



Cross-Sectional Study of Knowledge and Attitudes towards Prostate Cancer among Educated Male Adults in a Semi-Urban Town of Northern Nigeria

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Summary

BACKGROUND

Prostate cancer is the second most common cancer among black African men, but the presentation is usually late. Advocacy is needed on health education in Nigeria and indeed Africa. This study aimed to assess knowledge & attitude towards prostate cancer among educated men in Yola town, Adamawa state of Nigeria.

MATERIALS AND METHODS

This was a cross-sectional study involving educated segments of the society. Data were analysed and presented in tables and bar charts. Fisher's test was used in the analysis of significance. Health workers were considered comparators.

RESULTS

Ninety (90) questionnaires were handed out and 68 were returned. The response rate was 75.5%. Teachers and health care workers were <40 years and <50 years respectively. Civil servants were 40 to 60 years. 75% of all the 68 respondents had tertiary education. There are significant differences in all knowledge domains of prostate and prostate cancer between health workers and civil servants/teachers, except between health workers and civil servants on whether they heard of prostate cancer ($p=1.0000$). There was a positive attitude on curability, advocacy and charitable work for prostate cancer.

CONCLUSION

There was limited awareness about prostate cancer although there was positive attitude to prostate cancer in this population. Health education on prostate cancer is still needed in the community.

Keywords: Attitude; Cancer; Knowledge; Nigeria; Prostate

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Introduction

Nigeria has a population of 173 million (2013) and therefore the most populous Black nation [1]. Five out of the six major African linguistic groupings are found in Nigeria [2]. A substantial proportion of Black people in the diaspora originated from Nigeria [3]. This study was carried out in Yola town, Adamawa state of Nigeria.

Prostate cancer is the commonest cancer among Nigerian men, accounting for

29.8% of all cancers in Men according to the GLOBACON statistics of 2020 [4]. The high incidence of prostate cancer in Nigeria is also reflected in other West African countries as well as among Afro Caribbean and Afro Americans whose ancestors are mainly West Africans that were translocated to the new world through the transatlantic slave trade and therefore share the same genetic similarity with West Africans [5]. A genetic wide association study (GWAS) carried out in



Nigeria (among the Bini tribe), Cameroun (among the Bamileke tribe) and in Jamaica has shown that men of West African ancestry have a much higher prevalence of 8q24 risk alleles than other populations of European and Asian ancestry[6]. This was corroborated in the PROCESS study carried in the UK, comparing prostate cancer incidences in Black Africans and Whites [7].

However, in Nigeria and other Black African countries, most patients present during the late stages of the disease. There is a need for education & advocacy on the disease. Hence, a cross-sectional survey was done involving the educated segments of the society because it is easier in terms of resources.

The objectives of the study are to ascertain the level of knowledge & attitudes towards prostate cancer as a disease from the educated segments in the community. This will help in planning educational & advocacy projects in future.

Materials and Methods

Approval for the study was sought from Yola South Local Government of Adamawa State, Nigeria. The study was carried out in 2014-2015. Questionnaires were administered to the following categories of men in the community: 1. Teachers. 2. Civil servants. 3. Health care workers in Yola Town.

Adult men 20 to 60 years old with good mental capacity were included. Women and Men <20 and >60 years old were not

included as well as doctors, surgical clinic staff and theatre staff. Doctors, theatre and surgical clinic staff were excluded because they were all expected to know details about prostatic diseases. Health care workers apart from theatre and surgical clinic staff were included to serve as comparators with other categories of educated people like teachers and civil servants.

The study involved a cross-sectional survey of educated segments of the society.

The tool for the study was a questionnaire, which has the following sections: biodata, educational attainment, basic knowledge of prostate and prostate cancer and then attitudes towards prostate cancer.

