

International Journal Research Publication Analysis

Page: 01-17

KNOWLEDGE OF MODIFIABLE AND NON-MODIFIABLE PROSTATE CANCER RISK FACTORS AS A PREDICTOR OF BUSINESSMEN'S ATTITUDE TOWARDS PROSTATE CANCER SCREENING AND EARLY DETECTION IN AKWA IBOM STATE, NIGERIA

***Olivia Onyeka Ekwutosi**

Department of Human Kinetics and Health Education, Faculty of Education, University of
Uyo, Nigeria.

Article Received: 03 July 2026

Article Revised: 23 July 2026

Published on: 10 August 2026

***Corresponding Author: Olivia Onyeka Ekwutosi**

Department of Human Kinetics and Health Education, Faculty of Education, University
of Uyo, Nigeria.

DOI: <https://doi-doi.org/101555/ijrpa.5388>

ABSTRACT

This study investigated knowledge of modifiable and non-modifiable prostate cancer risk factors as a predictor of businessmen's attitude towards prostate cancer screening and early detection in Akwa Ibom State, Nigeria. The study was guided by two specific objectives, two research questions and two null hypotheses. A cross-sectional survey research design was adopted. The target population comprised 8,450 male businessmen aged 40 years and above across Akwa Ibom State, Nigeria. A sample of 382 respondents was determined using Taro Yamane's formula, while a multi-stage sampling procedure was employed to select participants. Data were collected using a structured instrument titled Knowledge of Modifiable and Non-Modifiable Prostate Cancer Risk Factors and Screening Attitude Questionnaire (KMNM-PCRFSAQ). The instrument was subjected to face and content validation by experts, while its internal consistency was established using Cronbach's alpha, which yielded reliability coefficients of 0.84 for the knowledge scale and 0.81 for the attitude scale. Mean and standard deviation were used to answer the research questions, whereas simple linear regression analysis was employed to test the hypotheses at the 0.05 level of significance. The findings revealed that businessmen possessed a moderate level of knowledge of both non-modifiable and modifiable prostate cancer risk factors. The regression analysis showed that knowledge of non-modifiable risk factors significantly predicted

businessmen's attitude towards prostate cancer screening and early detection. Similarly, knowledge of modifiable risk factors significantly predicted businessmen's attitude towards prostate cancer screening and early detection. The study concluded that improving businessmen's knowledge of both modifiable and non-modifiable prostate cancer risk factors can significantly enhance positive attitudes towards prostate cancer screening and early diagnosis. It therefore recommended, among others, that government agencies, healthcare providers and business associations collaborate to organise regular workplace health education campaigns and community-based prostate cancer screening programmes targeted at businessmen across Akwa Ibom State, Nigeria.

KEYWORDS: Prostate cancer, modifiable risk factors, non-modifiable risk factors, prostate cancer screening, early detection, businessmen.

1.0 INTRODUCTION

Prostate cancer has become one of the leading public health concerns affecting men worldwide. It is among the most commonly diagnosed cancers in men and remains a major cause of cancer-related morbidity and mortality, particularly in low- and middle-income countries where access to screening and early diagnosis is often limited. Although considerable advances have been made in the diagnosis and management of prostate cancer, the disease continues to account for a substantial number of preventable deaths because many patients present to health facilities at advanced stages. Early detection through routine prostate cancer screening remains one of the most effective strategies for reducing mortality and improving treatment outcomes. Unfortunately, many men are either unaware of their level of risk or fail to participate in recommended screening programmes until symptoms become severe.

Knowledge of modifiable and non-modifiable prostate cancer risk factors has increasingly been recognised as a fundamental determinant of health-seeking behaviour. Men who understand both the factors they cannot change, such as age, family history and genetic predisposition, and those they can modify through healthier lifestyles are generally more likely to appreciate the importance of preventive healthcare. Such knowledge encourages informed decision-making regarding prostate cancer screening and early detection. Conversely, inadequate knowledge often contributes to misconceptions, delayed healthcare utilisation and poor attitudes towards early detection. Understanding the relationship between knowledge of both categories of risk factors and screening attitude is therefore essential for

designing effective health promotion programmes capable of reducing the burden of prostate cancer among high-risk populations.

Prostate cancer develops in the prostate gland, a small organ located below the bladder that forms part of the male reproductive system. The disease is characterised by the uncontrolled growth of abnormal cells within the prostate, which may remain confined to the gland or spread to surrounding tissues and distant organs if left untreated. According to the World Health Organization (2020), prostate cancer remains one of the most frequently diagnosed malignancies among men worldwide and is responsible for a significant proportion of cancer-related deaths. Although survival rates have improved considerably in countries where organised screening programmes are well established, many developing nations continue to record poor outcomes because diagnosis often occurs at advanced stages of the disease.

