ENSIGN GLOBAL COLLEGE, KPONG

EASTERN REGION, GHANA

KNOWLEDGE, PERCEPTIONS AND PRACTICES ABOUT PROSTATE CANCER SCREENING AMONG MEN IN THE ADA EAST DISTRICT OF THE GREATER ACCRA REGION, GHANA

By

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DECLARATION

I hereby do declare that except for the references made to other literature and works of other researchers which have been duly acknowledged, the content of this work is an output of my own investigation and has not been either in whole or in part for the award of any other degree elsewhere.

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DEDICATION

This work is dedicated to all Ghanaian men in the Ada East District and the entire country as a whole.

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DEFINITION OF TERMS

Knowledge-This refers to the understanding and /or awareness of the risk factors of prostate cancer.

Perception-These are the beliefs of concerning the causes, seriousness and susceptibility of risk of suffering prostate cancer.

Practices-These are behaviors or acts of respondents concerning but not limited to screening for prostate cancer.

ABBREVIATIONS

ACS	-	American Cancer Society
AOR	-	Adjusted Odds Ratio
BPH	-	Benign Prostatic Hyperplasia
CANSA	-	Cancer Association of South Africa
CP	-	Chronic Prostatitis
CI	-	Confident Interval
COR	-	Cummulative Odds Ratio
DRE	-	Digital Rectal Examination
GHS	-	Ghana Health Service
INCTR	-	International Network for Cancer Treatment and Research
JHS	-	Junior High School
MOH	-	Ministry of Health
NCCE	-	National Commission on Civic Education
NHIS	-	National Health Insurance Scheme
ORs	-	Odds Ratios
PC	-	Prostate Cancer
PSA	-	Prostate-Specific Antigen
SSA	-	Sub-Saharan Africa
SHS	-	Senior High School

ABSRACT

Background: Prostate Cancer (PC) has made a significant health impact globally and Ghana is no exception. The incidence and mortality of prostate cancer worldwide correlate with increasing age, with the average age at the time of diagnosis being 66 years. For African-American men, the incidence rates are higher than White men, with 158.3 new cases diagnosed per 100,000 men and their mortality is approximately twice as White men. The reasons for this disparity have been hypothesized to be difference in social, environmental and genetic factors. Unfortunately, it is often detected late in the Ghanaian population due to lack of voluntary screening. This study assessed the Knowledge, practices and perceptions of PC screening uptake among men in the Ada East District in the Greater Accra Region of Ghana.

Method: This study was a quantitative research using a community-based cross-sectional study design. It employed the use of questionnaires to estimate the extent of attitudes and perceptions of men aged 40 years and above in the Ada East District from366 respondents using multistage sampling technique. Using statistical procedures in mathematical language, this study allowed a one-time assessment of health problems for interpretation. Chi-square test statistics were used to estimated the association between the knowledge, practices and perception (dependent variables) and socio-demographic characteristics(independent variables) of multiple binary logistic regression model was used to measure the strength of association between the variables at a 95% Confidence Interval.

Results: The majority (79.3%) of respondents were of the Ga-Dangme ethnic group, were in the 40-49 years age bracket(44.4%) and married (70.8%). Except for age group, marital status, ethnicity and number of biological children, all socio-demographic characteristics were significantly associated with PC screening uptake($p<0.05$) but there was no significant association between socio-demographic characteristics and knowledge level on PC($P>0.05$). Only religious affiliation and family history of PC were significantly associated with perceptions on PC.

Conclusion: This study showed that most of the Ada East District were aware of prostate cancer. This however, did not translate into practice. Public Health interventions should have MOH liaise with the NHIS to roll out a free PC screening and prevention program in the District Hospitals to ensure early screening.

