Original Article Research Journal of Health Sciences

Assessment of the knowledge and perception of prostate cancer and uptake of screening among public transport drivers in selected motor parks in Akure, Ondo State

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Abstract

Objective: Prostate cancer is one of the most common cancers affecting men globally. The objectives of this study were to assess the knowledge of prostate cancer among public transport drivers, the perception of prostate cancer among public transport drivers and to evaluate the uptake of prostate cancer screening among public transport drivers**.**

Method: A cross-sectional study was conducted using a self- structured questionnaire with Yoruba and Igbo version was used to elicit information from the drivers. Two hundred and thirty four participants (234) were recruited for the study and SPSS version 23 was used to analyze the data collected.

Results: The participants mean age being ±46 years 5.1 standard deviation and a good number of them were married, Majority of the public transport drivers had poor knowledge of Prostate Cancer and screening and the poor knowledge could be traced to low level of education among the participants. A significant proportion of the participants however, exhibited poor knowledge and negative attitudes and perceptions of prostate cancer screening and treatment. The uptake rate for prostate cancer screening among the participants was 18% which is relatively low. This study was an eye opener as it revealed significant low knowledge, perception of prostate cancer and relatively low prostate cancer screening practice The findings in this study is an indication for a need to increase public sensitization campaigns on prostate cancer and its screening tests to improve public understanding about the disease with the aim of prevention and early detection .

Conclusion: The study showed considerable source of participant's information on PCa to be from health workers and social media. .However, there is considerable low screening uptake. Therefore, health education should target people with lower educational level and whose workload is strenuous this in turn will increase the uptake of screening of Prostate Cancer.

Key words: Knowledge, perception, prostate cancer (PCa), prostate cancer screening

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Received: November 2, 2020 *Accepted: October 10, 2022* *Published: June 30, 2023*

http://dx.doi.org/10.4314/rejhs.v11i2.2

Article Original Research Journal of Health Sciences

Evaluation de la connaissance et de la perception du cancer de la prostate et adoption du dépistage chez les conducteurs de transports en commun dans des parcs automobiles sélectionnés à Akure , dans l'état d'Ondo

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Resume

Objectif de l'étude: Le cancer de la prostate est l'un des cancers les plus fréquents chez l'homme dans le monde. Les objectifs de cette étude étaient d'évaluer la connaissance du cancer de la prostate chez les conducteurs de transport en commun, la perception du cancer de la prostate chez les conducteurs de transport en commun et d'évaluer l'adoption du dépistage du cancer de la prostate chez les conducteurs de transport en commun **.**

Méthode de l'étude : Une étude transversale a été menée à l'aide d'un questionnaire auto-structuré dont la version Yoruba et Igbo a été utilisée pour obtenir des informations auprès des conducteurs. Deux cent trente-quatre participants (234) ont été recrutés pour l'étude et la version SPSS 23 a été utilisée pour analyser les données recueillies.

Résultat de l'étude: L'âge moyen des participants était de ± 46 ans 5,1 écart-type et un bon nombre d'entre eux étaient mariés, la majorité des conducteurs de transports publics avaient une mauvaise connaissance du cancer de la prostate et du dépistage et cette mauvaise connaissance pouvait être attribuée au faible niveau d'éducation des participants. Cependant, une proportion importante des participants présentaient une mauvaise connaissance et des attitudes et perceptions négatives du dépistage et du traitement du cancer de la prostate. Le taux de participation au dépistage du cancer de la prostate parmi les participants était de 18 %, ce qui est relativement faible . Cette étude a été une révélation car elle a révélé une faible connaissance, une perception du cancer de la prostate et une pratique relativement faible du dépistage du cancer de la prostate. Les résultats de cette étude sont une indication pour un besoin d'augmenter les campagnes de sensibilisation du public sur le cancer de la prostate et ses tests de dépistage afin d'améliorer la compréhension du public sur la maladie dans un but de prévention et de détection précoce .

Conclusion: L'étude a montré que la source considérable d'informations des participants sur l'APC provenait des agents de santé et des médias sociaux. .Cependant, le recours au dépistage est considérablement faible. Par conséquent, l'éducation à la santé devrait cibler les personnes ayant un niveau d'éducation inférieur et dont la charge de travail est intense, ce qui, à son tour, augmentera le recours au dépistage du cancer de la prostate.

Mots-clés : Connaissance, perception, cancer de la prostate (CP), dépistage du cancer de la prostate.

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Received: November 2, 2020 *Accepted: October 10, 2022* *Published: June 30, 2023*

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INTRODUCTION

Prostate cancer is the number one cancer in men both in incidence and mortality in Africa, constituting 40,000(13%) of all male cancer incidences and 28,000(11.3%) of all male cancer-associated mortalities (1).