The burden of prostate cancer is particularly pronounced among men of African descent. Epidemiological evidence indicates that Black men experience higher incidence rates, earlier disease onset and more aggressive tumour progression than men from many other racial groups (Pernar et al., 2018). This disparity has been attributed to a combination of genetic predisposition, environmental influences, lifestyle factors and inequalities in access to healthcare services. In Sub-Saharan Africa, where organised screening programmes remain limited, prostate cancer has become an increasing public health concern that demands urgent attention from governments, healthcare professionals and community organisations.

Nigeria bears a substantial share of this burden. Prostate cancer is currently one of the leading cancers affecting Nigerian men, particularly those aged 40 years and above. Despite improvements in diagnostic facilities, many patients still present at tertiary hospitals when the disease has progressed beyond the stage at which curative treatment is most effective. Obiesie et al. (2022) observed that a considerable proportion of prostate cancer cases in Nigeria are diagnosed at advanced stages, resulting in poorer treatment outcomes and increased mortality. Such late presentation is often associated with limited awareness, inadequate health education, fear of diagnosis, cultural beliefs and poor utilisation of screening services.

One of the most important determinants of prostate cancer prevention is knowledge of modifiable and non-modifiable prostate cancer risk factors. In this context, knowledge refers to an individual's awareness and understanding of the biological, genetic, environmental and behavioural factors that increase the likelihood of developing prostate cancer. Adequate knowledge enables individuals to recognise their personal level of risk, appreciate the importance of preventive healthcare and make informed decisions regarding prostate cancer

screening and early detection. Conversely, poor knowledge may create a false sense of security, discourage preventive practices and contribute to delayed diagnosis.

Non-modifiable prostate cancer risk factors include advancing age, family history of prostate cancer, African ancestry and genetic predisposition. Although these factors cannot be altered, they significantly influence an individual's susceptibility to the disease. Research consistently shows that the risk of developing prostate cancer increases with age, particularly after 50 years, while men with first-degree relatives diagnosed with prostate cancer are at substantially greater lifetime risk. Likewise, men of African descent experience disproportionately higher incidence and mortality rates than many other racial groups.

Modifiable prostate cancer risk factors, on the other hand, relate to behaviours and lifestyle practices that individuals can change to reduce their likelihood of developing the disease. These include unhealthy dietary habits, obesity, physical inactivity, excessive alcohol consumption and tobacco use. Although these factors may not independently cause prostate cancer, they have been associated with an increased risk of disease occurrence and progression. Consequently, increasing public awareness of these modifiable factors provides opportunities for preventive interventions that encourage healthier lifestyles while promoting participation in routine prostate cancer screening.

Among the various occupational groups in Nigeria, businessmen constitute an important yet often overlooked population. Many businessmen spend long hours managing their enterprises, travelling frequently and coping with significant financial and occupational pressures. These demanding schedules frequently leave little time for preventive healthcare. Consequently, routine medical examinations are often postponed until illness begins to interfere with daily activities or business operations. This tendency places businessmen at increased risk of late diagnosis of chronic diseases, including prostate cancer.

Businessmen across Akwa Ibom State experience similar challenges. The State is characterised by vibrant commercial activities in major business centres such as Uyo, Ikot Ekpene, Abak, Eket, Oron and Ikot Abasi, where thousands of men depend on trading, entrepreneurship and other commercial ventures for their livelihood. The demands associated with sustaining these businesses often encourage individuals to prioritise income generation over personal health. Consequently, many businessmen rarely seek routine health assessments despite belonging to an age group particularly vulnerable to prostate cancer.

1.1 Statement of the Problem

Prostate cancer remains one of the leading causes of cancer-related morbidity and mortality among men worldwide, particularly in low- and middle-income countries where awareness,

screening and early diagnosis are often inadequate. Medical evidence consistently indicates that when prostate cancer is detected at an early stage, treatment outcomes are considerably improved, survival rates are higher and the quality of life of affected individuals is better preserved. Consequently, men aged 40 years and above, especially those with recognised risk factors, are expected to possess adequate knowledge of both modifiable and non-modifiable prostate cancer risk factors and willingly participate in routine prostate cancer screening programmes, including prostate-specific antigen (PSA) testing and digital rectal examination (DRE).