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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background to the study

The prostate, the largest auxiliary gland in the male reproductive system, is situated between the bladder and the penis in the lower pelvis. (Tonry *et al.,* 2020). Previously, it was believed that the prostate gland had five anatomical lobes; however, just three lobes—two anterior and one median—are recognized. One of the first to identify the three histologically different zones of the prostate was McNeal (Tonry *et al.,* 2020). From a clinical standpoint, knowledge of the zonal anatomy of the prostate is essential to comprehending benign and malignant prostatic pathologies, as the zone from which the pathology arises is a distinguishing feature of each of the three major prostate illnesses. Benign prostate hyperplasia (BPH), prostate cancer (PC), and chronic prostatitis are the three main conditions affecting the prostate (CP). Although it has a wide range of symptomatological patterns, chronic prostatitis (CP) is a urological illness that is officially described as an inflammation and swelling of the prostate gland. The majority of urologic diagnoses in men under 50 years old are for PC, which affects between 4.5 and 9% of the male population(Tonry *et al.*, 2020). In men over 50, BPH, also known as an enlargement of the transitional zone of the prostate, can develop suddenly. The interstitial cells' increased estrogen production, which drives prostatic growth, compensates for the decreased testosterone production that often results in the expanding size. Early signs of the condition typically include increased frequency, urgency, and trouble starting to urinate due to the pressure the enlarged prostate puts on the bladder and urethra. In its early stages, PC exhibits symptoms that are comparable to those of BPH. The outer zone of the prostate

is where PC begins in the majority of patients, though. As an adenocarcinoma, PC is comparable to other prevalent epithelial malignancies including breast and colon in many ways (Tonry *et al.,* 2020).

Ghana is not an exception when it comes to how prostate cancer (PC) has significantly impacted health in recent years. Academics and medical organizations continue to report extensively on prostate cancer. The incidence is increasing, and we are increasingly seeing men in their 40s with the illness as a result of the increased use of imaging tools and PSA testing. Previously, men in their 60s and 70s were the most commonly diagnosed with prostate cancer (Bott Simon RJ and Ng Keng Lim, 2021).

According to a recent study, African American men were twice as likely as men of other races to pass away from low-grade prostate cancer. African American men are twice as likely as white men to develop prostate cancer, and they are also twice as likely to die from it. A recent study found that compared to men of other races, African American men had a twofold increased chance of dying from low-grade prostate cancer. African American men are twice as likely to develop prostate cancer than white men are, and they are also twice as likely to pass away from it (National Cancer Institute, 2019). This body of research suggests that some biological factors may make African American men more biologically vulnerable to the growth and spread of low-grade prostate cancer than men of other races.

In Africa, prostate cancer is the most common type of male cancer in terms of both prevalence and mortality. Cancer is a severe public health issue that many of the 1 billion people in sub-Saharan Africa are affected by. In sub-Saharan Africa, it was predicted that 801 392 new cases of cancer and 520 158 cancer-related deaths would occur in 2020. In men, prostate cancer was the most common type of cancer (77 300 cases). The most

prevalent male cancer in 40 sub-Saharan African nations was prostate cancer.(Lyon and France, 2022).

This discrepancy may be caused by variations in testing, referral practices, accessibility to care, illness biology, hereditary susceptibility, treatment options, reporting, and diagnosis. A nearly 98% 5-year survival rate among affected males has been achieved thanks to advancements in screening rates, genomic testing, imaging, and treatment(Carthon *et al.*, 2021). According to the American Cancer Society's yearly statistics reports, the death rate from cancer in the US has been gradually declining over the past 25 years. By 2016, the overall cancer death rate for all sexes had decreased 27% from its high in 1991. Between 1991 and 2016, this drop equates to an annual decline of 1.5% and 2.6 million fewer fatalities(American Cancer Society, 2019). Early detection is brought on by high-income countries' lower death rates. On the other hand, advanced, incurable tumors highlight the need for better support systems and educational initiatives, as seen in high-income countries. According to epidemiological studies, Ghana has a higher prostate cancer prevalence than other West African nations like Nigeria (127/100,000) and Cameroun (130/100,000)(Mensah and Mensah, 2020).

