

# KNOWLEDGE, ATTITUDE AND PRACTICE OF PROSTATE CANCER AMONG MALE PATIENTS OF AGE 40 YEARS AND ABOVE IN UNIVERSITY OF NIGERIA TEACHING HOSPITAL (UNTH), ENUGU.

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## ABSTRACT

Prostate Cancer is cancer of the prostate gland. This is a very common cancer amongst males aged 40 years and above. It is the most common male cancer diagnosed worldwide yet many are not aware of it and this has led to the increased mortality rate of the disease. Prostate cancer screening involves Digital Rectal examination which is done by a clinician, and PSA blood screening. Many studies in our setting have shown poor knowledge, attitude and perception of prostate cancer and its screening among males. It was on this basis and also for the fact that it was so common, that this study was carried out to assess the knowledge, attitude and practice of prostate cancer and its screening among male patients of age 40 years and above in University of Nigeria Teaching Hospital (UNTH), Enugu. Methodology: An observational cross sectional study was carried out with a sample size of 413 male patients of age 40 years and above in UNTH. Using a simple random sampling, the study population was sampled. All met the inclusion criteria. A semi structured self administered questionnaire was used for quantitative data collection. Data was analysed using statistical package for social sciences (SPSS) version 23.0. Data was presented using tables, pie charts and bar charts. Result: the study showed that 87% of respondents have heard about Prostate cancer and only about 67% of respondents have heard about prostate cancer screening. There was also a positive attitude towards prostate cancer and prostate cancer screening among respondents. Despite the good knowledge of prostate cancer and positive attitude to prostate cancer screening, only about 38% has ever practiced Prostate cancer screening. It was worth noting that there was a significant relationship between the practice of prostate cancer screening and the knowledge and attitude of respondents towards prostate cancer and prostate cancer screening. There were also a positive attitude, perception and

practice towards prostate cancer screening especially in patients of the older age group (>50 years). Conclusion: There was a good knowledge of Prostate cancer. Also there was a good attitude towards prostate cancer. The perception of prostate cancer was also good however, there was a poor practice of prostate cancer screening in those of younger age groups (<50years) while those of older age groups had a very good practice of prostate cancer screening. Recommendations: Adequate sensitization of the general public about prostate cancer and the burden of the disease. Introduction of health awareness programs in the communities.

Keywords: Cancer; Prostate; Knowledge; Practice; Attitude; Enugu; UNTH; Male.

## 1. INTRODUCTION.

Prostate cancer is an Adenocarcinoma of the male prostate and is one of the leading cause of cancer related deaths globally . Prostate cancer is now the most commonly diagnosed male cancer worldwide<sup>3</sup> . According to the World Health Organization(WHO), it is the second most common cause of cancer in males globally. The disease represents the sixth leading cause of cancer related death worldwide with 1,111,700 new cases of Prostate cancer diagnosed and 307,500 deaths in 2012 . An estimated 0.9 million cases and 0.26 million deaths of Prostate cancer occur annually in the world . It was an important study because the knowledge, attitude

and perception of Nigerian men about the disease has not been fully investigated . Prostate cancer has a higher incidence, a more aggressive course and higher mortality in black men when compared to their white counterparts. These disparities persist and findings continue to be inconclusive about the reasons and the best methods to decrease them. Majority of men within the affected age group lack information about the Prostate and were more likely to present late with the disease . Some of them were reluctant to have to have investigations related to the disease especially the Digital Rectal Examination (DRE) and had little or no knowledge about these examinations . While screening of Prostate cancer using Prostate Specific Antigen (PSA) blood test and Digital Rectal Examination (DRE) are effective available measures for early detection of disease, utilization of these services range from 0% to

15% in Africa . Lack of awareness of these examinations amongst Nigerian men has led to the increased mortality due to Prostate cancer . Lower mortality was reported in developed countries due to early detection while in developing countries, most cancer patients were diagnosed with late stage or incurable tumor . Other challenges encountered in Prostate cancer in men include inadequate health education, poverty, poor health care facilities and paucity of specialist urological care. Studies done across countries have shown low levels of knowledge and uptake of screening despite high levels of awareness of Prostate cancer . Also, Studies done in Nigeria showed that

men had relatively low levels of knowledge, low perceptions of self vulnerability and low rates of uptake of screening.

## 2. METHODE AND MATERIALS

### 2.1 STUDY AREA

The area of study was in University of Nigeria Teaching Hospital, Enugu state, Nigeria with geographical coordinates 6°3'N, 7°30'E. The state shares borders with Abia and Imo state to the south, Ebonyi state to the East Benue state to the North-east, Kogi state to the Northwest and Anambra state to the West. Enugu state is a metropolitan settlement with estimated population of about 3.3 million. It has a total of seventeen local government areas, four of which are Urban and thirteen are Rural. Economically, the state is predominantly Rural and agrarian with a substantial proportion of working population engaged in farming, trading and civil service. In the urban areas, trading is the predominant occupation. UNTH Ituku-Ozalla is located 25km South of Enugu, it occupies an area of 500 hectares along the Enugu - Port Harcourt Express way. The hospital has broad objectives, which includes services, teachings and research. It provides inpatient and outpatient services to her clients through her highly trained staff. The hospital has 41 main departments and urology is one of them where clients with cases of prostate cancer are managed.