Despite these recommendations, the uptake of prostate cancer screening among many Nigerian men remains disappointingly low. A substantial proportion of patients continue to present at healthcare facilities only after the disease has progressed to advanced stages, thereby limiting treatment options and increasing the likelihood of poor clinical outcomes. This situation has become a major public health concern because delayed presentation contributes significantly to the high mortality associated with prostate cancer in Nigeria.

Businessmen constitute one of the occupational groups most vulnerable to delayed health-seeking behaviour. The demands of running businesses, maintaining profitability and meeting financial obligations often leave little time for routine medical examinations. Many businessmen tend to seek healthcare only when symptoms become severe enough to interfere with their daily activities or business operations. Consequently, preventive health practices, including prostate cancer screening, are frequently neglected despite increasing age and exposure to recognised risk factors. In addition to occupational demands, several psychological, cultural and socio-economic factors may discourage businessmen from participating in prostate cancer screening. Fear of a cancer diagnosis, misconceptions about the disease, embarrassment associated with digital rectal examination, financial constraints and poor access to reliable health information may all contribute to negative attitudes towards screening. More importantly, inadequate knowledge of both modifiable and non-modifiable prostate cancer risk factors may reduce men's perception of personal vulnerability, thereby discouraging them from seeking timely medical evaluation.

Although awareness campaigns on prostate cancer have been conducted in different parts of Nigeria, empirical evidence on how knowledge of modifiable and non-modifiable prostate cancer risk factors influences businessmen's attitudes towards prostate cancer screening and early detection in Akwa Ibom State remains limited. Existing studies have largely focused on the general male population or hospital-based samples, with relatively little attention given to businessmen whose occupational lifestyle may uniquely influence their health-seeking

behaviour. This gap in the literature creates the need for an empirical investigation into whether knowledge of both categories of prostate cancer risk factors predicts businessmen's attitudes towards prostate cancer screening and early detection. Findings from this study are expected to provide evidence for the design and implementation of targeted health education programmes, workplace-based interventions and public health policies aimed at improving screening uptake, promoting early diagnosis and reducing prostate cancer-related morbidity and mortality among businessmen in Akwa Ibom State, Nigeria.

1.2 Purpose of the Study

The main purpose of this study was to examine knowledge of modifiable and non-modifiable prostate cancer risk factors as a predictor of businessmen's attitude towards prostate cancer screening and early detection in Akwa Ibom State, Nigeria. Specifically, the study sought to:

1. Determine the extent to which knowledge of non-modifiable prostate cancer risk factors predicts businessmen's attitude towards prostate cancer screening and early detection in Akwa Ibom State, Nigeria; and
2. Determine the extent to which knowledge of modifiable prostate cancer risk factors predicts businessmen's attitude towards prostate cancer screening and early detection in Akwa Ibom State, Nigeria.

1.3 Research Questions

The following research questions guided the study:

1. To what extent does knowledge of non-modifiable prostate cancer risk factors predict businessmen's attitude towards prostate cancer screening and early detection in Akwa Ibom State, Nigeria?
2. To what extent does knowledge of modifiable prostate cancer risk factors predict businessmen's attitude towards prostate cancer screening and early detection in Akwa Ibom State, Nigeria?

1.4 Research Hypotheses

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

H₀₁: Knowledge of non-modifiable prostate cancer risk factors does not significantly predict businessmen's attitude towards prostate cancer screening and early detection in Akwa Ibom State, Nigeria.

H₀₂: Knowledge of modifiable prostate cancer risk factors does not significantly predict businessmen's attitude towards prostate cancer screening and early detection in Akwa Ibom State, Nigeria.

2.0 THEORETICAL FRAMEWORK

2.1 Health Belief Model (HBM) by Irwin M. Rosenstock (1966)

The Health Belief Model was developed by Irwin M. Rosenstock in 1966 to explain why individuals adopt or fail to adopt preventive health behaviours. The model proposes that health-related actions are influenced by an individual's perceived susceptibility to a disease, perceived severity of the disease, perceived benefits of taking preventive action, perceived barriers to such action and cues that stimulate health behaviour.

In relation to this study, businessmen who possess adequate knowledge of modifiable and non-modifiable prostate cancer risk factors are more likely to perceive themselves as being susceptible to the disease. This heightened perception of vulnerability can foster positive attitudes towards prostate cancer screening and early detection. Although perceived barriers such as fear of diagnosis, financial cost and time constraints may discourage participation in screening, appropriate health education and awareness programmes can serve as cues to action that motivate businessmen to adopt preventive health practices. The model therefore provides a suitable theoretical explanation for the relationship between knowledge of prostate cancer risk factors and attitudes towards screening and early detection.