Basic data like age and educational attainment were displayed on bar charts. While answers to the questions from the knowledge and attitude domains were analysed as percentages and displayed on tables. Fisher's test was used in the comparison of the knowledge and attitude domains between the different categories of subjects. A P-value of ≤ 0.05 is considered significant. The P-value was calculated using the statistical package for social sciences (SPSS).

Results

Biodata

All the teachers were <40 years and all Health care workers were <50 years. 80% of civil servants were 40 to 60 years (Fig.1).

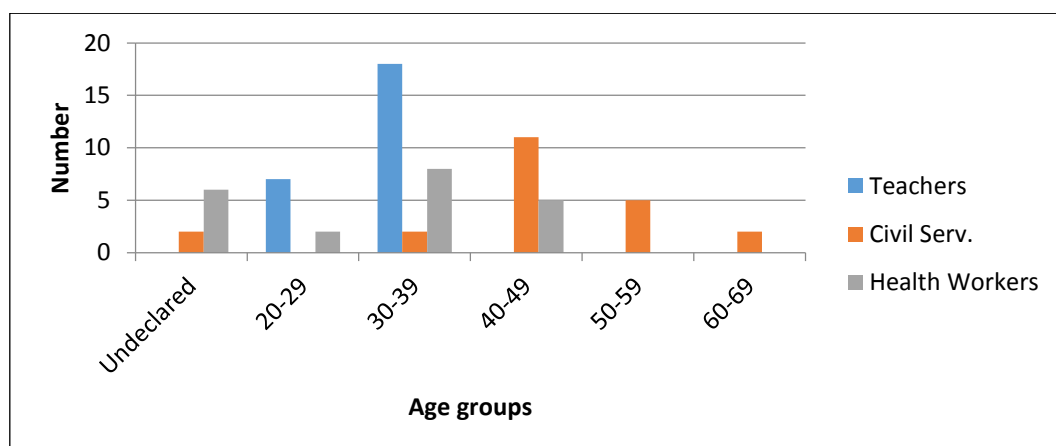




Figure 1: Age Distribution of Respondents.

Educational attainment

Seventy five per cent (75%) of all the 68 respondents had tertiary education (either a National Diploma or University degree). All have at least an ordinary level education (Fig. 2).

Basic knowledge of prostate cancer

Majority (90.5%) of health workers had heard of the prostate gland compared to 64% and 40.9% of teachers and civil servants respectively. More than half (52.4%) of health workers know the exact location of the prostate gland, while only about 20% of teachers and 18.2% of civil servants know the location of the prostate gland. Most (90.5%) of health care workers, 86.4% of civil servants, and 64% of teachers have heard of prostate cancer.

Many (85.7%) of health workers could list the basic diagnostic modalities of prostate cancer, but only about 4% and 13.6% of teachers and civil servants respectively could list them. In terms of treatment modalities, 81% of health workers could list them, while 13.6% of teachers and civil servants could list them (Table 1).

There were significant differences in knowledge of prostate and prostate cancer between health workers and civil servants, as well as health workers and teachers across all domains. The only exception was between health workers and civil servants when asked whether they heard of prostate cancer (p= 1.000). However, there was no significant difference in knowledge domains between teachers and civil servants.