Even though there hasn't been a unanimous agreement on prostate cancer screening recommendations, large population studies have shown better survival benefits in early treatment of prostate cancer following screening. Additional evidence suggests that cancer mortality has recently decreased in a number of countries. Nigerian investigations revealed that there was often little awareness of prostate cancer (Enemugwem *et al.*, 2019).

Men should educate themselves about the benefits and risks of prostate cancer screening before making decisions, considering the complexity of the issues involved (Morlando,

Pelullo and Di Giuseppe, 2017). The American Cancer Society recommends Prostate-Specific Antigen (PSA) or Digital Rectal Examination (DRE) as the annual prostate cancer screening tests for men over 50. Additionally, it states that patients should be informed of the advantages and disadvantages before screening (Rawla, 2016).

Prostate cancer cases increased dramatically in various countries in the 1990s; this increase is attributed to the development of the PSA test and is therefore viewed as an improvement in detection (López-Abente, Mispireta and Pollán, 2014).

Although the prognosis is still unclear, men with prostate cancer are now living longer than before (UK, 2017). It can be difficult to discern between people with high risks who require potentially curative therapy and those with low risks for whom watchful waiting is sufficient (Bratt *et al.*, 2013). Furthermore, there is growing evidence that, as compared to watchful waiting in localized illness, radical prostatectomy, with its severe iatrogenic morbidity, does not appreciably enhance mortality(Knipper *et al.*, 2021). Comprehensive research has been done on novel genetic and immunological predictors of prostate cancer outcomes (Bishop *et al.*, 2015). These, however, still take time, and traditional clinical practice does not support them. Inaccurate clinical prognostication is now predicated on readily available tumor-related information, such as (PSA) levels, Gleason score, surgical margins, and pathological stage. It is becoming increasingly clear that systemic inflammation contributes to prostate cancer patients' worse survival and disease progression (López-Abente, Mispireta and Pollán, 2014).

The appropriate care of the sickness is one of the key problems with PC. The majority of men with PC have a mild condition that may be successfully managed without immediate care and is likely not going to reduce their normal life expectancy. If the disease progresses

in some persons and spreads (metastasizes) to organs other than the prostate, the prognosis for patients significantly worsens. In actuality, just 28% of men with metastatic PC live for five years or more (Tonry *et al.*, 2020). One of the most frequently used blood-based cancer biomarkers and the gold-standard for PC diagnosis, PSA has a significant impact on the overtreatment of PC in men. This is a serious issue because certain PC therapy options include side effects that could drastically reduce quality of life (Tonry *et al.*, 2020).

1.2 Problem Statement

In sub-Saharan Africa, the frequency of prostate cancer (PC) is rising (Ramaliba *et al.*, 2022). It is one of the most often discovered malignancies in men in the area (Necku, Anaba and Abuosi, 2019). Despite the subregion's rising PC prevalence, little is known about the illness. Additionally, the subregion has a poor level of awareness of and information about prostate cancer prevention. Men in Ghana may expect to live an average of 62.47 years, whereas men in Mauritius and Lesotho can expect to live an average of 71.61 years and 51 years, respectively. Men in Ghana have a higher likelihood of surviving beyond the age of 60. Out of every three men of 40 years and above in Ghana, one is at risk of PC (Necku, Anaba and Abuosi, 2019).

In Ghana, where its prevalence is increasing, prostate cancer is currently the second most frequent cancer among men. Ghana does not, however, have a cancer registry, in part because the condition is poorly recorded. Finding the prevalence rate is challenging as a result. In addition, there is a dearth of material on PC screening in Ghana, including knowledge of PC and attitudes toward it. For the early identification of prostate cancer, screening has been found to be a useful method. However, there is little PC screening in

Ghana, which leads to delayed diagnosis, inadequate care, and an increase in the death rate for prostate cancer (Necku, Anaba and Abuosi, 2019).