2.2 Theory of Reasoned Action (TRA) by Martin Fishbein and Icek Ajzen (1975)

The Theory of Reasoned Action (TRA), developed by Martin Fishbein and Icek Ajzen in 1975, explains that an individual's behaviour is primarily determined by behavioural intention, which is influenced by attitude towards the behaviour and subjective norms. According to the theory, individuals are more likely to perform a particular behaviour when they believe that the behaviour will produce desirable outcomes and when significant others approve of or encourage that behaviour. The theory emphasises that knowledge and beliefs contribute to attitude formation, while attitude influences behavioural intention, which ultimately determines actual behaviour.

Applied to this study, businessmen who possess adequate knowledge of modifiable and non-modifiable prostate cancer risk factors are more likely to recognise the benefits of prostate cancer screening and early detection. Such knowledge is expected to foster favourable attitudes towards screening because informed individuals are more likely to appreciate the importance of early diagnosis in reducing prostate cancer-related morbidity and mortality. Likewise, encouragement from family members, healthcare professionals, colleagues and business associations may reinforce positive attitudes and strengthen businessmen's intentions to participate in routine prostate cancer screening. The Theory of Reasoned Action therefore supports the proposition that improved knowledge of prostate cancer risk factors can

positively influence attitudes, which subsequently encourage participation in prostate cancer screening and early detection programmes.

3.0 CONCEPTUAL CLARIFICATIONS

3.1 Knowledge of Modifiable and Non-Modifiable Prostate Cancer Risk Factors

Knowledge of modifiable and non-modifiable prostate cancer risk factors refers to an individual's awareness and understanding of the biological, genetic, environmental and behavioural factors that increase the likelihood of developing prostate cancer (American Cancer Society [ACS], 2020). These risk factors are generally categorised into two broad groups. Non-modifiable risk factors include advancing age, African ancestry, family history of prostate cancer and inherited genetic mutations, all of which cannot be altered by the individual but significantly influence susceptibility to the disease. Conversely, modifiable risk factors include unhealthy dietary habits, obesity, physical inactivity, excessive alcohol consumption and tobacco use, which can be controlled or minimised through healthy lifestyle choices (Pernar et al., 2018; Jones et al., 2021). Adequate knowledge of these factors enables individuals to recognise their personal level of risk, adopt healthier lifestyles and appreciate the importance of preventive healthcare, including routine prostate cancer screening and early detection.

In the context of this study, knowledge of modifiable and non-modifiable prostate cancer risk factors refers to the extent to which businessmen understand both categories of factors associated with prostate cancer. It encompasses their awareness of inherent characteristics that increase susceptibility to the disease, as well as lifestyle-related behaviours that may elevate or reduce risk. Such knowledge is expected to shape businessmen's perception of personal vulnerability, influence their health-related decisions and encourage positive attitudes towards prostate cancer screening and early detection. Consequently, greater knowledge of both modifiable and non-modifiable risk factors is regarded as a key determinant of preventive health behaviour among businessmen.

3.2 Businessmen's Attitude Towards Prostate Cancer Screening and Early Detection

Businessmen's attitude towards prostate cancer screening and early detection refers to their beliefs, feelings, perceptions and willingness to participate in activities designed to identify prostate cancer before the onset of obvious clinical symptoms (Awosan et al., 2018). Prostate cancer screening commonly involves the use of the prostate-specific antigen (PSA) blood test and the digital rectal examination (DRE), both of which facilitate timely diagnosis and prompt medical intervention (Obiesie et al., 2022). A favourable attitude is reflected in a

willingness to undergo routine screening, confidence in the effectiveness of early detection, acceptance of recommended screening procedures and recognition of the benefits of preventive healthcare. Conversely, negative attitudes are characterised by fear, reluctance, misconceptions and avoidance of screening services.

Within the context of this study, businessmen's attitude towards prostate cancer screening and early detection refers to the degree to which registered businessmen aged 40 years and above in Akwa Ibom State, Nigeria, are willing to accept and participate in recommended prostate cancer screening practices. It encompasses their readiness to seek medical advice, undergo routine screening, comply with healthcare recommendations and encourage preventive health practices among fellow businessmen despite potential barriers such as fear of diagnosis, embarrassment, cultural beliefs, financial limitations or occupational demands. Positive attitudes are expected to promote early diagnosis, improve treatment outcomes and reduce prostate cancer-related morbidity and mortality among the study population.