They were more than 1.4 million new cases of Prostate cancer in 2020 across the globe and the fourth world most commonly diagnose cancer in the world. Guadeloupe had the highest rate followed by Martinique. (1) In Nigeria, Prostate cancer is one of the most commonly diagnosed cancer among men (2).Nigeria ranked first out of nine countries with the highest prevalence of prostate cancer in Africa. Nigeria ranked first, with democratic republic of Congo and Uganda.(2)In that report, it was estimated that the age groups of 30-44 and 45-50 for age specific totals deaths for 2005 (2). This implies that any health promotion and preventive measures must focus on the age group above 40 years of age.

The specific causes of prostate cancer remain unknown. Whilst the primary risk factors include age and family history, ethnicity, smoking, world area, diet, other factors associated with the cancer include hormonal imbalances, the living and working environment, lifestyle, exposure to certain medications, sexually transmitted infections and men's health seeking behavior (3).

The probability of being diagnosed with cancer is higher in developing countries. This has been attributed mainly to poor awareness, inadequate health education and lack of screening program for prostate cancer, poor health care centers or facilities, poverty, paucity of specialist urological care (4). In developing countries, it may be less common however its incidence and mortality has been on the rise, because there have been neither specific policies nor effective strategies for controlling the disease. A high morbidity and mortality of this disease has been confirmed and with annual death rate at 20,000and with a hospital incidence of 127/100,000(3)

It has been confirmed through many studies carried out that there is awareness and knowledge deficit about prostate cancer and the available treatment options and prevention (5,6). A majority of these studies focused on several knowledge areas such as incidence, prevalence, risk factors, signs and symptoms, relative risk, anatomy and function of the prostate gland, screening and early detection options, treatment availability and side effects associated with treatment.

Furthermore, findings from the literature suggest that income, age, positive family history, education, and access to care are associated with an individual's knowledge about prostate cancer. Therefore, it is important to assess their knowledge about prostate cancer as well as its correlates, so that future interventions can be drawn from this knowledge to inform their decision-making processes regarding prostate cancer

Previous studies have shown that the whole body vibration that a driver experiences while driving can increase the risk of prostate cancer because vibrations prompts the body to produce more testosterone which is a known risk factor for prostate cancer (6).While testing men who already had prostate cancer it was determined that drivers were four times more likely to be diagnosed with highly aggressive prostate cancer (7). Checking through the incidence rates of prostate cancer, it was observed that majority of the Nigerian population have little knowledge of this disease condition. This lack of knowledge does not allow the men above 45 years of age to know that they are more at risk than the younger men. The uptake of the prostate cancer screening test has been associated with different factors and are unemployment, financial status, insufficient health promotion and education of the public. Hence the need to carry out this research among the public transport drivers in some selected Motor Park in Akure.

However, the lack of knowledge on the disease and the low uptake of routine screening among men most at risk of developing prostate cancer compounds the problem. The objectives of the study were to:

1. assess the knowledge of prostate cancer among public transport drivers
2. assess the perception of prostate cancer among public transport drivers
3. determine the uptake of prostate cancer screening among public transport drivers

MATERIALS AND METHODS

A descriptive, cross-sectional study conducted to assess the knowledge and perception of prostate cancer among public drivers and the uptake of prostate cancer screening in selected Motor Parks in Akure. A self- structured questionnaire with Yoruba and Igbo Version was used to elicit information from the drivers. The selection of participants was done using proportionate sampling because they are composed of several sub groups and purposive sampling with respect to participants

that were readily available at the different settings and are high in number at the selected motor parks. The study objectives were explained to participants, and written and informed consent was obtained and other ethical consideration was followed. Demographic information including age, marital status, education, religion and tribe. It also collected data on family history of cancer as well as knowledge, practice and attitudes towards prostate cancer screening. Data collected during the study were checked for completeness. Frequency tables and graphs were generated for relevant variables. The data were analysed using Statistical Package for Social Sciences (SPSS) version 23.The Yaro Yamane (1967) formula was used to calculate the sample size for this study which was Two hundred and thirty four (234) public drivers who were recruited proportionately in selected motor parks in Akure. The selected motor parks were selected because more people ply the roads often and the reason for more drivers. Content validity of the instrument was ensured through a thorough review of literature and the presentation of the instruments to experts in the field of study for assessment. The instrument was also made reliable by using a test-retest method involving administration of the copies instrument to twenty five (25) participants from Ado Ekiti (New Motor Park) to control bias. The reliability coefficient was 0.80 which showed the instrument was reliable. The questionnaire was made up of four sections which are Section A- Demographic data, Section B-knowledge of prostate cancer, Section C-perception of prostate cancer, Section D-uptake of screening. An approval was given to conduct the study by Ondo State Research and Ethics Committee. The SPSS version 23 was used to analyze the data collected.