### 2.2 STUDY POPULATION

Men aged 40 years and above were selected from University of Nigeria Teaching Hospital, Enugu.

### 2.3 STUDY DESIGN

An Observational Cross-Sectional Study was the study design that was done

### 2.4 SAMPLE SIZE ESTIMATION

Prevalence was gotten from a previous study by Adibe M.O, Aluh D.O & Anosike C. on

Knowledge, Attitude and Perception Among Male Staff of University of Nigeria.

$N = Z^2 P(1-P) / D^2 Z = 1.96$  at the 95% confidence limit.

P= Prevalence from a previous Study

Prevalence from previous Study = 57.8%

D= Margin of error tolerated usually 5%

$N = 1.96^2 \times 0.578(1-0.578) / 0.0025 =$

N= 375

To cover for non participation, missing questionnaires an additional 10% of sample size will be added

10% of 375 is 38; 38+375= 413

## 2.5 SAMPLING METHODE/TECHQUE

A Simple random sampling method was adopted for this study.

## 2.6 DATA COLLECTION.

Data were collected via a semi structured questionnaire which were self administered and with assistance where the need arose. The Study was clearly explained to the patients and informed consent was obtained.

The questionnaires were divided into three sections:

Section A was to determine their personal data

Section B was to determine their perception of prostate cancer  
 Section C was to ascertain the practices about prostate cancer

## 2.7 DATA MANAGEMENT

Outcome variables; Knowledge of participants, attitude of participants and practice of participants towards Prostate cancer.

## 2.8 DATA ANALYSIS

Data analysis was done electronically with the SPSS program. Descriptive analysis was carried out and was used to assess the study objectives. Data was represented in the various forms using:

- 1) Tables
- 2) Pie Chart
- 3) Bar Chart

## 2.9 ETHICAL CONSIDERATIONS

The proposal of the study was sent to the health research and ethical committee, University Of Nigeria Teaching Hospital, Ituku-Ozalla, Enugu where appropriate approval was given. The respondents were spoken to on the need for the study and urged to give informed consent before the administration of the survey and will be

## 3.0 RESULTS

### 3.1 SOCIODEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

**Table 3.1: Sociodemographic characteristics of respondents**

<i>Variable</i>	<i>Value</i>	<i>Frequency (N=413)</i>	<i>Percentage (%)</i>
<b>Age</b>	Less than 50 years	192	46.5
	50 to 60 years	117	28.3
	More than 60 years	104	25.2
	<b>Ave. age: 53.61 yrs</b>		<b>Std. dev: 10.44 yrs</b>
<b>Educational level</b>	Primary and below	66	16.0
	Secondary	159	38.5
	Tertiary	188	45.5
<b>Occupation</b>	Civil/ Public servant	141	34.1
	Trading	143	34.6
	Skilled worker	72	17.4
	Artisan	19	4.6
	Others	38	9.2
<b>Marital status</b>	Single	66	16.0
	Married	269	65.1
	Divorced	13	3.1
	Widowed	59	14.3
	Other	6	1.5
<b>Monthly income</b>	N0 to N50,000	226	54.7
	N50,000 to N100,000	120	29.1
	<b>Ave: N67,558.68</b>		<b>N100,000 to N200,000 48 11.6</b>

**Std. dev: N74,205.47**

**More than N200,000 15 3.6**

The average age of the respondents is  $53.61 \pm 10.44$  years and majority of the respondents are below 50 years (46.5%). Most of the respondents attained a tertiary level of education (45.5%) with most of them being either civil servants (34.1%) or traders (34.6%). Most of the respondents were married (65.1%) and earn below N50,000 monthly (54.7%).

### **3.2 PREVALENCE OF URINARY/PROSTATE SYMPTOMS AMONGST RESPONDENTS Fig.**

#### **3.1: Prevalence of urinary prostate symptoms amongst respondents**

The prevalence of urinary prostate symptoms amongst the respondents was 24%.

**Fig. 3.2: Prevalence of urinary prostate symptoms amongst first degree relatives of respondents**

**Fig. 3.3: Prevalence of urinary prostate symptoms amongst second degree relatives of respondents**

Prevalence of urinary prostate symptoms in first degree relatives was 38% and in second degree relatives was 27%.

### **3.3 LEVEL OF KNOWLEDGE OF PROSTATE CANCER AND PROSTATE CANCER SCREENING AMONGST RESPONDENTS**

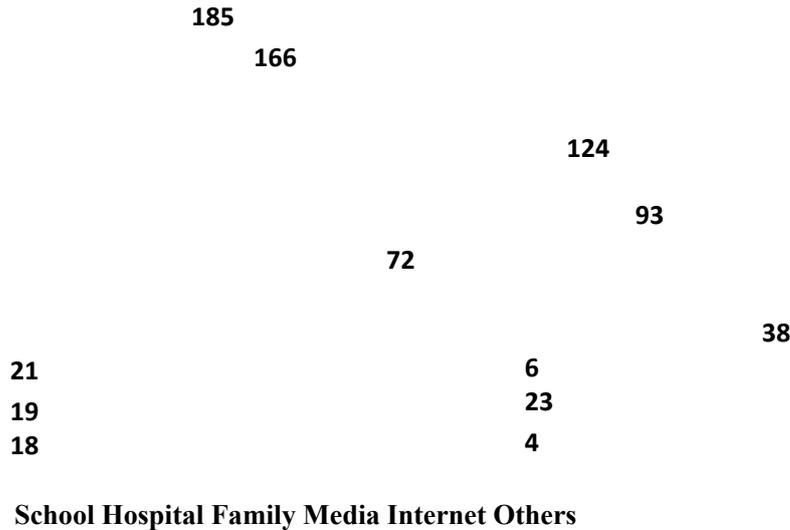
**Fig. 3.4: Awareness of prostate cancer amongst respondents**

**Fig. 3.5: Awareness of prostate cancer screening amongst respondents**

The awareness of prostate cancer was 87% while the awareness of prostate cancer screening was 67%.