But the low rate of men and the lack of understanding of the condition, particularly those at high risk for prostate cancer, who undergo routine screenings, make the issue complicated. Additionally, there is a lack of knowledge about the risk factors for men, which makes it difficult for people to become aware of them and use screening and early diagnosis. Furthermore, despite the fact that there are risks and variables that can affect how the disease develops are mostly distinct, Accra and Ghana in general have a limited number of studies, which has led to an excessive reliance on study findings from other parts of the world (Duncan-wesley, 2015).

Finding out the attitudes, knowledge, and perceptions of adult males regarding prostate cancer screening has therefore become urgently necessary. As a result, the main goal of this research is to examine this issue utilizing the Ada East District as a case analysis.

1.3 Rationale of the study

The results of this significant investigation reveal how men in the Ada East District feel about prostate cancer screening in terms of attitudes, knowledge, and perception. The findings of this study will necessitate vital health initiatives aimed at increasing specific awareness levels about prostate cancer and will urge constructive behavior modifications to lower the dangers of developing prostate in males.

Concerning the issue, because they fear they might die from it, some people do not want to know whether they have prostate cancer. Though this group worldwide has greater rates of prostate cancer than other races, little is known about the risk factors for prostate cancer

among men in Sub-Saharan Africa (Rebbeck *et al.*, 2013). In Ghana, there is an increase in the burden of prostate cancer and the fundamental causes of the rising incidence of prostate cancer, however, are mostly unknown among Ghanaian men (Nyarkotey and Rnd, 2020). Therefore, the current study investigates attitudes, knowledge and perceptions for 40-year-old men to have prostate cancer screening in selected communities in the Ada East District in the Greater Accra Region of Ghana.

It is anticipated that, all data and information gathered will be used by local cancer bodies, the Ghana National Cancer Control Strategy, the Cancer Society of Ghana, academicians and scientists to develop policies which will be used as tools to control and prevent prostate cancer in Ghana.

The study is essential because it will serve as evidence-based information for accurate planning by health practitioners and policy makers in general. It will also indicate what may be expected in the general populace. Also, it will add to the scientific body of knowledge and serve as a source of literature: providing a conceptual framework which can be adapted by future researchers who will want to conduct empirical studies on prostate cancer screening within the academic circles.

The recommendations of this study on improving screening uptake and promotion of information dissemination on prostate cancer will go a long way in significantly improving the effectiveness of health management of prostate cancer at all stages among men.

1.4 Conceptual framework

A conceptual framework is described as " the result of bringing together several related concepts to explain and give a broader understanding of the phenomenon under research" (Imenda, 2014). Predisposing variables gathered from the study participants such as age, the level of formal education attained, reported religious affiliation, ethnicity and occupation can affect their attitude and perception towards screening for prostate cancer. This in effect could lead to the preventive measures these individuals will want to pursue to avoid the disease.