RESULT

A total of 234 questionnaires were retrieved for analysis putting the response rate at 98.2 percent. The participants' age ranged between 31- 50 years: mean age being ±46 years 5.1 standard deviation. Fifty five (23.9%) and 78(33.9%) of the participants were single and married.

The socio-demographic characteristics in comparison with the knowledge of the participants.

The age of the participants with good knowledge are between 30.4 % (31-40) and 32.1% (40-51) also the participants with level of education have a significant effect on the level of knowledge (19.6% and 13.0%) for primary and secondary education respectively.

Majority of the participants are Christians who claimed they were informed in their different places of worship about PCa.

Knowledge of Prostate Cancer

The study revealed that 139 participants (60.4%) had poor knowledge while 91 participants (39.5%) had good knowledge of prostate cancer. Information of Pca from Health workers which constituted a larger percentage of (47.8%) and social media (43.5%) constituted a major source of information on the knowledge and awareness of prostate cancer. One hundred and thirty participants (56.5%) could not identify the signs and symptoms of PCa One hundred and thirty nine participants (60.4%) had no formal education while 45(19.6%) had primary school education.

The socio-demographic characteristics in comparison with the perception of the participants.

The perception of participants in comparison with age showed that 60.4% with no formal education revealed that that PCa was caused by the gods.

Perception of Prostate Cancer

Seventy one participants (30.8%) and 56(24.35%) disagreed and strongly disagreed that smoking and alcohol consumption are some of the contributing factors to contacting P Ca. Meanwhile, 88 (38.2%) participants agreed to that statement. Eighty nine of the participants disagreed that early check-up can help to identify and treat the condition, It is interesting that majority of the participants still believed that P Ca is caused by the gods.The 18% of the participants had the screening because of three main reasons which are Firstly, regular physical checkups due to pressure by family members to conduct the test and secondly prompted by local signs and symptoms, lastly due to prostatic infections and benign prostatic hyperplasia.

Comparison of socio-demographic characteristics with the uptake of prostate cancer screening among public drivers

Firstly, regular physical checkups due to pressure by family members to conduct the test and secondly prompted by local signs and symptoms, lastly due to prostatic infections and benign prostatic hyperplasia (BPH).18% of the participants have had to screen for PCa and this

was as a result of the aforementioned reason and also reflected on their level of education and Religion(6% and 12% of the participants that screened have secondary level of education and are religious leaders).It was found out that tribe of the participants had nothing to do with the uptake of PCa screening.

Uptake of prostate cancer screening among public drivers

The findings revealed that 18% (42) participants had gone for PCa screening before due the these reasons: Firstly, regular physical checkups due to pressure by family members to conduct the test and secondly prompted by local signs and symptoms, lastly due to prostatic infections and benign prostatic hyperplasia

DISCUSSION

This study adopted descriptive design to assess knowledge and perception of prostate cancer and uptake of prostate cancer screening among public transport drivers in selected motor parks Akure. Majority of the public transport drivers had poor knowledge of PCa and this accounts for 139(60.4%).the poor knowledge could be traced to the participant's low level of education as most of them had no formal education. Education plays an important role in awareness and assimilation of information at every given time. It was also observed through this research that educational achievement was also one of the key factors affecting the knowledge and perception concerning prostate cancer. The findings of this study ascertained that the drivers with higher level of education were the participants who had the good knowledge and perception of prostate cancer. This finding is similar to the study conducted by Kinyao & Kishoyina (2018) (9). In their study on native Nigerians found out that 78.8% have never heard any information on cancer of the prostate. Eight five of the participants believed that good personal hygiene and good nutrition are some of the ways to prevent PCa. This implies that there are still some of the participants that well aware of PCa. The findings of this study is also similar to a study that was conducted at Oyo State among older men using a cross sectional study which made use of a multi-stage sampling techniques to assess the knowledge, awareness, and screening practices among older men regarding prostate cancer: The overall mean knowledge of prostate cancer causation, treatment and prevention was 5.8% out of a maximum of 16.This is also in contrast to a study conducted among the staff of University of Nigeria. Some have appreciable knowledge and a positive attitude with regard to prostate cancer. A significant proportion of participants however, exhibited poor knowledge and negative attitudes and perception of prostate cancer (11).

