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Knowledge of Prostate Cancer and Attitude towards Screening among Male Patients in Federal Teaching Hospital, Ido-Ekiti

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Original Research Article

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Abstract: Prostate cancer is the most common cancer among Nigerian men and the second most common cause of death from cancer in men worldwide. This study assesses the knowledge of prostate cancer and attitude towards screening among male patients in federal medical center, Ido Ekiti, Ekiti State. This study is a descriptive cross-sectional study. Self-administered structured questionnaires were used to collect information from patients attending urology clinic in a tertiary institution. Descriptive and inferential statistics was used to analyze the captured data at 0.05 level of significance. A response rate of 85.8% was recorded. Knowledge of prostate cancer was generally poor but about 46.0% of the respondents agreed that incidence of prostate cancer increases with age and only about one-quarter (n=25; 26.6%) of the respondents knew that prostate specific antigen (PSA) and digital rectal examination (DRE) are screening methods for prostate cancer. Attitude towards screening was also poor. Result shows that there was a significant relationship between educational level (p=0.008), knowledge of prostate cancer (p=0.006) and willingness to screen. There is a low level of knowledge of prostate cancer among respondents and their attitude towards screening is relatively poor, hence there is urgent need to increase awareness through various means such as campaign, media, and outpatients clinics.
Keywords: Prostate cancer, Knowledge, Screening.

INTRODUCTION

Prostate cancer (PCa) can be defined as "the development of cancer in the prostate gland in the male reproductive system" [1].

PCa has evolved as a major health problem in industrialized nations as well as developing countries [2]. PCa has been observed to be the most common cancer and the second leading cause of death from cancer among male population [3–5]. The prevalence of PCa is on the increase in low and middle income country because of rapid industrialization and changing life style [6]. In Africa continent, there is a wide variability in the incidence and screening of prostate cancer [6]. The peak incidence of disease is in people between the ages of 60 and 70 [3]. Documentation is poor in developing world as there is no national cancer mortality registry in Nigeria and this makes it difficult to assess the burden of prostate cancer in Nigeria, but it has been discovered that prostate cancers are diagnosed late and patients are less likely to receive curative therapy [5]. In developed countries, the possibility of been diagnosed with cancer is twice as high as in developing countries but lower mortality rate is been reported because of early detection while cancer victims are diagnosed late with poor prognosis in developing world [4].

The causes of prostate cancer still remain controversial but it is widely believed that "aging, positive family history, and race" are among the risk factor of prostate cancer [3]. PCa can be silent at first but in later stage can be "difficulty urinating, blood in the urine, or pain in the pelvis, back or when urinating " [1]. Survival of prostate cancer is "closely related to clinical and pathological stage of the disease at diagnosis" for example if its detected and treated early survival rate will be high [2]. Research has shown that men are not willing to undergo screening exercise but "low socio-economic status, lack of insurance coverage for screening, lack of knowledge about prostate cancer, and lack of physician recommendations for screening" has been identified as some of the reasons that may discourage people from participating in screening [3].

For early detection and treatment of prostate cancer it is encouraged that men should get screened but there is no generally acceptance time for prostate cancer screening for example, American urological association recommends screening for men who are 40

years old and above while the united states prostate cancer foundation recommended screening for men over 50 years [3]. Expansion of prostate cancer screening which is done by using prostate serum antigen (PSA) test and rectal examination (DRE) will facilitate early diagnosis and proper treatment [3]. It is of no doubt that prostate cancer has received little or no attention in this part of the world and with the expected increased incidence of prostate cancer, there is need to create awareness and sensitise people about prostate cancer. Therefore, this study seeks to investigate the knowledge of and attitude towards prostate cancer screening among male patients attending a tertiary hospital in Ekiti State.

METHODS

A non-experimental, quantitative, descriptive approach was used in this study. The study was conducted among male patients attending urology clinic in federal teaching hospital Ido-Ekiti. Data was collected through a questionnaire. A questionnaire was developed to assess the demographic characteristics of respondents, their knowledge of prostate cancer and attitude towards screening. There are twelve questions under knowledge domain and each correct answer has a score of one, with a total score of 12. A score less than or equal to 7 was considered poor knowledge while a score greater than or equal 8 was considered good knowledge. The questionnaire was pretested on a small group of randomly selected patients, for comprehensibility, accuracy, language, and sensitivity of questions and no modification was made. Data was collected over a period of two months (March to April 2017). Potential respondents were informed about the purpose of the study and were told that participation was totally voluntary. A sample size of 120 students (n=120) was decided upon to provide good representation of the total population. Out of the 120 respondents only 103 respondents returned their questionnaire.

