



Knowledge, Attitude and Screening Behaviour of Benue State University Male Students towards Prostate Cancer Awareness

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Abstract

The study investigated the influence of knowledge, attitude and screening behaviour of Benue State University Male Students towards prostate cancer awareness. Five research questions and research hypotheses guided the study. The study was a cross-sectional design utilizing a pretested 34-item Prostate Cancer Questionnaire (PCQ) (Cronbach's alpha of 0.62) to collect information about knowledge, attitude and screening behaviour regarding prostate cancer among Benue State University Male students Makurdi, Nigeria. Two hundred and forty-five participants were sampled for the study by systematic random selection of male students in Benue state university. Data analysis was done using mean and standard deviations while multiple regression analysis was used to test the hypotheses at 0.05 and 0.01 levels of significance respectively using SPSS 16.0 software. Result showed that the interaction of knowledge, attitude and screening behaviour significantly influenced prostate cancer awareness, knowledge ($\beta=0.76$; $P<0.01$), screening behaviour ($\beta=0.108$; $P<0.05$) and attitude ($\beta=-0.018$; $P>0.05$). Though attitude was not significant, their joint interaction significantly influenced awareness of prostate cancer. Demographic variables were not found to significantly influence prostate cancer awareness. The study provides conclusion for male students to be encouraged to follow health seeking behaviours and recommend that the government should design an intervention program through innovative health education strategies and include cancer education in school curriculum.

Keywords

Attitude, Knowledge, Prostate cancer, Screening behaviour

Background

Current trends in the prevalence of cancer morbidity and mortality in Nigeria has given precedence to this study. Several studies have revealed cancer as a public health problem and the second common cause of death in the developed countries and among the three leading causes of death in developing countries. A study reveal that prostate cancer has become the number one cancer in men with increasing incidence and morbidity in men of black African ancestry [1]. This statement is supported by the assertion that the incidence

and prevalence in black men is in multiples of those from other races in several studies; [2]. Further, Ogunbiyi et al. found in their study that prostate cancer has become the number one cancer in Nigerian men and constitutes 11% of all male cancers [3]. Their results further indicate that in spite of the absence of screening programs in Nigeria, the number of prostate cancer cases is on the increase.

Prevalence rates of prostate cancer within Africa show that Nigeria ranked first out of the nine countries with the highest prevalence of prostate cancer. Similarly, disease attitude expressed as Disability Adjusted Life Years (DALYs) lost to prostate cancer recorded for Nigeria for the year (2004) was 86,000, with the United States and India having 240, 000 and 110,000 respectively. In sub-Saharan Africa, Nigeria ranked first, with Democratic Republic of Congo and Uganda occupying the second and third places with 22,000 and 15,000 respectively. In that report, it was estimated that the age from which prostate cancer becomes significantly manifested is 45 years. There is 45.3-fold increase in prostate cancer reported between the age groups of 30-44 and 45-50 for age-specific total deaths for 2005 [4]. This implies that any health promotion and preventive health intervention must target those that are under 45 years of age.

Furthermore, deaths recorded from prostate cancer cases have been complicated by under-reporting and by cases that have not been diagnosed due to poor knowledge on the part of individuals with the condition and, probably, lack of structured guidelines to deal adequately with this health condition that has emerged in the health care system. A careful study of the disease shows that it is gradually taking a prominent position as an emerging epidemic in Benue State, Nigeria. This has provided the rationale for undertaking the present study.

From the foregoing, a study conducted by Atulomah et al. suggest that the level of knowledge about prostate cancer among males in Nigeria is low and their attitude and screening practice towards the disease is also low [5]. Treatment modalities for prostate cancer are complex, and the diagnosis of untreated or inadequately managed cases is often usually poor, especially in developing countries like Nigeria, considering the high cost of medication and surgical intervention required to treat patients with a diagnosed condition.

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Therefore, measures for controlling onset of prostate cancer and even other cancers is screening. According to Atulomah, et al. (2010), prostate screening among men has value in predicting how individuals are likely to respond if an intervention is designed to stimulate screening behaviour among men through innovative health education strategies emphasizing intensive cognitive and health promotion activities to improve their knowledge of the disease and the benefits of screening [5]. Screening is aimed at diagnosing disease at an early state before symptoms start. This makes cancer easier to treat and is likely to be curable [6]. Two tests are commonly used to screen for prostate cancer-Digital Rectal Examination (DRE) and Prostate Specific Antigen PSA test. DRE is when a doctor or nurse examines the prostate by putting a gloved, imbricated finger into the rectum to estimate the size of the prostate and feel for lumps or other abnormalities. PSA test measures the level of PSA in the blood. PSA is a substance made by the prostate. The level of PSA in the blood can be higher in men who have prostate cancer [7]. The only test that can fully confirm the diagnosis of prostate cancer is a biopsy; the removal of a small piece of the prostate for microscopic examination. However, prior to biopsy less invasive testing can be conducted [8]. Ultrasound (US) and Magnetic Resonance Imaging (MRI) are the two main imaging methods used for prostate cancer detection.