4.0 METHODOLOGY

A quantitative cross-sectional survey research design was adopted for this study to examine knowledge of modifiable and non-modifiable prostate cancer risk factors as a predictor of businessmen's attitude towards prostate cancer screening and early detection. The target population comprised 8,450 registered male businessmen aged 40 years and above across Akwa Ibom State, Nigeria, as documented in the 2025 records of the Akwa Ibom State Ministry of Commerce and Industry. Using Taro Yamane's formula, a sample size of 382 respondents was determined. A multi-stage sampling procedure was employed. First, the 31 Local Government Areas of Akwa Ibom State were stratified into the three senatorial districts: Uyo, Ikot Ekpene and Eket Senatorial Districts. Thereafter, proportionate sampling was used to allocate respondents across the Local Government Areas based on the population of registered businessmen, while simple random sampling through balloting was employed to select participants from the registers of recognised trade and business associations.

Data were collected using a structured instrument titled Knowledge of Modifiable and Non-Modifiable Prostate Cancer Risk Factors and Screening Attitude Questionnaire (KMNMP-CRFSAQ). The questionnaire consisted of Section A, which elicited respondents' demographic information; Section B, which contained 12 items measuring knowledge of non-modifiable prostate cancer risk factors; Section C, which contained 12 items measuring knowledge of modifiable prostate cancer risk factors; and Section D, which comprised 10 items assessing businessmen's attitude towards prostate cancer screening and early detection

using a four-point rating scale. Face and content validity of the instrument were established by three experts from the University of Uyo. A pilot study involving 30 registered businessmen in Cross River State yielded Cronbach's alpha reliability coefficients of 0.84 for the knowledge scale and 0.81 for the attitude scale. Of the 382 questionnaires administered, 368 were correctly completed and returned, representing a response rate of 96.3%. Mean and standard deviation were used to answer the research questions, while simple linear regression analysis was employed to test the null hypotheses at the 0.05 level of significance using SPSS version 27.0. The benchmark for interpreting mean scores remained as follows: 3.50–4.00 (High/Very Favourable), 2.50–3.49 (Moderate/Moderately Favourable), 1.50–2.49 (Low/Unfavourable), and 1.00–1.49 (Very Low/Highly Unfavourable).

5.0 RESULTS

5.1 Research Question One

To what extent does knowledge of non-modifiable prostate cancer risk factors predict businessmen's attitude towards prostate cancer screening and early detection in Akwa Ibom State, Nigeria?

Table 1: Descriptive Analysis of Businessmen's Knowledge of Non-Modifiable Prostate Cancer Risk Factors and Attitude Towards Prostate Cancer Screening and Early Detection. (n = 368)

Variables	Mean ($\bar{X}$)	S.D	Decision
Knowledge of Non-Modifiable Prostate Cancer Risk Factors			
Advancing age (40 years and above) increases the risk of prostate cancer.	3.12	0.68	Moderate Knowledge
A family history of prostate cancer increases an individual's susceptibility to the disease.	2.85	0.74	Moderate Knowledge
Men of African ancestry are at greater risk of developing prostate cancer.	2.41	0.81	Low Knowledge
Genetic predisposition increases the likelihood of developing prostate cancer.	2.79	0.70	Moderate Knowledge
Overall Knowledge	2.79	0.74	Moderate Knowledge
Attitude Towards Prostate Cancer Screening and Early Detection			
Willingness to undergo routine PSA screening.	2.94	0.70	Moderately Favourable
Acceptance of Digital Rectal Examination (DRE) where necessary.	2.52	0.83	Moderately Favourable
Belief that early detection improves treatment outcomes.	3.28	0.62	Favourable
Overall Screening Attitude	2.91	0.72	Moderately Favourable

Table 1 indicates that businessmen in Akwa Ibom State possessed a moderate level of knowledge of non-modifiable prostate cancer risk factors, with an overall mean score of 2.79. Similarly, they demonstrated a moderately favourable attitude towards prostate cancer screening and early detection, with an overall mean score of 2.91. Although respondents exhibited moderate knowledge regarding advancing age, family history and genetic predisposition as risk factors, their knowledge of African ancestry as a significant non-modifiable risk factor was comparatively low. Furthermore, while respondents generally believed that early detection improves treatment outcomes, acceptance of Digital Rectal Examination (DRE) was relatively less favourable.

5.2 Research Question Two

To what extent does knowledge of modifiable prostate cancer risk factors predict businessmen's attitude towards prostate cancer screening and early detection in Akwa Ibom State, Nigeria?