The knowledge, attitudes and practices regarding prostate cancer was studied among the men in Uganda by selecting 545 men aged 18-71 years. The study revealed that majority of the respondents 324(59.4%) had heard about prostate cancer. The fact that majority of the participants have heard of PCa from health workers is commendable because it shows the extent of sensitization the health workers have put in place and social media is another important source of information of the participants. This is obviously different from a study conducted by Awosan et al., (2018) (12). A survey on the awareness of PCa and its screening among men attending the outpatient clinics of a tertiary health centre in Lagos, Nigeria found that 8.9% of the participants got information of PCa from health workers which is commendable (12).

Majority of the participants had low perception of Prostate Cancer (PCa) as this is seen in most of the participants perception that P Ca is caused by the gods .Furthermore a good number of the participants did not believe that smoking and alcohol predispose men to PCa, despite the poor perception from the participants a good number believed that a diet rich in fruits and vegetables could prevent PCa. The proportion of participants with positive perception is low (4.3%) were aged 51-60 and had secondary school education. Findings also corroborates with the findings from a study on the perception of prostate cancer among male staff of University of Nigeria by(13) the findings found out that male staff with tertiary degree constituted the majority of respondents who had positive perception of prostate cancer screening and treatment. More than three-quarter (79.7% .n = 239.0) of those with positive perception were academic staff. These two findings gave out the assertion that high knowledge of PCa is associated with good perceptions and positive attitude towards the Screening vice versa.

The uptake rate for prostate cancer screening among the participants was 18% which is relatively low this is in consonant to studies in Taiwan that reported the uptake rate to be between 12.4% and 29.4% (13). Similarly, finding in a study among Tanzanian men on the uptake of PCa screening which showed relatively low level(14).Some Qualitative studies

have found fear of cancer, lack of knowledge, embarrassment during screening and perceived low risk were barriers, while family history of prostate cancer, urinary symptoms and physician's recommendation motivated the participants to go for screening. There was a high and inaccurate expectation among the participants that prostate cancer would be very likely to cause impotence and sexual dysfunction. This is a popular reason for not screening for Prostate cancer as seen among men in a study carried out in Nigeria (Adesunloye, 2018). In addition, some researchers have identified sexual dysfunction as a sensitive issue for black men, which discourages their involvement in prostate cancer screening (14). There is room for further studies to increase awareness and assess lived experience of the public drivers. Also a mixed method design should be approach to elicit and back up data from the public drivers.

CONCLUSION

Results from the study show that the low level of formal education among a good number of the participants hada great impact on their knowledge and perception and eventually the uptake of PCa screening. The source of information of Prostate Cancer (PCa) is commendable because Health workers play an important role However, this needed to be improved upon to encourage better uptake of PCa screening.

Government, Health workers and other sectors should increase their effort on making sure the knowledge and perception of PCa is harnessed through quality health education and sensitization and this will consequently lead to uptake of screening bymen that are predisposed to PCa due to their occupation. There should be substantial policies guiding Pca screening and uptake. Also the knowledge of the masses should be updated periodically by nurses, doctors and other concerned health workers and be evaluated using educational programs to teach on early detection and prompt treatment.

Acknowledgements: The authors of this research work wish to appreciate the Public transport chairmen and drivers for giving us the opportunity to be heard and creating an enabling environment for the conduct of the study.

Conflict of Interest: The authors hereby declared that there was no conflict of interest among them.

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Table i: Number of drivers in their proportionate sample

Units		Number of drivers	Proportionate sampling
1.	Ado Ekiti drivers	52	43
2.	Ido and oye drivers	35	20
3.	Lagos drivers	65	50
4.	Ondo drivers	45	36
5.	Ore drivers	48	36
6.	Sunshine State Transport	60	49
Total		305	234

Table ii: Demographic data of the participants

Variables	Parameters	Frequency (230)	Percentage (100%)
Age	20-30	40	17.3
	31-40	70	30.4
	41-50	74	32.1
	51-60	46	20.0
Marital status	Single	55	23.9
	Married	78	33.9
	Divorced	47	20.9
	Separated	50	21.7
Religion	Christianity	100	43.5
	Muslim	61	26.5
	Tradition	45	19.6
	None	24	10.4
Ethnicity	Yoruba	150	65.2
	Igbo	44	19.1
	Hausa	14	6.1
	Other	22	9.6
Education level	None	139	60.4
	Primary	45	19.6
	Tertiary	30	13.0
	Other qualification	16	6.9