More so, for prostate screening among men, the health belief model has value in predicting how individuals are likely to respond if an intervention is designed to stimulate screening behaviour among men through innovative health education strategies emphasizing intensive cognitive and health promotion activities to improve their knowledge of the disease and the benefits of screening [5].

As at 2011, prostate cancer was the second most frequently diagnosed cancer and the sixth leading cause of cancer death in male worldwide [9]. Prostate cancer is fraught with both physical and psychological symptomatology. Depression, anxiety, stress, fatigue, pain and psychosocial factors all affects the patient with prostate cancer. Impotence, erectile dysfunction, sexual issues and incontinence in these patients complicate matters further. Depression has been strongly correlated to fatigue and pain as symptoms in prostate cancer [10].

According to Atulomah et al. 2010, levels of awareness about prostate cancer among men is low while the level of perception is just above average and screening behaviour is very low. Education has a role to play in prostate cancer related knowledge [11]. Using data derived from WHO documents, it has been possible to provide the necessary evidence for profiling prostate cancer in Nigeria as an emerging epidemic. Males are most susceptible to prostate cancer just as females are most susceptible to breast and cervical cancers. It is therefore imperative to explore the knowledge, attitude and the screening behaviour of Benue state university male students towards prostate cancer.

From the fore going therefore it could be postulated that:

- i. Knowledge will significantly influence prostate cancer awareness among male students of Benue State University.
- ii. Attitude will significantly influence prostate cancer awareness among male students of Benue State University.
- iii. Screening behaviour will significantly influence prostate cancer awareness among students of Benue State University.
- iv. Knowledge, attitude and screening behaviour will jointly, independently and significantly influence prostate cancer awareness among male students of Benue State University.
- v. Age, religion, educational level and marital status will jointly, independently and significantly influence prostate cancer awareness among male students of Benue State University.

Method

Design

The study employed a cross sectional survey approach in investigating the knowledge, attitude and screening behaviour of male students of Benue state university towards prostate cancer awareness.

Participants

The participants were two hundred and forty-five (245) male students of Benue state university. The participants who were selected from the university consisted of 205 (83.7%) singles, 31(12.7%) married, 2(0.8%) separated 5(2%) did not indicate their marital status their ages ranged from 18-52 years with the mean age of 25.37. 221(90.2%) indicated that they were Christians, 8(3.3%) were Muslims, 5(2%) were traditional worshipers, 1(0.4%) were from other religions while 10(4.1%) of the respondents did not indicate their religious affiliation. Also 7(2.9%) of the respondents were in 100 level, 35(14.3%) were 200 level, 115(46.9%) of the respondents were 300 level while 88(35.9%) were in 400 level. Importantly also, the data showed that 80(32.7%) of the respondents were from the faculty of social sciences, 25(10.2%) were from the faculty of management science, 30(12.2%) were from the faculty of Arts, 28(11.4%) were from the faculty of law 18(7.3%) were from the faculty of science, 42(17.1%) were from the faculty of education, also 21(8.6%) of the respondents were from college of health science while 1(0.4%) of the respondents did not indicate the faculty.

Instrument

The instrument used for the study was a questionnaire tagged: Knowledge, Attitude and Screening Behaviour Questionnaire (KASBQ). The first section assessed the demographic characteristics of the participants; these include age, marital status, religion, educational level and occupation. Section B of the questionnaire assessed knowledge about prostate cancer, section C assessed attitude towards prostate cancer while section D assessed screening behaviour towards prostate cancer. The prostate cancer questionnaire was adapted from Atulomah et al, 2010 having found to be culture friendly [5]. The reliability coefficient (Cronbach Alpha) of the prostate cancer questionnaire was 0.62.

Procedure

A total number of 250 questionnaires were administered to the participants in their various faculties (7 Faculties of Benue State University) with at least one department from each faculty represented. The researcher instructed the participants to complete all items on the questionnaire. The questionnaires were administered to participants who were cooperative, and willing to volunteer information. However, some were not willing, demanding for incentives. Out of the 250 questionnaires administered, 245 were properly completed and returned after 2 weeks. Therefore, 245 (98%) of the questionnaires were considered for analysis.

