

KNOWLEDGE OF PROSTATE PROBLEMS AMONG ADULT MEN IN IDEMILI NORTH LOCAL GOVERNMENT AREA OF ANAMBRA STATE

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Abstract: Prostate cancer is the leading cancer in males in Africa, and this is both in terms of incidence and mortality. This study determined the knowledge of prostate problems among adult men population of 219,223 in Idemili North Local Government Area of Anambra state. To guide the study, four research questions were used and four hypotheses were formulated and tested at 0.05 level of significance. It is descriptive survey design and the sample size for this study comprised 250 adult men of over the age 40 years who are government workers (GW) and non-government workers (NGW) in Idemili North LGA. The data for the study was collected with a structured questionnaire designed by the researcher and titled "Prostate Problems Knowledge Test (PPKT). The reliability coefficient of the validated instrument was found to be 0.75. Research questions were answered with percentage, mean and standard deviation, and hypotheses were tested using analysis of variance (ANOVA) statics at 0.05 level of significance. The findings show that some adult men in Idemili North Local Government Area had high knowledge of prostate problems while others have an adequate average knowledge of prostate problems regardless of age differences. Based on the findings and conclusions, recommendations among others was made that it is necessary to organize public awareness campaigns to educate adult men in Idemili North Local Government Area about prostate problems, regardless of age, to provide occupational-based education to government workers, as they had lower mean knowledge than non-government workers, to engage with community leaders and organizations to promote prostate health awareness and education.

1. INTRODUCTION

As men age, the risk of prostate problems increases, including prostatitis (prostate inflammation), benign prostatic hyperplasia (BPH; enlarged prostate), and prostate cancer (Smith et al., 2020). Although one prostate disorder does not typically lead to another, it is possible to have multiple conditions simultaneously. A healthy prostate functions without drawing attention to it (American Cancer Society, 2022). The World Health Organization (WHO) emphasized the significance of cancer awareness on World Cancer Day, stating that individuals' and communities' knowledge and understanding of cancer play a crucial role in preventing, detecting, and treating the disease (World Health Organization, 2011). In fact, research has shown that cancer awareness is a key factor in improving cancer outcomes (WHO, 2019). Moreover, a recent study highlighted that enhancing cancer literacy can lead to earlier detection and treatment, ultimately reducing cancer mortality rates (Globocan, 2020).

The World Health Organization (WHO) emphasizes that the escalating cancer epidemic in Sub-Saharan Africa can be reversed if government, communities, and other partners collaborate to raise awareness about the disease and reduce its risk factors through prevention and early detection strategies. The WHO also states that between 30–50% of cancers can currently be prevented by avoiding risk factors and implementing existing evidence-based prevention strategies. The WHO also highlights the importance of early detection in cancer mortality reduction (World Health Organization, 2022). When identified early, cancer is more likely to respond to effective treatment, resulting in a greater probability of surviving, less morbidity, and less expensive treatment. In 2013, the WHO launched the Global Action Plan for the Prevention and Control of Non-communicable Diseases 2013-2020, aiming to reduce premature mortality from cancer, cardiovascular diseases, diabetes, and chronic respiratory diseases by 25 percent by 2025, (World Health Organization, 2024).