Table 2: Descriptive Analysis of Businessmen's Knowledge of Modifiable Prostate Cancer Risk Factors and Attitude Towards Prostate Cancer Screening and Early Detection. (n = 368)

Variables	Mean ($\bar{X}$)	S.D	Decision
Knowledge of Modifiable Prostate Cancer Risk Factors			
Frequent consumption of high-fat diets and red meat increases prostate cancer risk.	2.64	0.79	Moderate Knowledge
Physical inactivity increases the risk of prostate cancer.	2.58	0.76	Moderate Knowledge
Obesity contributes to the development of aggressive prostate cancer.	2.71	0.72	Moderate Knowledge
Excessive alcohol consumption and tobacco use increase prostate cancer risk.	2.80	0.69	Moderate Knowledge
Overall Knowledge	2.68	0.74	Moderate Knowledge
Attitude Towards Prostate Cancer Screening and Early Detection			
Willingness to pay personally for prostate cancer screening.	2.82	0.78	Moderately Favourable
Willingness to recommend prostate cancer screening to fellow businessmen.	3.10	0.65	Favourable
Willingness to overcome fear and participate in screening programmes.	2.76	0.80	Moderately Favourable
Overall Screening Attitude	2.89	0.74	Moderately Favourable

Table 2 reveals that respondents possessed a moderate level of knowledge of modifiable prostate cancer risk factors, with an overall mean score of 2.68. Likewise, their overall attitude towards prostate cancer screening and early detection was moderately favourable, with an overall mean score of 2.89. Respondents demonstrated greater awareness of the harmful effects of excessive alcohol consumption and tobacco use than of physical inactivity. They also expressed greater willingness to recommend prostate cancer screening to fellow businessmen than to bear the financial cost of undergoing screening themselves.

5.3 Hypothesis One

H₀₁: Knowledge of non-modifiable prostate cancer risk factors does not significantly predict businessmen's attitude towards prostate cancer screening and early detection in Akwa Ibom State, Nigeria.

Table 3: Simple Linear Regression Analysis of Knowledge of Non-Modifiable Prostate Cancer Risk Factors as a Predictor of Businessmen's Attitude Towards Prostate Cancer Screening and Early Detection. (n = 368)

Predictor Variable	B	Std. Error	β	t	p-value	Decision
Constant	1.142	0.138	—	8.275	<0.001	Significant
Knowledge of Non-Modifiable Prostate Cancer Risk Factors	0.633	0.048	0.568	13.188	<0.001	Reject H ₀₁

Model Summary: R = 0.568; R² = 0.323; Adjusted R² = 0.321; F(1,366) = 173.912; p < 0.001.

The regression analysis presented in Table 3 revealed a statistically significant positive relationship between knowledge of non-modifiable prostate cancer risk factors and businessmen's attitude towards prostate cancer screening and early detection. Knowledge of non-modifiable prostate cancer risk factors accounted for 32.3% of the variation in businessmen's attitude towards screening and early detection. Since the p-value was less than 0.05, the null hypothesis was rejected. The finding therefore indicates that knowledge of non-modifiable prostate cancer risk factors significantly predicts businessmen's attitude towards prostate cancer screening and early detection in Akwa Ibom State, Nigeria.

5.4 Hypothesis Two

H₀₂: Knowledge of modifiable prostate cancer risk factors does not significantly predict businessmen's attitude towards prostate cancer screening and early detection in Akwa Ibom State, Nigeria.

Table 4: Simple Linear Regression Analysis of Knowledge of Modifiable Prostate Cancer Risk Factors as a Predictor of Businessmen's Attitude Towards Prostate Cancer Screening and Early Detection. (n = 368)

Predictor Variable	B	Std. Error	β	t	p-value	Decision
Constant	1.305	0.142	—	9.190	<0.001	Significant
Knowledge of Modifiable Prostate Cancer Risk Factors	0.592	0.051	0.518	11.608	<0.001	Reject H_{02}

Model Summary: $R = 0.518$; $R^2 = 0.268$; Adjusted $R^2 = 0.266$; $F(1,366) = 134.742$; $p < 0.001$.

The results in Table 4 indicate that knowledge of modifiable prostate cancer risk factors significantly predicts businessmen's attitude towards prostate cancer screening and early detection. The regression model explained 26.8% of the variation in businessmen's attitude towards prostate cancer screening and early detection. Since the p-value was less than the 0.05 level of significance, the null hypothesis was rejected. The finding confirms that increased knowledge of modifiable prostate cancer risk factors is associated with a more favourable attitude towards prostate cancer screening and early detection among businessmen in Akwa Ibom State, Nigeria.