Data Analysis

The data gathered in this study was analyzed using statistical package for social science (SPSS version 16.0). In the SPSS, mean and standard deviations were used to describe the data while multiple regression analysis was used to measure the influence of the independent variables on prostate cancer awareness. The level of significance was 0.05 and 0.01 alpha levels.

Results

The mean scores of the respondents' demographic characteristics are shown in table 1 while a regression table for main and interaction effects of knowledge, attitude and screening behaviour towards prostate cancer is shown on table 2. Table 3 is a Regression table for main and interaction effects of demographic factors on prostate cancer awareness among Benue state university male students.

The above table reveals that 25.37 was the mean age of participants with a minimum of 18 and a maximum of 52 the SD was 4.084. Marital status had 1 as the minimum and 4 as the maximum and a mean score of 1.17 with a standard deviation of 0.457, the minimum of 1 was scored for religion and a maximum of 4, while the mean score was 1.09 with a Standard Deviation of 0.387. A minimum score of 1 was given to Educational level with a maximum of 4 and a mean score of 3.16 with 0.770 Standard Deviation. The scores for faculty

Table 1: Mean and Standard Deviation of the Variables.

Variables	Total Number	Minimum	Maximum	Mean	Standard Deviation
Age	220	18	52	25.37	4.084
Marital status	240	1	4	1.17	0.457
Religion	235	1	4	1.09	0.387
Educational level	245	1	4	3.16	0.770
Faculty	244	1	7	3.36	2.153

Table 2: Regression table for main and interaction effects of knowledge, attitude and screening behaviour of Benue state university male students towards prostate cancer awareness.

Variables	R	R ²	F	β	t	Significance
Constant	0.807	0.650	136.464		-4.706**	0.000
Knowledge				.761	16.328**	.000
Attitude				-.018	-.417	.677
Screening behavior				.108	2.448*	.015

Note: * = P<.05; ** = P<.01.

Table 3: Regression table for main and interaction effects of demographic factors on prostate cancer awareness among Benue state university male students.

Variables	R	R ²	F	β	t	Significance
Constant	.164	.027	1.356		2.728	.007
Age				.026	.343	.732
Marital Status				.146	1.823	.070
Religion				-.069	-.890	.375
Educational Level				.072	.995	.321

show a minimum of 1 and a maximum of 7 with 3.36 mean score and 2.153 standard Deviation.

The results of regression analyses revealed that among the variables tested in the study, knowledge ($\beta=0.761$; $P<.01$) significantly predisposes someone to prostate cancer which is consistent with hypothesis one of the study. However, attitude ($\beta=-.018$; $P>.05$) negatively but significantly influences prostate cancer, consistent with hypothesis two of the study. Screening behaviour ($\beta=.108$; $P<.05$) was found to significantly influence prostate cancer consistent with hypothesis three. This result indicates that knowledge, attitude and screening behaviour jointly and significantly influence prostate cancer awareness which is consistent with hypothesis four of the study.

The results of regression analyses revealed that all the demographic factors were not found to influence prostate cancer awareness in the study. Hypothesis five was not supported by the result.

Discussion

This result indicate that knowledge and screening behaviour of male students of Benue state university will influence or predispose them to prostate cancer. Demographic variables were found not to influence prostate cancer in the study.

An examination of results of regression analysis reveals that knowledge contributed the greatest percentage to the influence of prostate cancer awareness among variables measured in this study. This finding is supported by Asuzu et al. who evaluated the University of Ibadan teaching and non-teaching staff and concluded that education has a role to play in prostate cancer related knowledge [11]. This finding also agrees with Atulomah et al. and Ukoli et al. in their study on specific knowledge related to prostate cancer which reviewed that the specific knowledge related to prostate cancer is low [12]. This could mean that participants who are students have the knowledge of prostate cancer because of their course of study while some other ones do not have this knowledge due to the course they are studying. This implies that for those that have knowledge about prostate cancer as a result of their course of study, they are influenced positively (that is they are less prone to having prostate cancer) while those who do not have knowledge about prostate cancer due to the course of study are influenced negatively (that is they are prone to having prostate cancer).

Regression result also reveals that attitude contributed negatively to the influence of prostate cancer. This finding is contrary to the findings which indicate that men show an attitude of worry about prostate cancer diagnostic outcomes when they had PSA testing with urologic symptoms at the time of the test [13]. Participants in this study indicate no worry about vulnerability to prostate cancer even though they have knowledge about prostate cancer, this is probably because they have not yet attained the at risk age.

Participants in the study indicated low level of screening behaviour for prostate cancer. Results show that screening behaviour contributed 10.8% influence to prostate cancer. This is in support to Etziomi et al. finding which indicate that screening account so much of observed drop in prostate cancer mortality [14]. This finding is in support of the result of Atulomah 2010, which shows that screening behavior has value in predicting how individual are likely to respond if an intervention is designed to stimulate the behaviour among men through innovative health education strategies.

