at the Central Hospital, Benin City.

The highest proportion [145 (67.8%)] of the respondents were in the age group 40–49 years, while the least proportion [17 (7.9%)] were in the age group 60–69 years. The mean (standard deviation) age of the respondents was 48.5 (6.3) years.

The majority of the respondents were married [205 (95.8%)], practiced Christianity [210 (98.1%)], and had spent 10 years and more [195 (91.1%)] in service. About half [108 (50.4%)] of the respondents were consultants.

Thirty five (16.4%) of the respondents were afraid of having DRE, 40 (18.7%) were afraid of being told that their test results were positive, 47 (22.0%) were afraid of being stigmatised of having prostate cancer, while 14 (6.5%) felt that screening effort being made by the government is good.

One hundred and forty six (96.1%) of the respondents who practised in UBTH had good attitude towards prostate cancer screening compared to 59 (95.2%) of those in Central hospital. The association between the place of medical practice and the attitude towards prostate cancer screening was not statistically significant ( $p = 0.721$ ).

One hundred and forty (96.6%) of the respondents in the age group 40–49 years had good attitude towards prostate cancer screening compared to 48 (92.3%) of those in the age group 50–59 years, and 17 (100.0%) of those in the age group 60–69 years. The association between age and attitude towards prostate cancer screening was not statistically significant ( $p < 0.349$ ).

One hundred and ninety seven (95.6%) of the respondents who were ever married (married, separated, divorced) had good attitude towards prostate cancer screening compared to eight (100.0%) of those who were never married (single). The association between marital status and the knowledge of prostate cancer screening was not statistically significant ( $p = 0.546$ ).

Thirty five (92.1%) of the Medical Officers had good attitude towards prostate cancer screening compared to 67 (98.5%) of the Resident Doctors and 103 (95.4%) of the Consultants. The association between designation and attitude towards prostate cancer screening was not statistically significant ( $p = 0.246$ ).

Nineteen (100.0%) of the respondents with 0–9 years in service had good attitude towards prostate cancer screening compared to 186 (95.4%) of those who had 10 and more years in service. The association between the duration of service and the attitude towards prostate cancer screening was not statistically significant ( $p = 0.611$ ).

The variables in the model explained between 4.9% and 16.6% of the variation in the knowledge of prostate cancer screening among the respondents. After adjusting for other covariates in the model, the following adjusted associations were observed:

The respondents who had their medical practice in UBTH were 8.45 (95% CI: (1.00–71.08)) times likely to have good attitude towards prostate cancer screening compared to those in Central hospital.

Variables	Frequency (n = 214)	Percentage
<b>Centre of Medical Practice</b>		
UBTH	152	71.0
Central Hospital	62	29.0
<b>Age group (years)*</b>		
40-49	145	67.8
50-59	52	24.3
60-69	17	7.9
<b>Marital Status</b>		
Married	205	95.8
Single	8	3.7
Widowed	1	0.5
<b>Religion</b>		
Christianity	210	98.1
Islam	4	1.9
<b>Designation</b>		
Consultants	108	50.4
Resident Doctors	68	31.8
Medical Officers	38	17.8
<b>Duration of service (years)**</b>		
0-9	19	8.9
10+	195	91.1
<b>Departments</b>		
Surgery	29	13.6
Obstetrics and Gynaecology	27	12.6
Orthopaedic	23	10.7
Internal Medicine	21	9.8
Child Health	19	8.9
Pathology	18	8.4
Anaesthesia	14	6.5
Family Medicine	14	6.5
Dentistry	13	6.1
Radiology	9	4.2
ENT	7	3.3
Mental Health	7	3.3
Ophthalmology	6	2.8
Radiotherapy and Oncology	5	2.3
Community Health	2	0.9
Note: *mean (standard deviation) age: 48.5 (6.3) years; **median (range): 15 (3-35) years. One hundred and ninety three respondents (90.2%) agreed that prostate cancer screening is necessary, 161 (75.2%) agreed that prostate cancer screening tools are effective in screening for prostate cancer, while 188 (87.9%) agreed that they would like to be informed if diagnosed with prostate cancer.		

TABLE 1: Socio-demographic characteristics of the respondents.