Prostate problems, including prostate cancer, benign prostatic hyperplasia, and prostatitis, are a significant public health concern globally, with a high incidence and mortality rate among adult men (World Health Organization, 2020). In Nigeria, prostate cancer is the second leading cause of cancer deaths among men, with a high incidence rate of 57.4 per 100,000 men (International Agency for Research on Cancer, 2020). Further more, Ntekim et al., (2023) in their study concluded that Prostate Cancer is the second most common cancer in young Nigerian men aged 55 years. Further findings suggest that there is a rising incidence and high prevalence of prostate cancer in Nigeria and advanced prostate cancer is most common at diagnosis and the mortality rate is high, as a result of this finding, there is need for improved strategies and policies for early detection of prostate cancer in Nigeria (Iheanacho & Enechukwu, 2024). Ariyo et al., (2024), in their study on the assessment of knowledge and perception on prevention of prostate cancer among male staff in achievers university, owo, ondo state, Nigeria concluded that health awareness programs should be reinforced to promote awareness and educate people about prostate cancer on a regular basis. Adibe et al., (2017) in their study of the Knowledge, Attitudes and Perceptions of Prostate Cancer among Male Staff of the University of Nigeria found out that some of the staff of the University of Nigeria have appreciable knowledge and a positive attitude with regard to prostate cancer, however, a significant proportion of staff exhibited poor knowledge and negative attitudes and perceptions of prostate cancer screening and treatment. In a study of prostate cancer knowledge and attitudes among men in Southeast Nigeria (Okeke et al., 2020), found out that a significant proportion of men in Southeast Nigeria had a low level of knowledge about prostate cancer risk factors, symptoms, and screening methods and also have a misconception that led them to believe that prostate cancer is a disease of very older men and that it is not a common problem in Nigeria.

Adebamowo, et al. (2019) concluded in their study that Prostate cancer is the second leading cause of cancer deaths among Nigerian men, and it accounts for 12.4 percent of all cancer deaths. In confirming the poor attitude to prostate health as a result of poor knowledge, Okeke, et al. (2018) asserted that only 12.5 percent of Nigerian men have undergone prostate-specific antigen (PSA) testing. The high mortality rate from prostate cancer in Nigeria is confirmed by Adebamowo, et al. (2020) in their study. It is against this background that this study was designed, to determine the knowledge of adult Men in Idemili North Local Government Area of Anambra State, toward Prostate Problems so as to bridge the gap in knowledge of prostate health, with the goal of achieving attitudinal change, and reduce high morbidity and mortality rate in Idemili North Local Government Area.

Research Questions

The following research questions guided the study:

1. What is the knowledge level of adult men in Idemili North Local Government Area towards prostate problems?
2. What is the knowledge level of adult men in Idemili North Local Government Area towards prostate problems based on their age?
3. What is the knowledge level of adult men in Idemili North Local Government Area towards prostate problems based on their occupations?
4. What is the knowledge level of adult men in Idemili North Local Government Area towards prostate problems based on educational level?

Hypotheses

The following null hypotheses were formulated and were tested at 0.05 level of significance.

1. There is no significant difference in the knowledge score of adult men in Idemili North Local Government Area towards prostate problems?
2. There is no significant difference in the mean knowledge scores of adult men in Idemili North Local Government Area towards prostate problems based on their age.
3. There is no significant difference in the mean knowledge scores of adult men in Idemili North Local Government Area towards prostate problems based on their occupations.
4. There is no significant difference in the mean knowledge scores of adult men in Idemili North Local Government Area towards prostate problems based on their educational level.

2. METHODS

A descriptive survey design was used for the study. The area of study for this research was Idemili North Local Government Area (LGA) of Anambra State. The population of the study comprised adult men from 40 years of age in Idemili LGA. It included government workers and non-government workers. The population of males in Idemili North LGA according to City Population (2024) is 219,223. The sample size for this study comprised of 250 adult men of over the age 40 years who are government workers (GW) and non-government workers (NGW) in Idemili LGA. Multistage sampling procedure was used to draw 250 respondents. The instruments used for the study was designed by the researcher and they were titled "Prostate Problems Knowledge Test (PPKT)" For the Prostate Problems Knowledge Test (PPKT), Kuder Richardson (K-R-20) was used for reliability check and the reliability coefficient was 0.75. The data collected was analyzed using statistical package for social sciences version 25 (SPSS). Percentage, Mean and Standard Deviation were used to answer research questions. The hypotheses was tested using analysis of variance (ANOVA) at 0.05 level of significance.

3. RESULTS AND DISCUSSION

Research Question One

What is the knowledge level of adult men in Idemili North Local Government Area towards prostate problems?