**Fig. 3.6: Sources of knowledge on prostate cancer and prostate cancer screening amongst respondents**

**Prostate cancer Prostate cancer screening**



The figure above compares the frequency of awareness of prostate cancer to prostate cancer screening. From all the sources of awareness, more respondents are aware of prostate cancer than prostate cancer screening.

**Table 3.2: Level of knowledge of prostate cancer and prostate cancer screening amongst respondents**

<i>Variable</i>	<i>Value</i>	<i>Frequency (N=413)</i>	<i>Percentage (%)</i>
<b>Most common cancer affecting men in Nigeria</b>	13.3 Infection with HIV	42	10.2
	Cigarette smoking	202	48.9
	No idea	49	11.9
	Painful urination	205	49.6
	Loss of bladder control	179	43.3
	Bone pain	64	15.5
	Weight loss	72	17.4
	Blood in urine	166	40.2
	Frequent urination	221	53.5
	Erectile dysfunction	32	7.7
	No idea	53	12.8
	Good diet	181	43.8
<b>Risk factors for prostate cancer</b>			
	Preventive measures for prostate cancer		
	Regular exercise	157	38.0
	Screening and treatment	237	57.4
<b>Signs and symptoms of prostate cancer</b>			
	Staying sexually active	59	14.3
	Use of drugs	126	30.5
	Increase Vit D intake	28	6.8
	No idea	68	16.5
<b>Lung cancer</b>	44	10.7	
<b>Prostate cancer</b>	288	69.7	
<b>No idea</b>	81	19.6	
<b>Black race</b>	47	11.4	
<b>Family history</b>	209	50.9	
<b>Men ages 50 and above</b>	228	55.2	
<b>Obesity</b>	55		

Most of the respondents were aware that the most common cancer affecting men in Nigeria was prostate cancer (69.7%). The other variables showed the level of knowledge of prostate cancer amongst the respondents.

**Table 3.3: Level of knowledge of prostate cancer and prostate cancer screening amongst respondents**

<b>Variable Value Frequency (N=413)</b>	<b>Yes 116 28.1 No 297 71.9</b>
<b>Percentage (%)</b>	
<b>Places to do PCS in Enugu?</b>	<b>DRE 137 33.2 PSA blood test 223 54.0 No screening method 30 7.3</b>
<b>Screening methods in Nigeria</b>	
	<b>18 to 29 years 12 2.9 30 to 40 years 17 4.1 41 to 69 years 304 73.6 No idea 80 19.4</b>
<b>Age group that require screening</b>	
	<b>Every 1 to 2 years 166 40.2 Every 3 years 103 24.9 Every 4 years 60 14.5 No idea 84 20.3</b>
<b>Frequency of screening</b>	<b>Yes 236 57.1 No 177 42.9</b>
<b>Do you know treatment for Prostate cancer?</b>	<b>Hormone therapy 16 3.9 Radiotherapy 27 6.5 Surgery 227 55.0 Chemotherapy 151 36.6</b>
<b>Treatments for prostate cancer</b>	

The table shows the level of knowledge of prostate cancer screening amongst the respondents.

### 3.4 THE ATTITUDE TOWARDS PROSTATE CANCER AND PROSTATE CANCER SCREENING AMONGST RESPONDENTS

**Table 3.4: The attitude towards prostate cancer and prostate cancer screening amongst respondents**

<b>Variables</b>	<b>Values</b>	<b>Mean</b>	<b>Remark</b>	<b>D [1] (%)</b>	<b>N [2] (%)</b>	<b>A [3] (%)</b>
<b>Prostate cancer is highly prevalent <u>and a leading cause of death?</u> Any man including you can <u>acquire prostate cancer</u></b>	(24.5)	117 (28.3)	191 (46.2)	2.22	Positive	39 (9.4)
<b>Screening helps in prevention of <u>prostate cancer</u></b>	176 (42.6)	192 (46.5)	2.38	Positive	63 (15.3)	161
<b>Screening causes no harm to the <u>patient</u></b>	(39.0)	189 (45.8)	2.31	Positive	38 (9.2)	114 (27.6)
<b>If screening is free and causes no <u>harm, will you participate?</u> Good diet and regular exercise <u>also prevents prostate cancer</u> If the above is possible, will you be <u>willing to abide by them?</u></b>	261 (63.2)	2.54	Positive	14 (3.4)	199 (48.2)	200
	(48.4)	2.45	Positive	21 (5.1)	125 (30.3)	267 (64.6)
	2.60	Positive	<b>GRAND MEAN 2.41 Positive</b>			
	45 (10.9)	145 (35.1)	220 (53.3)	2.43	Positive	101

The table above shows the attitude of respondents towards prostate cancer screening. Most of the respondents agree to the variables in the table above. The general attitude of the respondents towards

prostate cancer screening is positive.