Attitude Items	Agree n (%)	Indifferent n (%)	Disagree n (%)
Prostate cancer screening is necessary	193 (90.2)	18 (8.4)	3 (1.4)
Prostate cancer screening tools are effective in screening for prostate cancer	161 (75.2)	45 (21.0)	8 (3.7)
Would like to be informed if diagnosed with prostate cancer	188 (87.9)	4 (1.9)	22 (10.3)

TABLE 2: Attitude towards prostate cancer screening among the respondents.

Attitude Items	Frequency (n = 214)	Percentage
<b>Afraid of having digital rectal examination (DRE)</b>		
Yes	35	16.4
No	179	83.6
<b>Afraid of being told that test results were positive</b>		
Yes	40	18.7
No	174	81.3
<b>Afraid of being stigmatised of having prostate cancer</b>		
Yes	47	22.0
No	167	78.0
<b>Screening effort being made by the government is good</b>		
Yes	14	6.5
No	200	93.5

TABLE 3: Respondents' attitude and government effort towards prostate cancer screening.

Composite Score Categories*	Frequency (n = 214)	Percentage
<b>Knowledge of prostate cancer</b>		
Good	204	95.3
Poor	10	4.7
<b>Knowledge of prostate cancer screening</b>		
Good	204	95.3
Poor	10	4.7
<b>Attitude towards prostate cancer screening</b>		
Positive	205	95.8
Negative	9	4.2
<b>Practice of prostate cancer screening</b>		
Good	38	17.8
Poor	176	82.2
Nine of 10 respondents had positive attitude towards prostate cancer screening [205 (95.8%)].		

TABLE 4: Composite scores for knowledge, attitude and practice of prostate cancer screening among the respondents.

Variable	Attitude towards prostate cancer screening, n (%)		p-value*
	Positive	Negative	
	Frequency (%)		
<b>Centre of medical practice</b>			
UBTH	146 (96.1)	6 (3.9)	0.721
Central Hospital	59 (95.2)	3 (4.8)	
<b>Age group (years)</b>			
40–49	140 (96.6)	5 (3.4)	0.349
50–59	48 (92.3)	4 (7.7)	
60–69	17 (100.0)	0 (0.0)	
<b>Marital status</b>			
Ever married	197 (95.6)	9 (4.4)	0.546
Never married	8 (100.0)	0 (0.0)	
<b>Designation</b>			
Medical officers	35 (92.1)	3 (7.9)	0.246
Resident doctors	67 (98.5)	1 (1.5)	
Consultants	103 (95.4)	5 (4.6)	
<b>Duration of service</b>			
0–9	19 (100.0)	0 (0.0)	0.611
10+	186 (95.4)	9 (4.6)	

Note: \*Fisher's exact test.

TABLE 5: Unadjusted predictors of attitude towards prostate cancer screening among the respondents.

The respondents in the age group 40–49 years were 1.19 (95% CI: 0.12–11.95) times likely to have good attitude towards prostate cancer screening compared to those in the age group 60–69 years. Also, respondents in the age group 50–59 years were 3.31 (95% CI: 0.17–65.78) times likely to have good attitude towards prostate cancer screening compared to those in the age group 60–69 years.

The respondents who were ever married were 4.57 (95% CI: 0.31–68.60) times likely to have good attitude towards prostate cancer screening compared to those who were never married.

The respondents who were Medical Officers were 3.95 (95% CI: 0.37–42.56) times likely to have good attitude towards prostate cancer screening compared to those who were Consultants. Also, the respondents who were Resident doctors were 6.43 (95% CI: 0.51–80.49) times likely to have good attitude towards prostate cancer screening compared to those who were Consultants.

The respondents who had spent 0–9 years in service were 0.18 (95% CI: 0.03–0.98) likely to have good attitude towards prostate cancer screening compared to those who had spent 10 years and above in service.

Variable	Regression Coefficient	p-value	OR (95% CI)
<b>Centre of medical practice</b>			
UBTH	2.13	0.05	8.45 (1.00–71.08)
Central Hospital*			1
<b>Age group (years)</b>			
40–49	0.17	0.88	1.19 (0.12–11.95)
50–59	1.20	0.43	3.31 (0.17–65.78)
60–69*			1
<b>Marital status</b>			
Ever married	1.52	0.27	4.57 (0.31–68.60)
Never married*			1
<b>Designation</b>			
Medical officers	1.37	0.26	3.95 (0.37–42.56)
Resident doctors	1.86	0.15	6.43 (0.51–80.49)
Consultants*			1
<b>Duration of service</b>			
0–9	-1.71	0.05	0.18 (0.03–0.98)
10+*			1

Note: \*Reference category,  $R^2 = 4.9 - 16.6$ .