Table 4.1.1

Mean Knowledge of Prostrate Problems among Adult Men in Idemili North Local Government Area

	N	Min.	Max.	Mean	SD	Remark
Percentage scores on knowledge of prostate problems	221	29.17	100.00	76.26	13.54	High knowledge

The descriptive statistics displayed in Table 1 shows that the minimum knowledge score on the Prostate Problem Tests was 29.17 while the maximum score was 100. The mean score was 76.26. The value indicates that the level of knowledge on the prostate problems among adult men in Idemili North Local Government Area was high.

Research Question Two

What is the knowledge level of adult men in Idemili North Local Government Area towards prostate problems based on their age?

Table 4.1.2

A Mean Knowledge of Prostate Problems among Adult Men of Different Ages in Idemili North Local Government Area

Age	N	Mean	SD	Remark
40 -50 years	136	76.72	14.00	High Knowledge
51-60years	56	77.08	12.18	High Knowledge
61 and above	29	72.56	13.71	High Knowledge

The mean knowledge on prostate problems based on age displayed in Table 2 shows that all the adult men irrespective of their age groups, had high knowledge of prostate problems. This was demonstrated by the mean knowledge which ranged between 72.56 and 77.08. While those between 61 and above had the least mean knowledge (Mean = 72.56), those between 51 and 60 years had the highest mean knowledge score of 77.08. The standard deviation scores indicate that there was more variability in the ratings by those between 40-50 years compared to those between 51 and 60 years of age.

Research Question Three

What is the knowledge level of adult men in Idemili North Local Government Area towards prostate problems based on their occupations?

Table 4.1.3

A Mean Knowledge of Prostate Problems among Adult Men of Different Occupations in Idemili North Local Government Area

Occupation	N	Mean	SD	Remark
Government worker	78	73.61	16.15	High Knowledge
Non-government worker	143	77.71	11.69	High Knowledge

Table 3 shows that the mean knowledge of prostate problems among adult men who identified as government workers was 73.61 while the mean knowledge of those who were non-government workers was 77.71. The mean scores suggest that the two groups had high knowledge of prostate problems. However, those who identified as non-government workers had a higher mean knowledge with 4.10 difference in their favour.

Research Question Four

What is the knowledge level of adult men in Idemili North Local Government Area towards prostate problems based on educational level?

Table 4.1.4

Mean Knowledge of Prostate Problems among Adult Men with Different Educational Levels in Idemili North Local Government Area

Level of Education	N	Mean	SD	Remark
Primary	32	69.53	16.24	Moderate knowledge
Secondary	93	77.78	13.70	High knowledge
Tertiary	96	77.04	11.79	High knowledge

The mean knowledge of adult men based on their educational levels as presented in Table 4 shows that those with low education (primary education) had the lowest mean score of 69.53. This indicates a moderate level of knowledge. On the other hand, those with secondary education had the highest mean knowledge as shown by their mean knowledge of 77.78. Those with tertiary education had a mean knowledge of 77.04. However, two last categories had high knowledge of prostate problems while those with primary education had moderate knowledge. The standard deviation scores shows that there was more variation in the ratings by adult men with primary education and the least variability among those with tertiary education.

Hypothesis One

There is no significant difference in the mean knowledge scores of adult men in Idemili Local Government Area about prostate problems based on their age.

Table 4.1.5*Analysis of Variance on Mean Knowledge of Prostate Problems among Adult Men of Different Age Groups*

Source of Variation	Sum of Squares	df	Mean Square	F(2,218)	p	Remark
Between Groups	463.75	2	231.88	1.27	0.284	NS*
Within Groups	39895.41	218	183.01			
Total	40359.16	220				

*NS

The ANOVA result displayed in Table 9 shows that there was no significant difference in the mean knowledge score on prostate problems among adult men of different age groups, $F(2,208) = 1.27$, $p = 0.284$. The null hypothesis was not rejected since the p-value was greater than 0.05 level of significance.

Hypothesis Two

There is no significant difference in the mean knowledge scores of adult men in Idemili Local Government Area about prostate problems based on their occupations.