Statistical Analysis

A total of 103 returned copies of questionnaires were coded and inputted into a Microsoft Excel spreadsheet on a password secured personal computer**.** This was further processed using a standard statistical package IBM SPSS 22. Results are then presented in tables and percentage. Chi square test and Fisher's exact test was used to check the significance relationship between demographic data and attitude towards prostate cancer screening at 0.05 level of significance.

RESULT

Out of 120 respondents that was included in the study, a total of 103 (n=103) respondents returned the questionnaire; therefore a response rate of 85.8% was obtained.

Demographic characteristics of the respondents

From table 1, a little above one-third (n=37; 35.9%) of the respondents are between 51-60 years while 30.1% are between 40-50 years, close to two-third of the respondents are Christians (n=62; 60.2%) and are married (n=61; 59.2%). About three-quarter of the respondents have above primary school education (n=80; 77.7%) and majority of the respondents do not have family history of prostate cancer (n=84; 81.6%).

Table-1: demographic variables

DEMOGRAPHIC DATA	N (%)
AGE (n=103)*	
40-50 YEARS	31 (30.1%)
51-60 YEARS	37 (35.9%)
61-70 YEARS	21 (20.4%)
> 70 YEARS	14 (13.6%)
RELIGION (n=103)	
CHRISTIANITY	62 (60.2%)
ISLAM	32 (31.1%)
TRADITIONAL	2 (1.9%)
MARITAL STATUS(n=100)	
SINGLE	19 (18.4%)
MARRIED	61 (59.2%)
DIVORCED	8 (7.8%)
WIDOWER	12 (11.7%)
EDUCATIONAL LEVEL (n=102)	
NONE	11 (10.7%)
PRIMARY	11 (10.7%)
SECONDARY	25 (24.3%)
TERTIARY	44 (42.7%)
POST GRADUATE	11 (10.7%)
FAMILY HISTORY (n=91)	
YES	7 (6.8%)
NO	84 (81.6%)

Respondent's knowledge of prostate cancer

From table 2 above knowledge of prostate cancer among respondents can be said to be generally low. Majority of the respondents do not know function (n=62; 66.0%), predisposing factor (n=46; 48.9%), sign and symptoms, screening method (n=62; 66.0%), and treatment of prostate cancer. However, close to half (n=40; 42.6**%)** of the respondents are able to identify the fact that incidence of prostate cancer increases with age. Surprisingly, close to three-quarter of the respondents have low level (n=75; 72.8%) of knowledge about prostate cancer, 15.5% have moderate knowledge while only 3.9% have high knowledge with a score of 0-5, 6-8 and 9-12 respectively.

Further descriptive analysis was done by assigning one mark for each correct answer and zero mark for each wrong answer. This will result in a minimum score of zero and a maximum score of 12. Respondent's scores were classified into poor and good with a score of 0-7 and 8-12 respectively. Result shows that majority (n=87; 84.5%) of the respondents have poor knowledge, while only 7.8% have good knowledge.

Table-2: knowledge of prostate cancer

Variables	Agree	Disagree	I don't know
Prostate is a gland responsible for testosterone excretion	8 (8.5%)	19 (20.2%)	62 (66.0%)
PC has the second highest mortality rate among men	18 (19.1%)	12 (12.8%)	64 (68.1%)
Incidence rate is increasing by aging	40 (42.6%)	9 (9.6%)	45 (47.9%)
Genetic element is an important predisposing factor	37 (39.4%)	11 (11.7%)	46 (48.9%)
There is a possibility of having PC without symptoms	32 (34.0%)	14 (14.9%)	48 (51.1%)
Prostate specific antigen (PSA) and Digital rectal examination (DRE) are screening methods for prostate cancer	25 (26.6%)	7 (7.4%)	62 (66.0%)
Weak and intermittent urination is a symptom of PC	20 (21.3%)	21 (22.3%)	53 (56.4%)
Low back pain is a symptom of prostate cancer	8 (8.5%)	30 (31.9%)	56 (59.6%)
Nocturia is a symptom of prostate cancer	20 (21.3%)	21 (22.3%)	50 (53.2%)
Surgery in the only treatment for prostate cancer	25 (26.6%)	23 (24.5%)	46 (48.9%)
Surgical treatment leads to incontinence	8 (8.5%)	34 (36.2%)	52 (55.3%)
Irradiation is one of the treatment measurements	12 (12.8%)	18 (19.1%)	64 (68.1%)

Attitude towards screening

Close to half (n=43; 41.7%) of the respondents agreed that early detection of prostate cancer decreases complication but only few (n=13; 12.6%) of the respondents believe they are at risk of prostate cancer and a little above one-third (n=39; 37.9%) agreed that digital rectal examination is important while about one-quarter (n=26; 25.2%) do feel nervous and embarrassed if asked to undergo DRE. The need and importance of PSA in detecting prostate cancer is not fully appreciated among respondents and about half (n=52; 50.5%) of the respondents are willing to screen for prostate cancer.