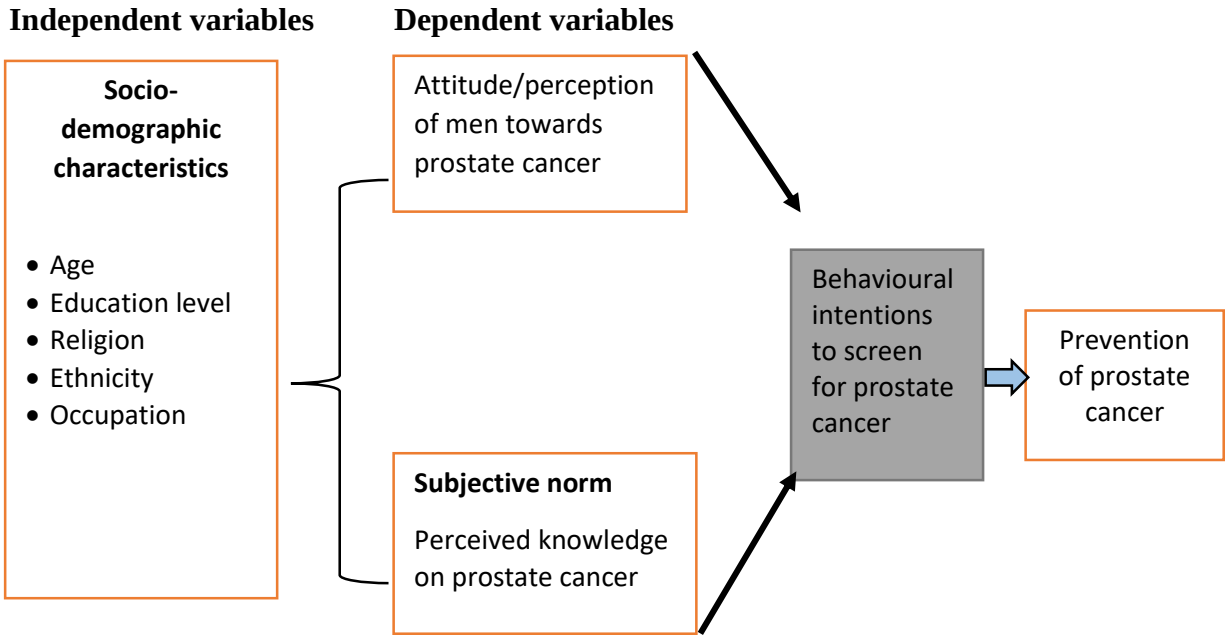


Figure 1: ***Conceptual framework for the study*****. Adapted from Fishbein (1967)**

1.5 Research questions

1. What is the knowledge level of prostate cancer screening among men in the Ada East District?
2. What are the perceptions of prostate cancer screening among men in the Ada East District?
3. What are the practices of prostate cancer screening among men in the Ada East District?
4. What is the relationship between attitude, knowledge and perception levels, towards prostate cancer screening with socio-demographic variables among men in the Ada East District?

1.6 General Objectives

The general objective of the study is to assess the knowledge, perceptions and practices toward the uptake of prostate cancer screening and its relationship with socio-demographic variables among men in the Ada East District of Ghana.

1.7 Specific objectives

1) To examine the level of knowledge of prostate cancer among men in the Ada East District.
2) To determine the perception of prostate cancer among men in the Ada East District.
3) To evaluate the practices of prostate cancer screening among men in the Ada East District.
4) To measure the relationship between knowledge and practices of prostate cancer and the socio-demographic characteristics of men in the Ada East District.

1.8 Profile of study area

The study was conducted in the Ada East District (Figure 2). It was formerly Danmge East District was established in 1989 as a result of Local Government Instrument 1491. Using a new Local Government Legal Instrument (L.I. 2130), a new district (Ada East) was created out of Danmge East under subsection (one) of section 3 of the Local Government Act, 1993 (Act 462), and it was founded in March 2012 with twenty-seven electoral areas.

The Greater Accra Region's Eastern portion is where the Ada East District is located. The District has 289.783 acres of land in total (square km). The South Tongu District, Ada West, and Central Tongu District all border the District on the north, east, and west, respectively. The Gulf of Guinea, which reaches from Kewunor to Totope over 18 kilometers, forms its southern border. Additionally, it is bordered by the Volta River, which flows from the district's seat, Ada-Foah, in the southeast and forms an estuary before reaching the Gulf of Guinea in the south. According to the 2010 Population and Housing Census, there are 71,671 people living in the Ada East District, or 1.8 percent of the overall population of the area. 52.5 percent of the population is female and 47.5 percent is male. Approximately 68.3% of the population lives in rural areas. There are 90.3 men for every 100 females in the District. The District's overall age dependency ratio (dependent population to population of working age) is 85.5, with males having a higher age dependency ratio (89.8) than females (88.9). The south-eastern coastal plains of Ghana, one of the warmest regions in the nation, surround the Ada East District.