Table iii: Knowledge of Prostate Cancer among public transport drivers

Variables	Parameters	Frequency (230)	Percentage (%)
Have you heard about prostate cancer before?	Yes	91	39.5
	No	139	60.4
Is prostate cancer preventable?	Yes	122	53.0
	No	108	46.9
One of the functions of prostate is to secret fluids that carries sperm	Yes	115	50
	No	115	50
Do you believe prostate cancer to be a serious disease condition?	Yes	130	56.5
	No	100	43.4
Can prostate cancer be inherited?	Yes	101	43.9
	No	129	56.0
Is prostate cancer a common disease?	Yes	130	56.5
	No	97	42.1
Can you identify the signs and symptoms of prostate cancer?	Yes	100	43.4
	No	130	56.5
Do you think prostate cancer is preventable?	Yes	105	45.6
	No	125	54.3
Regular screening, good personal hygiene and good nutrition are some important ways to prevent it?	Yes	85	36.9
	No	65	28.8
	Indifferent	80	34.8
If yes, what is your source of information concerning prostate cancer?	Health workers	110	47.8
	Social media	100	43.5
	Others	20	8.7
Do you know about prostate cancer screening?	Yes	39	16.9
	No	141	61.3
	Indifferent	50	21.7

Table iv: Summarized knowledge score of PCa

Knowledge of PCa	Good	9	39.5 %
	Poor	139	60.4%

Table v: Perception of Prostate Cancer among public transport drivers

Variables	Parameters	Frequency (230)	Percentage (100%)
Consumption of fruits and vegetables can prevent PCa	Strongly agree	65	28.2
	Agree	61	26.5
	Indifferent	30	13.0.
	Disagree	54	23.4
	Strongly disagree	20	8.6
Smoking and alcohol consumption are Some of the contributing factors of Pca	Strongly agree	45	19.6
	Agree	43	18.6
	Indifferent	15	6.5
	Disagree	71	30.8
	Strongly disagree	56	24.3
Early check -up can help to detect prostate cancer	Strongly agree	10	4.3
	Agree	32	13.9
	Indifferent	21	9.1
	Disagree	67	29.1
	Strongly disagree	89	38.7
Pca is an caused by the gods and herbs are better in curing it	Strongly agree	85	36.9
	Agree	67	29.1
	Indifferent	-	-
	Disagree	46	20.0
	Strongly disagree	32	13.9
Pca will likely cause impotence and sexual dysfunction	Strongly agree	105	45.6
	Agree	67	29.1
	Indifferent	-	-
	Disagree	41	17.8
	Strongly disagree	25	10.8

Table vi: Uptake of PCa screening by participants 18% (42)

Trans-rectal Ultrasound	6%(14)
Digital rectal Examination	8%(18)
Prostate Specific Antigen	4% (10)

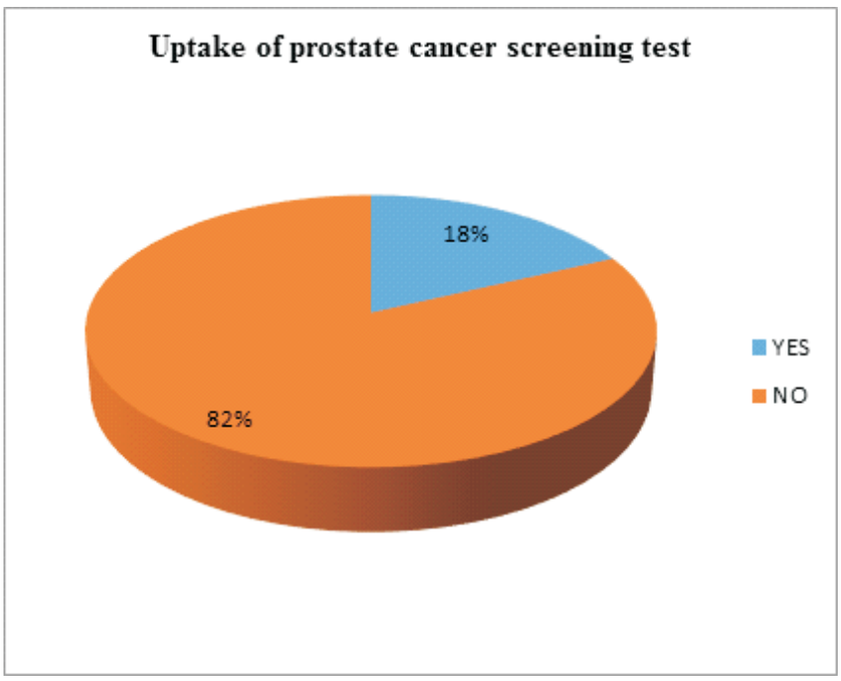

Figure i: Uptake of prostate cancer screening among public drivers