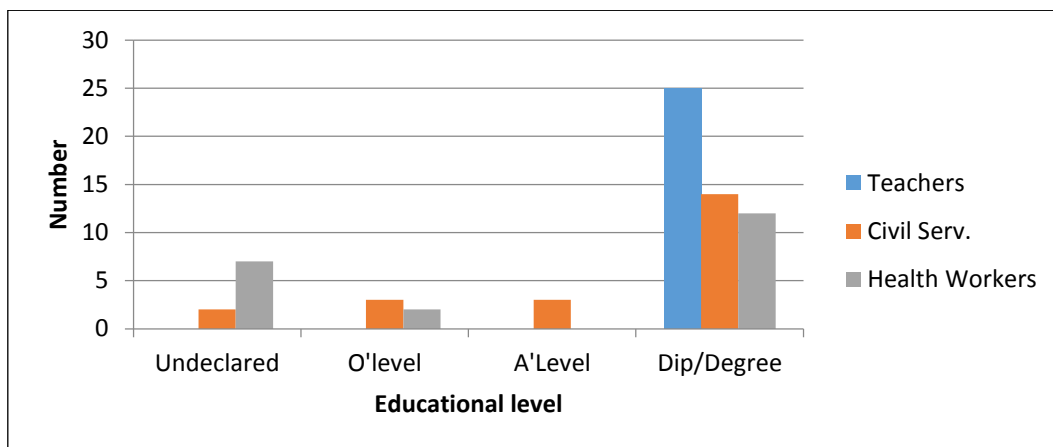


Figure 2: The Educational Level of Respondents.

Table 1: Knowledge of Prostate and Prostate Cancer.

Domain	Teachers					Civil servants					Heath workers				
	Yes	%	No	%	Total	Yes	%	No	%	Total	Yes	%	No	%	Total
Prostate gland	16	64	9	36	25	9	40.9	13	59.1	22	19	90.5	2	9.5	21
Prostate cancer	15	60	10	40	25	19	86.4	3	13.6	22	19	90.5	2	9.5	21
Prostate location	5	20	20	80	25	4	18.2	18	81.8	22	11	52.4	10	48.6	21
Diagnostics	1	4	24	96	25	3	13.6	19	86.4	22	18	85.7	3	14.3	21
Treatment	3	13.6	22	86.4	25	3	13.6	19	86.4	22	17	81.0	4	19	21



General attitude to prostate cancer

Most (95.2%) of health workers feel prostate cancer is a significant disease among blacks compared to 40% and 59.1% of teachers and civil servants. All health care workers felt Black men need health education on prostate cancer, while 80% of teachers and 86.4% of civil servants respectively felt the same way. Almost all civil servants (95.5%) would accept screening compared to 84% of teachers and 85.7% of civil servants. The perception of prostate cancer as a curable disease is high among all respondents, especially health workers. More than 90% of health workers and civil servants would consider advocacy or charity work related to prostate cancer, but only around two-thirds of teachers (Table 2).

The main significant difference in attitude related to the perception of prostate cancer as a significant disease in blacks between health workers and teachers ($p=0.001$), as well as health workers and civil servants ($p=0.0093$). There were also significant differences in attitude to advocacy and charity for prostate cancer between health workers and teachers ($p=0.0274$). There were no significant differences in attitudes between teachers and civil servants.

Discussion

The respondents are mostly young to middle-aged, educated adult men in the formal

employment sector. Even among health workers (other than doctors and theatre staff), only about half could define the exact location of the prostate gland in the body.

Awareness of prostate cancer in this study is comparable to a study done among University staff in Nsukka, Nigeria, where knowledge of prostate cancer is up to 71.2% [8]. It is also comparable to a study in the United States of America, where knowledge among black men of diverse backgrounds was 68.4% [9]. However, the proportion of teachers and civil servants who could list basic diagnostic and therapeutic modalities in prostate cancer management was small.

The higher motivation to advocacy/charity for prostate cancer among civil servants compared to teachers might be due to older age and higher perception of vulnerability of the former. Most would accept screening (Table 2). This is comparable to another study in Ilorin, North Central Nigeria, where 84% are even ready to pay for screening [10]. Another study has shown that the factors that influence Nigerian Men to undergo PSA testing are; the symptoms experienced, the influence of friends and relatives, older age associated with increased awareness, accessibility to testing services and the knowledge of the PSA test [11].

Table 2: Attitudes to Prostate Cancer.