5.5 Findings of the Study

The study revealed that:

1. Businessmen in Akwa Ibom State, Nigeria, possessed a moderate level of knowledge of non-modifiable prostate cancer risk factors, which significantly predicted their attitude towards prostate cancer screening and early detection ($R = 0.568$, $R^2 = 0.323$, $p < 0.001$).
2. Businessmen in Akwa Ibom State, Nigeria, possessed a moderate level of knowledge of modifiable prostate cancer risk factors, which significantly predicted their attitude towards prostate cancer screening and early detection ($R = 0.518$, $R^2 = 0.268$, $p < 0.001$).

6.0 DISCUSSION OF FINDINGS

6.1 Knowledge of Non-Modifiable Prostate Cancer Risk Factors as a Predictor of Businessmen's Attitude Towards Prostate Cancer Screening and Early Detection

The findings of the study revealed that knowledge of non-modifiable prostate cancer risk factors significantly predicted businessmen's attitude towards prostate cancer screening and early detection in Akwa Ibom State, Nigeria ($R = 0.568$, $R^2 = 0.323$, $p < 0.001$). This finding implies that businessmen who possessed greater knowledge of non-modifiable risk factors

such as advancing age, family history, African ancestry and genetic predisposition were more likely to demonstrate favourable attitudes towards prostate cancer screening and early detection. The result suggests that increased awareness of these inherent risk factors enhances men's perception of susceptibility to prostate cancer, thereby encouraging positive health-seeking behaviour and greater acceptance of routine screening.

The finding is consistent with Jones et al. (2021), who reported that men with greater knowledge of non-modifiable prostate cancer risk factors exhibited more favourable attitudes towards prostate cancer screening and early diagnosis. Similarly, the finding agrees with Ariyo et al. (2024), who observed that awareness of advancing age, family history and race significantly influenced men's willingness to participate in prostate cancer screening programmes. The result also lends empirical support to the Health Belief Model, which posits that individuals who perceive themselves to be susceptible to a disease are more likely to adopt preventive health behaviours. However, the comparatively low level of knowledge regarding African ancestry as a risk factor suggests the need for intensified health education programmes aimed at increasing awareness among businessmen throughout Akwa Ibom State.

6.2 Knowledge of Modifiable Prostate Cancer Risk Factors as a Predictor of Businessmen's Attitude Towards Prostate Cancer Screening and Early Detection

The study further revealed that knowledge of modifiable prostate cancer risk factors significantly predicted businessmen's attitude towards prostate cancer screening and early detection in Akwa Ibom State, Nigeria ($R = 0.518$, $R^2 = 0.268$, $p < 0.001$). This indicates that businessmen who understood the influence of lifestyle-related risk factors such as unhealthy dietary habits, obesity, physical inactivity, excessive alcohol consumption and tobacco use were more likely to develop favourable attitudes towards prostate cancer screening. The finding underscores the importance of health education in promoting positive health behaviours and encouraging participation in preventive healthcare services.

This finding is consistent with Murtola et al. (2016), who found that knowledge of lifestyle-related risk factors positively influenced men's decisions to participate in prostate cancer screening programmes. Likewise, Obiesie et al. (2022) reported that improved awareness of modifiable prostate cancer risk factors enhanced positive perceptions of prostate cancer screening among Nigerian men. The finding further supports the Theory of Reasoned Action, which explains that knowledge shapes beliefs and attitudes, while favourable attitudes strengthen behavioural intentions. Consequently, increasing businessmen's knowledge of

modifiable prostate cancer risk factors is likely to improve their willingness to participate in routine prostate cancer screening and early detection programmes.

7.0 CONCLUSION

The study concluded that knowledge of modifiable and non-modifiable prostate cancer risk factors significantly predicts businessmen's attitude towards prostate cancer screening and early detection in Akwa Ibom State, Nigeria. Businessmen demonstrated a moderate level of knowledge of both categories of prostate cancer risk factors and exhibited moderately favourable attitudes towards prostate cancer screening and early detection. Furthermore, the study established that knowledge of both non-modifiable and modifiable prostate cancer risk factors significantly influenced businessmen's attitudes towards screening and early detection. The findings therefore highlight the critical role of health education in improving awareness of prostate cancer risk factors and promoting positive health-seeking behaviour. Consequently, enhancing businessmen's knowledge of both categories of prostate cancer risk factors is expected to improve participation in routine prostate cancer screening, facilitate early diagnosis and contribute to reducing prostate cancer-related morbidity and mortality among businessmen in Akwa Ibom State.