An agricultural economy dominates the region. According to the 2010 Population and Housing Census conducted by the Ghana Statistical Service, 68.3 percent of the population lives in rural areas, which is the reason for this. 30% of people who are 15 years old and

older who are not employed are in the labor force, which accounts for 70% of the population. There are 5.0 percent unemployed people among the economically active population, compared to 95.0 percent employed people. Students make up a bigger portion of the economically inactive population (50.2%), followed by people who work at home (15.8%), and people who are disabled or ill enough to not be able to work (5.8%). 48.2% of the unemployed (4 out of 10) are actively looking for jobs.

A little over 20.2% of the employed population is made up of skilled employees in the agricultural, forestry, and fishing industries. Another 39.3% work in service and sales, 23.3% in craft and allied.

In general, men make up the majority of workers in every employment category, with the exception of those who are apprentices, self-employed without employee(s), and contributing family workers. The district's main employer, the private informal sector, employs 92.2 percent of the total workforce, followed by the public sector, which employs 4.4 percent. All Ada East District men aged 40 and older were included in this study. trades, and 6.8% are managers, professionals and technicians.

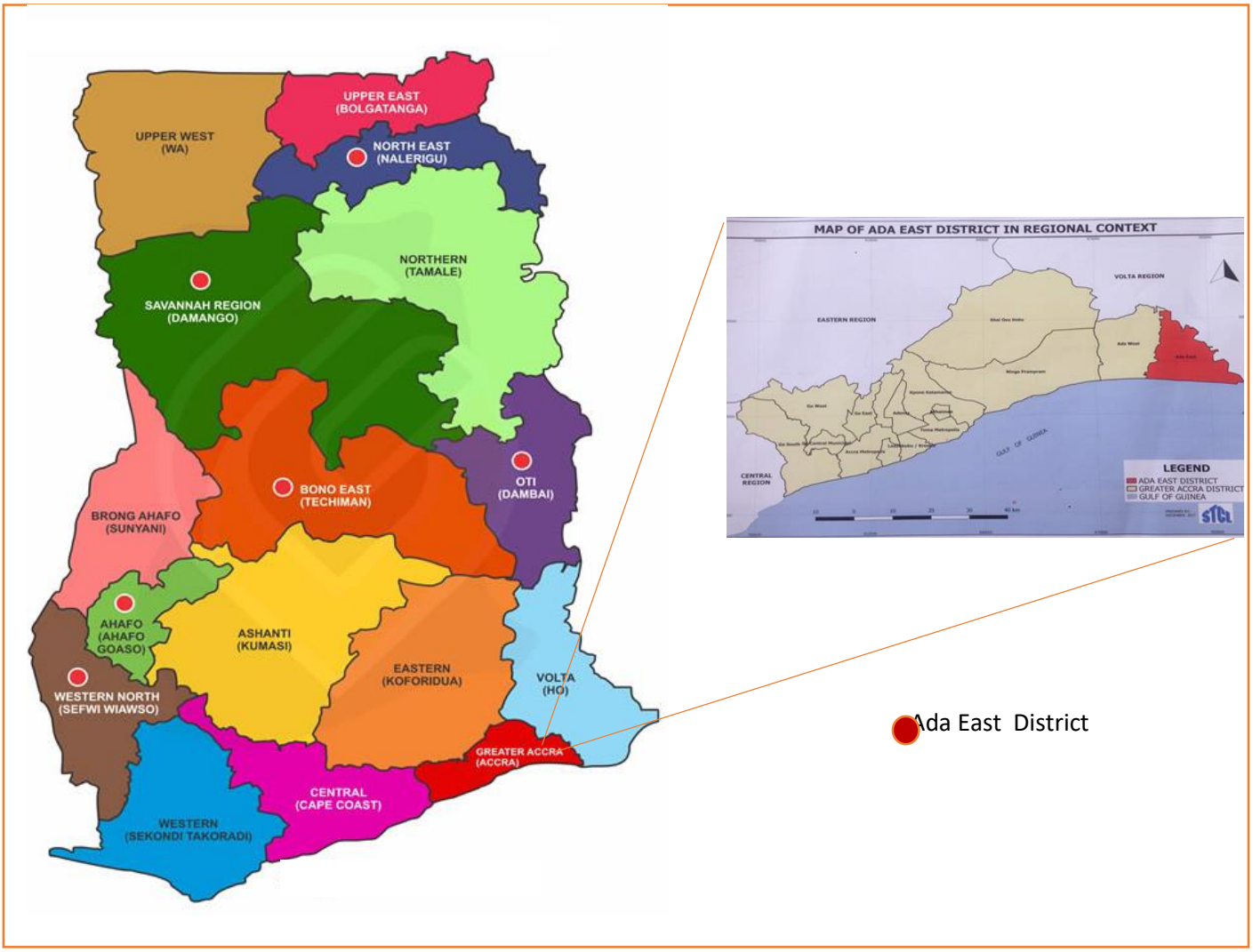


Figure 2: Map of Study Area (Ada East District Municipality

Scope of Study

When study participants were being recruited, the study's focus was narrowed to men who were 40 years of age or older and lived in the Ada East District. Knowing the limitations of screening, the adverse effects of treatment, the symptoms, and the risk factors is the only way to be fully informed about prostate cancer and prostate cancer screening.

1.10 Organization of Report

There are six (6) sections in the report. This study's background information, problem statement, justification for the investigation, hypothesis/conceptual framework, research questions, general objective, specific objective, study area profile, and study scope are discussed in Chapter 1's introduction. Based on the study's aims, Chapter Two also reviewed related studies on the subject. The topics covered in Chapter 3 include research methodology and design, data handling, data analysis, ethical consideration, study limits, and assumptions. In Chapter 4, the background variables and the findings based on the major study variables are summarized. In Chapter 4, the background variables and the findings based on the major study variables are summarized. By contrasting the findings with the literature, Chapter 5 discusses the findings based on the study questions. By summarizing the main conclusions and addressing recommendations to the relevant stakeholders, Chapter Six delivers the conclusion and recommendations.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Etiology of Prostate Cancer