### 3.5 THE PRACTICE OF PROSTATE CANCER SCREENING AMONGST RESPONDENTS

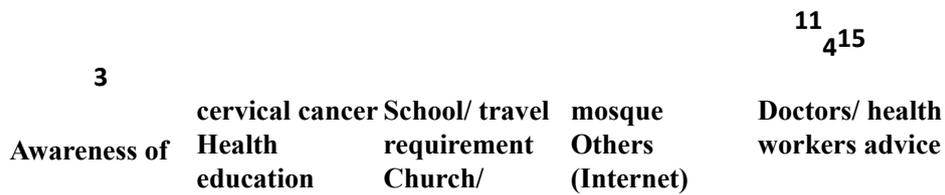
**Fig. 3.7: Prostate cancer screening amongst respondents**

From the figure above, only 38% of the respondents have done screening for prostate cancer.

**Fig. 3.8: Factors which influenced prostate cancer screening amongst respondents**

112

77



From the figure, the major factors which influenced the practice of prostate cancer screening were Health education and Doctors/ Health worker’s advice.

### 3.5 THE PRACTICE OF PROSTATE CANCER SCREENING AMONGST RESPONDENTS

**Table 3.5: The practice of prostate cancer screening amongst respondents**

<b>Variable Value Frequency (N=413)</b>	<b>DRE 93 22.5 PSA blood test 116 28.1</b>
<b>Percentage (%)</b>	<b>Prostate ultrasound 52 12.6</b>
<b>What was done during the screening?</b>	<b>Financial constraints 12 2.9 No access to such services 17 4.1 I do not think it is important 128 31.0 Not enough free time 67 16.2</b>
<b>Reasons for not doing prostate cancer screening</b>	<b>Every 1 to 2 years 166 40.2 Every 3 years 103 24.9 Every 4 years 60 14.5 No idea 84 20.3</b>
<b>Frequency of screening</b>	<b>Yes 291 70.5 No 122 29.5</b>

**Respondents who would like to do screening** Yes 258 62.5 No 155 37.5  
**Would you undergo PCS if it comes with a cost?**

The table above shows the level of practice of prostate cancer screening amongst respondents.

### 3.5 THE RELATIONSHIP BETWEEN THE PRACTICE OF PROSTATE CANCER SCREENING AND THE SOCIODEMOGRAPHY OF RESPONDENTS

**Table 3.6: The relationship between the practice of prostate cancer screening and the sociodemographic characteristics of respondents**

	<i>Practiced prostate cancer screening? Chi</i>		<i>df</i>	<i>p</i>	<i>value square</i>		
	<i>Yes (%)</i>	<i>No (%)</i>			<i>Total (%)</i>	<i>Yes (%)</i>	<i>No (%)</i>
<b>Age &lt; 50 years</b>	27 (14.1)	165 (85.9)	192 (100.0)	89.781	2	0.000	<b>50 to 60 years</b> 66 (56.4) 51 (43.6) 117 (100.0)
<b>&gt; 60 years</b>	65 (62.5)	39 (37.5)	104 (100.0)				
<b>Educational level</b>				<b>Secondary</b> 58 (36.5) 101 (63.5) 159 (100.0)			
<b>Primary</b>	24 (38.1)	39 (61.9)	63 (100.0)	0.573	2	0.715	<b>Tertiary</b> 76 (40.4) 112 (59.6) 188 (100.0)
<b>Occupation</b>				<b>Civil servant</b> 52 (36.9) 89 (63.1) 141 (100.0)	46.496	4	0.000
<b>Skilled worker</b>	4 (5.6)	68 (94.4)	72 (100.0)				<b>Trading</b> 73 (51.0) 70 (49.0) 143 (100.0)
<b>Artisan</b>	10 (52.6)	9 (47.4)	19 (100.0)				
<b>Others</b>	19 (50.0)	19 (50.0)	38 (100.0)				

**Marital status**

**Monthly income**

<b>Single</b> 6 (9.1) 60 (90.9) 66 (100.0) 66.479 4 0.000	
<b>Married</b> 95 (35.3) 174 (64.7) 269 (100.0)	<b>0 to 50,000</b> 86 (38.1) 140 (61.9) 226 (100.0) 27.687 3
<b>Divorced</b> 9 (69.2) 4 (30.8) 13 (100.0)	<b>50 to 100,000</b> 45 (37.5) 75 (62.5) 120 (100.0)
<b>Widowed</b> 45 (76.3) 14 (23.7) 59 (100.0)	<b>100 to 200,000</b> 12 (25.0) 36 (75.0) 48 (100.0)
<b>Other</b> 3 (50.0) 3 (50.0) 6 (100.0)	<b>&gt; 200,000</b> 15 (100.0) 0 (0.0) 15 (100.0)

The table shows the relationship between the practice of prostate cancer screening and sociodemographic attributes. There was a higher percentage practice of prostate cancer screening in the older respondents >60 years (62.5%), as compared to others 50 to 60 years (56.4%) and less than 50 years (14.1%). The practice of prostate cancer screening was highest amongst traders (51.0%) and Artisans (52.6%). All the respondents who earn above N200,000 (100%) had practiced prostate cancer screening as compared to other levels of income. The relationship between the practice of prostate cancer screening and Age, Occupation, Marital status and Monthly income was highly significant (p<0.001).