The interaction of knowledge, attitude and screening behaviour to the influence of vulnerability to prostate cancer was statistically significant even though attitude was not significant, their interaction effect was significant. Regression results of this study reveals that the interaction of knowledge, attitude and screening behaviour significantly predispose participants to prostate cancer. This shows that the level of knowledge about prostate cancer will determine the attitude you can put towards the disease which will consequently determine your screening behaviour towards prostate cancer. From this study, knowledge contributed 76.1%, attitude 1.8%, while screening behaviour contributed 10.8% towards vulnerability to prostate cancer. Support for this finding can be traced to Asuzu and Obeke, (2012) whose study suggested the need to organize enlightenment programs that will encourage men to go for screening. The study also reveals that education has a role to play in prostate cancer related knowledge. Atulomah et al. (2010), also asserts that the level of awareness about prostate cancer among men is low while the level of perception is just about average and screening behaviour is very low; accounting for the high prevalence rate of prostate cancer.

Finally, the assertion that, age, religion, educational level and marital status will jointly, independently and significantly influence prostate cancer was not supported by the study. This is likely to be as a result of the fact that the participants in this study are not at the at risk age in terms of the age which was found to contribute only 2.6%, also for the marital status, there was a skewed result since majority of the participants were below the age of marriage. Although marital status contributed 14.6%, it is found not to influence vulnerability to prostate cancer in the study. For educational level, all the participants are undergraduates studying at different levels; therefore, they are all assumed to having a good educational background. Generally, the joint and independent influence of these demographic variables is seen to have been as a result of the skewed part of the variables in the study. This finding is contrary to the work of Webb, Linda, & James, (2006) which utilized focus group discussions and found the group expressing apprehensions towards prostate cancer screening, including feelings of vulnerability, compromised manhood, and discomfort [15]. They also shared motivators for screening, including female significant others, physician recommendations, early education and church influence. For Webb et al, (2006), eligibility for participation criteria for males was age; ≥ 40 years. In their study, Webb et al made use of female groups and male groups, both of which voiced the influence of female significant others, seen as key motivators for their husbands. According to their study education was very important factor and the church was mentioned as key to disseminating information on prostate cancer screening and encouraging members to be screened.

The implication of the findings in this study is that, there is a great influence of knowledge and screening behaviour towards prostate cancer. This means that the more knowledge an individual has on the disease, the less chances of contacting the disease and that screening behaviour, which is getting screened or not screened could predispose someone to prostate cancer. The attitude of men towards

the disease must not be over emphasized. The findings in this study imply that knowledge, attitude and the screening behaviour of men towards prostate cancer could influence the disease either positively or negatively in the sense that, one would have minimal chances of developing the disease and negatively in the sense that, there would be maximal chances of developing the disease. The result from this study can be generalized among people who have not attained the at risk age for prostate cancer.

Although this study contributes significantly to literature, it has some limitation. The participants were only sampled from Benue state university makurdi. It would have been beneficial if participants were sampled across all universities in Benue state. The study also did not involve female significant others since it was carried out among students who are assumed majorly to be singles and because the study was carried out among students, most of them had not attained the at risk age.

Recommendations

From the findings of this study, the following recommendations are made: First, the findings revealed that knowledge influenced prostate cancer vulnerability pointing to the need to design an intervention programme through innovative health education strategies by the government to improve knowledge about prostate cancer. Education stakeholders should also include cancer education in the curriculum at all levels of education.

Second, the findings revealed that attitude did not influence prostate cancer since there are few attitudes that can predispose one to prostate cancer, yet there is a need for regular medical checkup by all in order to be sure of being free from risk factors for prostate cancer, including genetics.

Third, the findings also point to the need to do regular screening. In order to achieve this, the study recommends health promotion campaigns that emphasize prostate cancer screenings which should be organized regularly by the government through the ministry of health and other NGOs. Fourth, the finding points to the need to create awareness on prostate cancer through religious bodies, the mass media, sporting events and school curriculum. Lastly, associations should be formed which could sensitize men about prostate cancer.

Conclusions

The results of this study suggest that knowledge, attitude and screening behaviour of male students influences prostate cancer vulnerability. Thus, the government and other stakeholders should provide adequate sensitization campaigns on prostate cancer. The

general finding of the study is that the level of knowledge, attitude and screening behaviour is not encouraging; therefore, all males are encouraged to key into health seeking behaviors in order to help curb the alarming rate of prevalence of prostate cancer in Nigeria.

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