Table-3: Relationship between demographic data and knowledge of prostate cancer

Variables	Knowledge level, N (%) Poor	Good	X^2 (df)	P-value
Age				
40- 60 years	58 (61.1%)	29 (30.5%)	0.898 (1)	0. 343
61 years and above	4 (4.2%)	4 (4.2%)		
Educational level				
None	11 (11.7%)	0 (0.0%)	7. 373 (2)	0.025*
Primary and Secondary	32 (34.0%)	0 (0.0%)		
Tertiary and PG	43 (45.7%)	8 (8.5%)		
Family History				
Yes	4 (4.8%)	3 (3.6%)	11.730 (1)	0.001**
No	72 (86.7%)	4 (4.8%)		

DISCUSSION

Prostate cancer is the most commonly diagnosed cancer among men and according to Akbarizadeh *et al.* [3] the peak incidence occurs between 60 and 70 years. The incidence (127/100,000) and mortality rate (20,000/ annum) of prostate cancer in Nigeria can be compared to that of African American men and with the potential increase in life expectancy more men are likely to be diagnosed [5].

About two-third of the respondents (n=68; 66.0%) are between 40-60 years old while 34.0% of the

respondents are 61 years and above which shows that there is over representation of men at lowest risk of prostate cancer. This is similar to the result of a study conducted in South Africa where 59.9% of the respondents are below the age of 55 years [7**]**.

Knowledge of prostate cancer is relatively low among respondents as only 7.8% have two third (8/12=2/3) and above knowledge of prostate cancer. Result of chi-square test shows that there is no significant relationship between age and knowledge of prostate cancer but a significant relationship was observed between education level, family history, and knowledge of prostate cancer ($p< 0.05$). This is consistent with a study conducted in South Africa where statistical significant relationship was observed between level of knowledge about prostate cancer and school education while no statistical relationship was noticed between knowledge of PCa and age [7**]**.

Only 9 (8.7%) men agreed with the three sign and symptoms stated in the questionnaire, weak and intermittent urination (n=20; 21.3%) and nocturia (n=20; 21.3%) was the most common symptoms identified by respondents followed by low back pain (n=8; 8.5%). This is close to the result of two different study where only 10.3%[4] and 11.4%[7**]** of the respondents new the presenting symptoms of PCa [5].

Only about one-quarter (n=25; 26.6%) of the respondents knew the screening methods for prostate cancer while about two-third (n=62; 66.0%) do not know. Lesser percentage (47.9%) of respondents was found to be ignorant of PCa screening in a similar study [4] while a larger percentage (56.8%) of respondents in a study conducted in Nigeria knew PSA as a method of screening for PCa but this disparity might be due to the high literacy level among respondents in the study.

In this study, About half of the respondents knew that early detection of prostate cancer decreases complication and relatively few (12.6%) of the respondents believe they are at risk of prostate cancer but a higher percentage (71%) in a similar study knew that early diagnosis of prostate cancer improves the clinical outcome and in the same study 63.5% of the respondents thought they were susceptible to prostate cancer [5].

Result showed that there was no significant relationship between age, family history and willingness to screen but there was a significant relationship between educational level and willingness to screen (p=0.008). A study conducted among public servant in Nigeria reported no statistically significant relationship between attitudes toward prostate cancer screening and the age of the respondents, (p = 0.276 [5]. Findings from this study also shows that there is a statistical significant relationship between knowledge of prostate cancer and willingness to screen (p=0.006). A recent study conducted among medical staff shows that there is no significant relationship between knowledge and doing the PSA test [3].

CONCLUSION

This study has revealed the level of knowledge about Prostate Cancer and attitude towards screening. Knowledge of prostate cancer is relatively poor among respondents and there is urgent need to address this knowledge gap. Base on the findings of this study and the improved life expectancy, it is therefore important to provide sufficient information about prostate cancer, screening, and its treatment so as to combat the potential increase in the incidence of prostate cancer.

Ethical approval and consent to participate

Permission was sought and gotten from the Federal teaching hospital, Ido-Ekiti. Informed consent of the participants was obtained before participating in the study.

Consent for publication

All authors have read and given approval to the submission of this manuscript

Competing interests

The authors declare that they have no competing interests.

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