**Table 3.7: The relationship between the practice of prostate cancer screening and the knowledge and attitude of respondents towards prostate cancer and prostate cancer screening**

	<i>Practiced prostate cancer screening? Chi</i>	<i>df</i>	<i>p</i>
<b>Aware of prostate cancer?</b>	<b>Yes</b> 152 (42.2) 208 (57.8) 360 (100.0) 18.676	1	0.000
	<b>No</b> 6 (11.3) 47 (88.7) 53 (100.0)		
<b>Aware of prostate cancer screening?</b>	<b>Yes</b> 146 (52.5) 132 (47.5) 278 (100.0) 73.229	1	0.000
<b>Yes (%) No (%) Total (%) value square</b>	<b>No</b> 12 (8.9) 123 (91.1) 135 (100.0)		
<b>Attitude towards prostate cancer/screening</b>	<b>attitude</b> 144 (50.7) 140 (49.3) 284 (100.0)	61.603	1 0.000
<b>Positive attitude Negative</b>		10 (8.6)	106 (91.4)
		116 (100.0)	

As expected, the practice of prostate cancer screening is higher amongst respondent who are aware of prostate cancer (42.2%) and also amongst respondents who are aware of prostate cancer screening (52.2%) as compared to those who are not. Also the practice of prostate cancer screening was higher amongst respondents who have a positive attitude towards prostate cancer screening (50.7%) as compared to those who have a negative attitude to prostate cancer screening (8.6%). The relationship between the practice of prostate cancer screening and the knowledge and attitude towards prostate cancer screening was highly significant (p<0.001).

**3.6 THE RELATIONSHIP BETWEEN THE PREVALENCE OF PROSTATE CANCER AND THE SOCIODEMOGRAPHY OF RESPONDENTS**

**Table 3.8: The relationship between the prevalence of prostate cancer symptoms and the sociodemographic characteristics of respondents**

<i>Any history of prostate/ urinary symptoms? Chi</i>	<i>df</i>	<i>p</i>
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	<b>Yes (%)</b>	<b>No (%)</b>	<b>Total (%)</b>	<b>value</b>
<b>Age &lt; 50 years</b>	20 (10.4)	172 (89.6)	192 (100.0)	35.301 2 0.000
<b>&gt; 60 years</b>	38 (36.5)	66 (63.5)	104 (100.0)	
<b>Marital status Single</b>	6 (9.1)	60 (90.9)	66 (100.0)	74.940 4 0.000
<b>Divorced</b>	6 (46.2)	7 (53.8)	13 (100.0)	
<b>Widowed</b>	38 (64.4)	21 (35.6)	59 (100.0)	
<b>Other</b>	3 (50.0)	3 (50.0)	6 (100.0)	
<b>Monthly income 0 to 50,000</b>	68 (30.1)	158 (69.9)	226 (100.0)	16.165 3 0.001
<b>100 to 200,000</b>	4 (8.3)	44 (91.7)	48 (100.0)	
<b>&gt; 200,000</b>	0 (0.0)	15 (100.0)	15 (100.0)	
<b>First degree relative with prostate cancer?</b>	72 (45.6)	86 (54.4)	158 (100.0)	67.448 1 0.000
<b>Second degree relative with prostate cancer?</b>	26 (10.2)	229 (89.8)	255 (100.0)	
<b>50 to 100,000</b>	26 (21.7)	94 (78.3)	120 (100.0)	
<b>Yes</b>	36 (32.4)	75 (67.6)	111 (100.0)	6.354 1 0.012
<b>No</b>	62 (20.5)	240 (79.5)	302 (100.0)	

The prevalence of prostate cancer symptoms is higher in the older respondents than the younger ones. This was observed as 36.5% in those more than 60 years as compared to 10.4% in those younger than 50 years. The prevalence of prostate cancer symptoms was respondents who earn below N50,000 (30.1%) as compared to those who earn above N200,000 (0.0%). The prevalence of prostate cancer symptoms was higher in respondents with a family history of prostate cancer in the first degree relatives (45.6%) as compared to those who don't have a family history (10.2%). Also, the prevalence of prostate cancer symptoms was higher in respondents with a family history of prostate cancer in the second degree relatives (32.4%) as compared to those who don't have a family history (20.5%). The relationship between the prevalence of prostate cancer and Age, marital status and monthly income was highly significant ( $p < 0.001$ ). The relationship between family history and the prevalence of prostate cancer was significant.

## 4.0 DISCUSSION AND CONCLUSION

This chapter discusses the findings in the preceding chapter and draws on the theoretical framework used in the study, and related to literature reviewed in chapter 2, together with the objectives of the study enable us draw conclusions and make recommendations for future studies. The study aimed to find out the Knowledge, Attitude, and Practice of Prostate Cancer among Male Patients in University of Nigeria Teaching Hospital (UNTH) Enugu state. The sample was made up of 413 patients of UNTH. Questionnaires were distributed amongst them and a 100% response were achieved.