TABLE 6: Adjusted predictors of attitude towards prostate cancer screening among the respondents.

## 4. Discussion

The response to the parameters used to assess individual's attitude towards prostate cancer screening indicated good attitude by the studied population. Over three-quarters were not afraid of having DRE, which is similar to the outcome of a study [4] among Jamaican doctors that showed that 89% of respondents had no fear of having a DRE done on them as part of screening for prostate cancer. Also, a population survey [6] involving 13,580 healthy men in USA undergoing prostate-specific antigen (PSA)—only screening to determine whether the use of DRE results in decreased compliance with prostate cancer screening—revealed that only 78% of men would participate in screening that included both DRE and PSA. Less than a quarter (22%) of the participants will abstain if DRE is involved. DRE was seen in that study as a significant barrier to participation in prostate cancer screening. The low number 35 (16.4%) of respondents that are scared of DRE in our study may be due to the fact that the study was carried out among doctors who have better knowledge of what DRE entails, as culture was the main reason for abstinence in the earlier study. The fact that some doctors are scared of having DRE suggests the need for further enlightenment

on the need for proper evaluation during prostate cancer screening, as some cancer may be missed when PSA is used alone as the screening tool [7].

Also, less than a quarter (22.0%) were afraid of being stigmatised of having prostate cancer, while 40 (18.7%) respondents were afraid of being told that their test result is positive. The percentage of those afraid of having a positive test found in this study is lower than what was obtained (39%) in a similar study [4] among male Jamaican doctors. The low percentage recorded in the current study may be due to recent advances and positive outcomes of curative attempts for prostate cancer as the benefit of prostate cancer screening and early intervention was still highly debatable as at the time of earlier study. Wood and colleagues [8] found that in a study of African American men, the majority of respondents identified fear-related barriers such as fear of cancer problems, fear of cancer treatment, fear of sexual dysfunctions and fear of a cancer diagnosis as the reason for not wanting to be tested for prostate cancer.

The composite score for attitude was positive for prostate cancer screening in 205 (95.4%) respondents. This is much higher than 40.6% obtained in a cross-sectional study [42] involving 160 men aged between 50 and 80 years in a Brazilian hospital. The high result obtained in the current study suggests a highly motivated group of respondents that fully support the concept of prostate cancer screening.

Multivariate regression analysis of the predictors of good attitude towards prostate cancer screening was statistically significant for UBTH as a centre of practice and also for the duration of practice greater than 10 years. This suggests that more experienced doctors who practice in larger hospital are likely to have better attitude towards prostate cancer screening than those who practice in small hospital or have practiced for short duration. This finding may be attributed to more organised healthcare delivery system that is existent in such big centres like UBTH, unlike what is obtainable in smaller centres like Central Hospital. In UBTH, there is a centre for disease control where screening is a major service including that for prostate cancer, this must have contributed in refining the attitude of doctors that practice there towards prostate cancer screening. Also, the increased duration of practice being a predictor may be due to the fact that as one gains more experience, the need for self-care increases, thus increasing one's consciousness for cancer screening. This finding is in keeping the outcome of a cross-sectional study [9] among 204 primary care physicians in three tertiary centres in Saudi Arabia that showed that following multiple regression analysis for predictors of attitude, knowledge and age were the most significant determinants of physicians' attitude towards prostate cancer counselling and screening in Saudi Arabia. The outcome of the current study is in contrast to what was reported by Pendleton et

al. in 2006, where they noted that no demographic factor could independently predict prostate cancer attitude [8]. Therefore, doctors who practice in smaller centres and with shorter duration of practice in our study are more likely to have poor attitude towards prostate cancer screening, thus necessitating more attitude-changing measures for this group of doctors.

## 5. Conclusion

The attitude of the respondents for prostate cancer screening is good despite the challenges with recommendation against community screening by some health management systems. The main factors identified by respondents as militating against cancer screening should be given proper attention in order to reduce the scourge of this highly prevalent pathology among Nigerians. There is a need for middle-aged doctors that practice in smaller centres to be encouraged to have more positive attitude towards prostate cancer screening.

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