8.0 RECOMMENDATIONS

Based on the findings of the study, the following recommendations are made:

1. The Akwa Ibom State Ministry of Health, in collaboration with healthcare institutions, professional bodies and business associations, should organise regular health education campaigns and awareness programmes in major markets, commercial centres and business clusters across Akwa Ibom State to improve businessmen's knowledge of both modifiable and non-modifiable prostate cancer risk factors.
2. Business and trade associations should incorporate periodic health education seminars into their meetings to educate members on prostate cancer risk factors, healthy lifestyle practices and the importance of routine prostate cancer screening and early detection.
3. Government and primary healthcare agencies should establish subsidised or free community-based prostate cancer screening programmes within commercial centres throughout Akwa Ibom State to reduce financial and geographical barriers that discourage businessmen from participating in routine screening.
4. Healthcare professionals and health educators should intensify public enlightenment campaigns through radio, television, social media and community outreach programmes to

improve awareness of prostate cancer risk factors and dispel misconceptions that discourage businessmen from seeking early screening and medical consultation.

5. Policy makers and non-governmental organisations should develop workplace health promotion initiatives specifically targeted at businessmen to encourage annual prostate cancer screening, foster positive health attitudes and reduce prostate cancer-related morbidity and mortality in Akwa Ibom State.

REFERENCES

1. Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.
2. American Cancer Society. (2020). *Prostate cancer risk factors and prevention*. American Cancer Society Guidelines.
3. Anjum, T., Farrukh, M., Heidler, P., & Díaz Tautiva, J. A. (2021). Entrepreneurial intention: Creativity, entrepreneurship, and university support. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(1), Article 11.
4. Ariyo, O. O., Odetola, T. D., & Okunola, O. K. (2024). Knowledge of prostate cancer risk factors and screening practices among adult males in urban communities. *African Journal of Nursing and Health Issues*, 15(1), 45–58.
5. Becker, M. H. (1974). The Health Belief Model and personal health behavior. *Health Education Monographs*, 2(4), 324–508.
6. Boubker, O., Arroud, M., & Ouajdouni, A. (2021). Entrepreneurship education versus management students' entrepreneurial intentions: A PLS-SEM approach. *The International Journal of Management Education*, 19(1), Article 100450.
7. Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Addison-Wesley.
8. Foli, S., Aziato, L., & Omenyo, C. N. (2022). The role of entrepreneurship education on entrepreneurial intentions among university students. *Education + Training*, 64(2), 201–220.
9. Ibebuike, J. E., Nwokike, G. I., Nwosu, D. C., & Nwanjo, H. U. (2019). Perception of prostate cancer screening among men in Umulogho Obowo local government area, Imo State. *European Journal of Pharmaceutical and Medical Research*, 6(5), 32–37.
10. Jones, C. R., Mbah, A. K., & Okumu, R. O. (2021). Knowledge of risk factors as a determinant of healthcare seeking attitude towards prostate cancer screening. *Journal of Cancer Education*, 36(4), 780–788.

11. Murtola, T. J., Vihervuori, H., & Tammela, T. L. (2016). Impact of risk factor knowledge on male decision-making regarding prostate cancer screening. *European Journal of Cancer Prevention*, 25(3), 210–217.
12. Ndofirepi, T. M. (2020). Relationship between entrepreneurship education and entrepreneurial goal intentions: Psychological traits as mediators. *Journal of Innovation and Entrepreneurship*, 9(1), 2–20.
13. Nowiński, W., Haddoud, M. Y., Lančarič, D., Egerová, D., & Czeglédi, C. (2021). The impact of entrepreneurship education, entrepreneurial self-efficacy and gender on entrepreneurial intentions of university students. *Studies in Higher Education*, 46(4), 821–835.
14. Obiesie, E. A., Egboluche, C. C., & Ikuerowo, S. O. (2022). Assessment of prostate cancer awareness and screening perceptions among Nigerian men. *Nigerian Journal of Clinical Practice*, 25(6), 812–819.
15. Ozaralli, N., & Rivenburgh, N. K. (2023). Entrepreneurial intention: Antecedents to entrepreneurial behavior in the U.S.A. and Turkey. *Journal of Global Entrepreneurship Research*, 13(1), Article 1.
16. Pernar, C. H., Ebot, E. M., Wilson, K. M., & Mucci, L. A. (2018). The epidemiology of prostate cancer. *Cold Spring Harbor Perspectives in Medicine*, 8(12), Article a030361.
17. Rosenstock, I. M. (1966). Why people use health services. *The Milbank Memorial Fund Quarterly*, 44(3), 94–127.
18. World Health Organization. (2020). *Prostate cancer burden and early detection strategies in Africa*. WHO Regional Office for Africa.
19. Yamane, T. (1967). *Statistics: An introductory analysis* (2nd ed.). Harper and Row.