The result indicates that 87% of respondents have heard about Prostate cancer and only about 67% of respondents have heard about prostate cancer screening. There was also a positive

attitude towards prostate cancer and prostate cancer screening among respondents. Despite the good knowledge of prostate cancer and positive attitude to prostate cancer screening, only about 38% had ever practiced Prostate cancer screening. It was worth noting there was a significant relationship between the practice of prostate cancer screening and the knowledge and attitude of respondents towards prostate cancer and prostate cancer screening.

The age distribution was between 40 to greater than 90 years, with the average age at 53.61 years and a standard deviation of 10.44 years. Most of the respondents were within the age range of 40 to 49 years (46.5%), while 28.3% were within 50 to 59 years and 25.2% were 60 years and above. Most of all the respondents had Tertiary institution as their highest level of education (45.5%) while others had Secondary school (38.5%) and Primary School (16%) as their highest level of education. An important finding in our study was that there was significant relationship between the prevalence of prostate cancer and the Age, marital status and monthly income of the participants. The study also showed that there was good perception of Prostate cancer as well as a good practice but the latter was seen in older age groups (>50years). The younger age group showed poor practice with most of them stating '*I did not think it was important*'.

There was a good knowledge of prostate cancer, about 87% of the respondents have heard about prostate cancer prior to this research. 38% of the respondents had first degree relatives who had urinary symptoms from Prostate cancer while others (62%) didn't have such relatives. Most of the respondents got their knowledge of prostate cancer from the Hospital while others were the Media. There was a poor practice and perception of prostate cancer screening where only 38% of the study population had undergone prostate cancer screening.

In the knowledge of prostate cancer, about 69.7% of the respondents described prostate cancer as the most common cancer affecting males in Nigeria, 19.6% had no idea while 10.7% of the respondents suggested that Lung cancer was the most common. Majority were able to identify painful urination, loss of bladder control and bloody urine as symptoms of prostate cancer. There was also good knowledge about the risk factors of prostate cancer. About 73.6% of the respondents had an idea of the age group that were indicated for prostate cancer screening. The research carried among Male staff in University of Nigeria, Nsukka showed that most of the respondents had good knowledge about prostate cancer and this was in agreement with our study. Their study also showed that 94.9% of their respondents who knew about prostate cancer and had good perception towards prostate cancer screening had Tertiary institution as their highest level of education. This was in agreement with our study which showed that 40.4% of those who had tertiary education were aware and had practiced prostate cancer screening when compared to those who had Secondary school(36.5) and Primary school (38.1%) education. A study in Kumasi, Ghana show that 96.1% of study participants were aware of prostate cancer and the majority(47.4%) heard it from the radio. This is was also in line with another study done in a hospital in Kenya where the participants cited the mass media(55.2%) as their greatest source of information about prostate cancer. All these were not in line with our findings in this study as majority of our participants cited the Hospital/ health workers and health education as their greatest source for information concerning both prostate cancer and prostate cancer screening. This could be because of decreased health information circulating in the media. The study also shows that majority of the participants that had good knowledge of prostate cancer and even participated in its screening were from the older age group (60 years and above). This was in line

with the study in Italy which had the most awareness in prostate cancer and practiced its screening in those of the older age group as well those who had tertiary education. This shows that the older age group are more aware of the disease no matter the geographical location because its a common disease seen in their group. Also, an overall study carried out in men in Chicago, USA showed that men had poor knowledge about prostate cancer and this was a contrast from our study.

The study carried out showed that most male patients in UNTH had a positive attitude towards prostate cancer and prostate cancer screening. However, of those who had positive attitude, only 50.7% were willing to undergo prostate cancer screening and 49.3% weren't. 70.5% of the study participants stated that '*would like to participate in prostate cancer screening*' while 62.5% stated that they '*would like to participate in prostate cancer screening even if it came at a cost*'. A study in Lagos showed that majority of their participants had positive attitude (65.7%) which was in line with our study. Similar to the findings in this study, another study in Ghana reported a positive attitude towards prostate cancer among study population. Most of the respondents recognized the fact that screening for prostate cancer is important, helpful as it keeps one healthy, beneficial as early detection of prostate cancer could result in better treatment outcomes.

A contrast to our finding was seen in the study done in Uganda where 77% of the participants had never considered prostate cancer screening due to their poor attitude which stems from their believe that they won't get prostate cancer and addition to the anxiety that follows the screening. A study in Australia showed that 68% of the respondents had a positive attitude and a few percentage who had negative attitude towards prostate cancer and its screening stated that their attitude would change if the disease would cause impotence. This points to the importance most men place towards their sexual life even over their own life.

This study showed that majority(31.0%) of the participants who had negative attitude towards prostate cancer and its screening were mostly due to those who the reason '*I do not think it is important*'. This was not line with the study in Italy where 41% of those with a poor attitude stated that their reason was '*not feeling at risk*'.

#### 4.1 CONCLUSION

The study performed on the Knowledge, Attitude and Practice of Prostate Cancer among male patients of age 40 years and above in University of Nigeria Teaching Hospital (UNTH) Enugu showed that there was a good knowledge of prostate cancer. Also there was a good attitude towards prostate cancer. The practice of prostate cancer was poor especially in those of younger age groups (<50years) while those of older age groups had a very good practice of prostate cancer screening.