Table 4.1.6*Independent Samples t-test Analysis on Mean Knowledge of Prostate Problems among Adult Men of Different Occupations in Idemili North Local Government Area*

Occupation	N	Mean	SD	df	t	p	Remark
Government worker	78	3.85	0.44	219	-2.17	0.031	S*
Non-government worker	143	3.84	0.49				

*Significant

The results presented in Table 10 shows that there was a significant difference in the mean knowledge scores of adult men who work in the government and those that are non-government workers, $t(219) = -2.17$, $p = 0.031$. Since the p-value was less than 0.05 level of significance, the null hypothesis was rejected.

Hypothesis Three

There is no significant difference in the mean knowledge scores of adult men in Idemili Local Government Area about prostate problems based on their educational level.

Table 4.1.7*Analysis of Variance on Mean Knowledge of Prostate Problems among Adult Men of Different Educational level*

Source of Variation	Sum of Squares	df	Mean Square	F(2,218)	p	Remark
Between Groups	1721.47	2	860.73	4.86	.009	S*
Within Groups	38637.70	218	177.24			
Total	40359.16	220				

*S

The result displayed in Table 11 indicates that there was a significant difference in the mean knowledge scores on prostate problems among adult men of different educational levels, $F(2,218) = 4.86$, $p = 0.009$. Since the p value was less than 0.05 level of significance, the null hypothesis was rejected. Scheffe posthoc multiple comparisons was conducted to ascertain which group was significantly different from the others.

The results presented in Table 12 shows adult men with primary education had significantly lower mean knowledge on prostate problems than those with secondary education, $p = 0.011$, and those with tertiary education, $p = 0.023$. However, adult men with secondary education were not significantly different from those with tertiary education in their mean knowledge of prostate problem, $p = 0.930$.

Table 4.1.8

Scheffe Multiple Comparison Tests Comparing Mean Knowledge Scores on Prostate Problems of Adult Men with Different Levels of Education.

(I) Educational Levels	(J) Educational Levels	Mean Diff. (I-J)	SE	<i>p</i>	Remark
Primary	Secondary	-8.25	2.73	0.011	S
	Tertiary	-7.51	2.72	0.023	S
Secondary	Tertiary	0.74	1.94	0.930	NS

4. DISCUSSION OF THE FINDINGS

Knowledge of Prostrate Problems:

Findings of the study shows that the mean percentage knowledge score of men in Idemili North Local Government Area was high which suggests that the respondents had a good knowledge of Prostate problems. This result is not in total agreement with some results gotten from studies conducted in other states, Oladimeji et. al (2009) suggests in their study that awareness and specific knowledge related to prostate cancer among men in Oyo State was low. This conflict in result could be as a result of the differences in the population groups studied. However, the result of this study is consistent with the findings of Oranusi et. al (2012) where male public servants in Anambra State had high level of knowledge of Prostate cancer.

The findings show that age differences among the adult men did not interfere in their knowledge because all the adult men irrespective of their age groups had high knowledge of prostate problems. Although the men between 61 and above had the least mean knowledge in comparison to those between 51 and 60 years who had the highest mean knowledge. The null hypothesis was not rejected because the p-value was greater than 0.05 level of significance, therefore, there is no significant difference in the mean knowledge score on prostate problems among adult men of different age groups in Idemili North Local Government Area. This finding agrees with the findings of Chesser et. al (2018). However, a study carried out among Ugandan men on the knowledge of prostate cancer, Nakandi et al., (2013) disagrees with the findings of this study as it showed that older men had significantly higher knowledge than younger men. This could be because older men have already started experiencing some prostate health symptoms that have exposed them to more knowledge. More so, differences in geographical location could be contributory to the conflict in result findings.