Domain	Teachers					Civil Servants					Health workers				
	Yes	%	No	%	Total	Yes	%	No	%	Total	Yes	%	No	%	Total
Significance in Blacks	10	40	15	60	25	13	59.1	9	40.9	22	20	95.2	1	4.8	21
Health education	20	80	5	20	25	19	86.4	3	13.6	22	21	100	0	0	21
Acceptance of screening	21	84	4	16	25	21	95.5	1	45.5	22	18	85.7	3	14.3	21
Views on Curability	20	80	5	20	25	18	81.8	4	18.2	22	18	85.7	3	14.3	21
Advocacy & charity	17	68	8	32	25	20	90.9	2	9.1	22	20	95.2	1	4.8	21

Key: Green are positive answers (yes). Red are negative answers (no).



A significant proportion of all groups of educated workers (especially health workers) in the town felt prostate cancer is a significant disease among black men and health education is needed and

Apart from knowledge of prostate and prostate cancer, doctors and health workers should identify other barriers to health-seeking behaviour such as sociocultural factors, as a study among African American and Afro Caribbean men has shown that embarrassment of the digital rectal examination, as well as fear of impotence and incontinence, are barriers to acceptance of screening and treatment of prostate cancer [12].

Limitations

The limitation of the study is that informal sector workers with limited education are not included because of resources and logistics challenges to study them. Another study on informal sector employees is needed in future.

Conclusion

This study has shown that there is some limited knowledge of prostate cancer among the educated segments of the community. More health education on prostate cancer is needed in the community. However, respondents had a positive attitude to prostate cancer as shown by motivation towards screening and advocacy on prostate cancer.

Author contribution

The conception, design and conduct of the study were done by the SRA.

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Competing Interest

The author declares no competing interest regarding research, authorship and/or publication of this article.

References

1. **United Nations Department of Economics & Social affairs, Population Division.** World Population 2012. www.unpopulation.org
2. **Bernd Heine, Derek Nurse.** African Languages: An Introduction. Cambridge University press, Cambridge. August 2000. www.culturaldiplomacy/experienceafrica.
3. **GLOBACON 2020.** www.gco.iarc.fr
6. **Odedina FT, Akinremi TO, Chinegwundoh F, Roberts R, Yu D, Reams RR, et al.** Prostate cancer disparities in Black men of African descent: a comparative literature review of prostate cancer burden among Black men in the United States, Caribbean, United Kingdom, and West Africa. *Infect Agent Cancer.* 2009; 4(Suppl 1): S2.
7. **Murphy AB, Ukoli F, Freeman V, Bennett F, Aiken W, Tulloch T, et al.** 8q24 risk alleles in West African and Caribbean men. *Prostate.* 2012 Sep 1;72(12):1366-73.
8. **Ben-Shlomo Y, Evans S, Ibrahim F, Patel B, Anson K, Chinegwundoh F, et al.** The risk of prostate cancer amongst black men in the United Kingdom: the PROCESS cohort study. *Eur Urol.* 2008 Jan ;53(1):99-105.
9. **Adibe MO, Aluh DO, Isah A, Anosike C.** Knowledge, Attitudes and Perceptions of Prostate Cancer among Male Staff of the University of Nigeria. *Asian Pac J Cancer Prev.* 2017 Jul 27;18(7):1961-1966.
10. **Magnus M.** Prostate cancer knowledge among multi-ethnic black men. *J Natl Med Assoc.* 2004 May; 96(5):650-6.
11. **Ajape AA, Babata A, Abiola OO.** Knowledge of prostate cancer screening



among native African urban population in Nigeria. *Nig Q J Hosp Med.* 2009 Jul-Sep;19(3):145-7.

12. **Enaworu OU, Khutan R.** Factors influencing Nigerian men's decision to undergo prostate specific antigen testing.

Afr Health Sci. 2016 Jun;16(2):524-32. doi: 10.4314/ahs.v16i2.21.

13. **Parchment YD.** Prostate cancer screening in African American and Caribbean males: detriment in delay. *ABNF J.* 2004 Nov-Dec;15(6):116-20.