It is also important to note that there was significant relationship between the occupation of the respondents and their practice of prostate cancer screening where most of those who practiced prostate cancer screening were Traders and Artisans. A significant relationship was found between the marital status of the respondents and their practice of prostate cancer

screening as most of those who practiced prostate cancer were married. There was also a significant relationship between the monthly income of the respondents and their practice of prostate cancer screening. It was observed that most of those who practiced prostate cancer screening were those who earned 200,000 naira and above monthly.

The study population thus had shown that there was a good knowledge, attitude and practice of prostate cancer. This was in keeping with our objectives of the research that answered the question of determining the state of knowledge attitude and practice of Prostate Cancer among male patients of age 40 years and above in University of Nigeria Teaching Hospital (UNTH) Enugu.

In line with our findings in this study, we are recommending;

1. Adequate sensitization of prostate cancer and the burden of the disease through public health campaigns, social media talk shows, rural outreach programs etc.
2. The introduction of prostate health awareness programs in communities and adequately explain the age group it commonly affects with the burden of the disease and key knowledge on early detection.
3. Encouraging young men to not just seek the knowledge of prostate cancer but also to practice it to help with its efficiency in early detection of prostate cancer.
4. Encouraging men of age 40 years and above to seek medical attention early when any abnormalities are detected on screening or any urinary symptoms.
5. A study to monitor the changes in the knowledge attitude and perception of prostate cancer over time should be conducted.
6. More studies should be conducted in other departments to determine the knowledge attitude and perception of prostate cancer and also help with sensitization.

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#### REFERENCES

- [1]. BUGOYE FC, GERMANA HL, KARE M & MMBAGA EM. Knowledge, Perceived Risk and Utilization of Prostate Cancer Screening Services Among Men in Dar Es Salaam, Tanzania.2019; 12-15.
- [2]. ADIBE MO, ALUH DO & ANOSIKE C. Knowledge, Attitude and Perception Among Male Staff of University of Nigeria.2017: 20-27
- [3]. OLAPADE-OLAOPA EO, OWOAJE ET, ADEDEJI, TG. Knowledge and Perception of Nigerian Men 40 years and Above Regarding Prostate Cancer.2014:45-60.

- [4]. WACHIRA BW, MENG'ANYI LW & RUTH MG. Knowledge, Perception and Uptake of Prostate Cancer Screening: A Cross-Sectional Study at a Level III Hospital in Kenya. *Med. Jnl Knya* 2018; 40(16): 35-40
- [5]. MORLANDO M, PELLULO CP & Di GIUSEPPE G. Prostate Cancer Screening: Knowledge, Attitude and Practices in a Sample of Men in Italy: A Survey. 2017: 60-67.
- [6]. WHO [Online]. Cancer The Problem [cited 2019 November 20]. Available from <https://www.who.int/news-room/fact-sheets/detail/cancer>
- [7]. PCF [Online]. Incidence of Prostate Cancer [cited 2020 February 10]. Available from <https://www.pcf.org/about-prostate-cancer/what-is-prostate-cancer/prostate-cancer-survival-rates/>
- [8]. Global Cancer Statistics [Online]. GLOBOCAN Estimates Cancer Incidence and Mortality Worldwide [cited 2018 October 18]. Available from <https://acsjournals.onlinelibrary.wiley.com/doi/full/10.3322/caac.21492>
- [9]. Chu LW, Ritchey J, Devesa SS et Al. Prostate Cancer Incidence Rates in Africa [Online] [cited 2019 December 1]. Available from <https://www.hindawi.com/journals/pc/2011/947870/>
- [10]. Ojulari F. Prostate Cancer in Nigeria: The Way Forward [Online]. [cited 2019 May 16 ]. Available from <https://www.vanguardngr.com/2019/11/prostate-cancer-in-nigeria-the-way-forward/>
- [11]. Cancer rate [Online]. Survival Rates for Prostate Cancer [cited 2018 January 4]. Available from <https://www.cancer.org/cancer/prostate-cancer/detection-diagnosis-staging/survival-rates.html>
- [12]. Archampong EQ, Naaeder SB, Ugwu B. *Baja's Principles & Practice of Surgery Including Pathology in the Tropics. Carcinoma of the Prostate. Clinical Features.* 2016;(5) 991-992
- [13]. KANINJING E, RAHMAN S, CLOSE F, PIERRE R, DUTTON M, LAMANGO N & ONOKPISE O. Prostate Cancer Screening Perception, Beliefs and Practices Among Men in Bamenda, Cameroon: *Med. Jnl.* 2017: 13 [14] 30-47.
- [14]. WILLIAMS PB & SALLAR A. Knowledge, Attitude and Perception of Prostate Cancer Screening Experience Among African-American Men in Southside Chicago. 2014: 67-69
- [15]. BRAY F, FERLAY J, SOERJOMATARAM I, SIEGEL R et al. Global Cancer Statistics: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 186 Countries. 2018: 120
- [16]. BAAISTE B. Knowledge, Attitude and Practice of Men Concerning Prostate Cancer in Muldersdrift, South Africa. 2018: 46-56.
- [17]. NDERITU P, VAN HEMELRIJCK M, ASHWORTH M et al. Prostate-Specific Antigen