Findings of the study on knowledge based on occupation showed that the mean knowledge of prostate problems among adult men who are government workers and those who are non-government workers were both high. However, those who were identified as non-government workers had a higher mean knowledge. The null hypothesis was rejected because the p-value was less than 0.05 level of significance, thus, there was a significant difference in the mean knowledge scores of adult men who are government and those that are non-government workers. The result of this study agrees with the findings of the study carried out among selected male government workers from different Local Governments Areas Secretariats in Benin City, Edo State and assessed on their knowledge and acceptance of prostate cancer screening. The result of the study showed that these government workers had high knowledge of prostate cancer screening (Ehwarieme & Josiah 2024). However, the findings of this study conflicts with the findings of another study on the knowledge and attitudes of prostate cancer among educated male adults in a Semi-Urban Town of Northern Nigeria, where Teachers, Civil servants and Health workers were all studied and all these workers showed limited knowledge about prostate cancer and prostate health (Aminu, 2022)

Findings of the study on knowledge of adult men in Idemili North Local Government Area based on their educational level showed that those with low education (primary education) had the lowest mean score, which indicated a moderate level of knowledge. On the other hand, those with secondary education had the highest mean knowledge then followed by those with tertiary education. The standard deviation scores show that there was more variation in the ratings by adult men with

primary education and the least variability among those with tertiary education. The null hypothesis was rejected because the p-value was less than 0.05 level of significance, hence, there was a significance difference in the mean knowledge scores on prostate problems among adult men of different educational levels. However, because three groups were involved, Scheffe post hoc multiple comparisons was conducted to ascertain the group that was significantly different from the others and it showed that adult men with primary education had significantly lower mean knowledge on prostate problems than those with secondary and tertiary education, whereas adult men with secondary education were not significantly different from those with tertiary education in their mean knowledge of prostate problem. This result is consistent with findings of the study carried out at the University of Nigeria on the knowledge, attitudes and perceptions of prostate cancer among male staff, and it was seen that greater majority of male staff who demonstrated a high level of knowledge of prostate cancer had tertiary degree. The findings of this study further suggests that the level of education was significantly related to the level of prostate cancer knowledge (Adibe et. al 2017). The result is also consistent with the findings of a study carried out among male patients aged 40 years and above at Kitwe Teaching Hospital, Zambia, where all the respondents with secondary or tertiary education had increased knowledge of prostate health problems, (Gift, Nancy & Victor 2020). This result however conflicts with the result of the study conducted in the Semi-Urban Town of Northern Nigeria where the study shows that there is limited knowledge of prostate cancer among the educated segments of the community (Aminu 2022).

5. CONCLUSION

The study found that adult men in Idemili North Local Government Area have a high level of knowledge and positive attitudes towards prostate problems, regardless of age, occupation, and educational level. However, there are some variations in knowledge and attitudes among these groups. Men aged 51-60 had the highest mean knowledge and attitude scores, while those with secondary education had the highest mean knowledge. Non-government workers had higher mean knowledge than government workers. Adult men with primary education had significantly lower knowledge than those with secondary and tertiary education. The study recommends public awareness campaigns, education, and counseling to improve knowledge and attitudes towards prostate problems, particularly among older men and those with lower educational qualifications.

In overall, the study highlights the importance of promoting prostate health awareness and education among adult men in Idemili North Local Government Area, with a focus on reaching older men and those with lower educational qualifications. Once there is improved knowledge and attitude, these adult men would voluntarily submit to prostate specific antigen tests (PSA), digital rectal examination (DRE) and other tests that would result to early detection and treatment of prostate problems, ultimately reducing the burden of prostate cancer in this population.

6. RECOMMENDATIONS

1. The Anambra State Health Department in conjunction with the Idemili North Local Government Health Department should organize adult men health awareness campaigns to educate adult men in Idemili North Local Government Area about prostate problems, regardless of age.
2. Idemili North Local Government Primary Health Care Authority should provide targeted health education for adult men, especially, these men aged 61 and above, as they had the least mean knowledge score in the study.
3. The State Ministry of Health should provide occupational-based education for all workers in both government and non-government sectors, however, special consideration should be given to workers in the government sector as they had lower mean knowledge in comparison to the non-government workers.

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