Testing in London General Practices. 2014: 85-90

- [18]. ATULOMAH NO, OLANREWaju MF, AMOSU AM. Level of Awareness, Perception and Screening Behaviour Regarding Prostate Cancer Among Men in a Rural Community of Ikenne L.G.A. 2010: 41-45
- [19]. ADELOYE D, DAVID RA, ADEREMI AV, ISEOLORUNKANMI A et al. An Estimate of the Incidence of Prostate Cancer in Africa: A Systematic Review and Meta-Analysis. Medical Journal. 2014: 5[2] 55-60.
- [20]. KABORE FA, KAMBOU T, ZANGO B & OUÉDRAOGO A. Knowledge and Attitude of Prostate Cancer Among the General Public in Burkina Faso. 2014: 56
- [21]. TEFEKLI A & TUNC M. Future Prospects in the Diagnosis and Management of Localized Prostate Cancer. 2013:45-56
- [22]. BARRETT T & HAIDER MA .The Emerging Role of MRI in Prostate Cancer Active Surveillance and Ongoing Challenges. 2017 : 50
- [23]. What is Prostate Cancer (online). [cited 2020 August 14]. Available on <https://www.cancer.org/cancer/prostate-cancer/about/what-is-prostate-cancer.html>
- [24]. ARCHAMPONG E et al. BAJA's Principles and Practice of Surgery (Textbook). 2016: 5[8] 126 - 129
- [25]. Prostate Cancer Diagnostic and Treatment Guidelines (online). [cited on 2020 March 14]. Available on <http://www.prostatecancerfoundation.co.za/cape/index.php/article/29>
- [26]. HORWICH A, PARKER C & CANGMA C. Prostate Cancer: ESMO Clinical Practice Guidelines for Diagnosis, Treatment and Follow-up: *Annals of Oncology*. 2017: 9[12] 78.
- [27]. NAKANDI H, KIRABO M, SEMUGABO C, KITTENGO A et al. Knowledge, Attitude and Practices of Ugandan Men Regarding Prostate Cancer : *African Journal of Urology*. 2013:12[9] 70-75
- [28]. FITZPATRICK JM, KIRKBY RS, BROUGH CL & SAGGERSON AL. Awareness of Prostate Cancer Among Patients and the General Public: Results of an International Survey.2009: 30
- [29]. ARNOLD-REED DE, HINCE DA, BULSARA MK et al. Knowledge and Attitudes of Men About Prostate Cancer: An Australian Survey. 2008: 5(14) 75
- [30]. MOFOLO N, BETSHU O, KENNA O, KOROMA S, LEBEKO T et al. Knowledge of Prostate Cancer Among Males Attending A Urology Clinic: A South African Study. 2015: 8(16) 39-45

- [31]. KABORE FA, KAMBOU T, ZANGO B & OUÉDRAOGO A. Knowledge and Attitude of Prostate Cancer Among the General Public in Burkina Faso. 2014: 45-50
- [32]. AMOAH G, ACHEAMPONG DO, GYASI-SARPONG KC, ACHEAMPONG E et al. Knowledge, Attitude and Perception of Prostate Cancer Among Male Adults in the Kumasi Metropolis: A Descriptive Cross-Sectional Study. 2018: 17(6) 69
- [33]. PEREIRA De PAVIA E, SALVADOR Da MOTTA MC & GRIEP RH. Knowledge, Attitude and Practices Regarding the Detection of Prostate Cancer: A Brazil Study. 2010: 14(17) 56
- [34]. AJAPE AA, BABATA A, & ABIOLA OO. Knowledge of prostate cancer screening among native African urban population in Nigeria. *Public health*. 2010 :43-60
- [35]. YEBOAH-ASIAMA B. Perceptions and Attitudes about Prostate Cancer among Male Teachers in the Sunyani Municipality. University of Ghana. 2015: 67
- [36]. BINKA C, NYARKO SH & DOKU DT. Cervical Cancer Knowledge, Perceptions and Screening Behaviour Among Female University Students in Ghana. *Journal of Cancer Education*. 2016: 49-56.
- [37]. ARAFA MA, RABAH DM & WAHDAN IH. Awareness of General Public Towards Cancer of Prostate and Screening Practices in Arabic Communities: A Comparative Multicentre Study. 2012: 13(5) 23-28
- [38]. UZOAMAKA VU, OLUWAKEMI OO, AJOGWU A & OJEWOLA RW. Prostate Cancer Screening: What do Men know, Think and do about their risk? Exploring the opinions of Men in an Urban Area in Lagos State, Nigeria: A Mixed Methods Survey. 2015: 6(14) 14-20
- [39]. BELL N, GORBER SC, SHANE A, JOFFRES M, SINGH H, DICKINSON J, SHAW E et al. Recommendations on screening for prostate cancer with the prostate-specific antigen test. *Canadian Medical Association Journal*. 2014: 23 (186)1225-1234.
- [40]. POLIT & BECK . *Nursing research: Generating and assessing evidence for nursing practice*, Philadelphia, Lippincott Williams & Wilkins. 2012: 46-68
- [41]. REBBECK TR, ZEIGLER-JOHNSON C, HEYNS C & GUEYE S. Prostate cancer screening, detection and treatment practices, among Sub-Saharan African urologists: *African journal of urology*, 2011: 14(17) 85-91.