Prostate cancer develops in the prostate, the largest auxiliary gland in the male reproductive system and located in the pelvis between the bladder and the penis (Tonry *et al.,* 2020).

It's one of the malignancies that affects people the most, especially men. Males have a tiny gland called the prostate that resembles a walnut that secretes seminal fluid that serves as the sperms' food source and vehicle. The majority of this cancer slowly grows and is confined to the prostate gland without causing severe harm or injury however, despite the fact that some of these cancers spread slowly and may not require any therapy, others can develop swiftly and with great acuity. This in turn spreads to nearby tissues, cells and finally to the entire body increasing the man's chances of not recovering which eventually leads to fatalities. Prostate cancer detected early while still confined to the prostate gland has the best chance of a successful treatment regime('Prostate cancer - Symptoms and causes - Mayo Clinic', 2020).

In its early stages, there may be no symptoms or indicators at all for prostate cancer. There may be indications and symptoms of more advanced prostate cancer which includes blood in urine, blood in semen, decreased force in the stream of urine, erectile dysfunction, effortless weight loss, bone pain and difficulty in urination (Tonry *et al.,* 2020).

Globally, the most prevalent non-skin cancer in males, prostate cancer (PC), accounts for 3.8% of all cancer-related deaths in men, according to Global Cancer Incidence and Comma; Mortality and Prevalence (GLOBOCAN) (Wang *et al.*, 2022). According to the 2018 database, men worldwide die from it as the fifth leading cause of cancer. It also said that Southern African and Caribbean men have the highest death rates globally (Wiafe *et al.*, 2021a) revealed that in countries like Australia, the USA, and New Zealand, PC was the second most prevalent malignancy. Though developing nations account for less than 30% of all PC cases, these nations are thought to have the greatest PC mortality rates due to delayed diagnosis. Although the disease is not common in Sub-Saharan Africa (SSA), if screening is promoted, it is anticipated that the frequency will rise. Therefore, PC continues to be a serious public health issue in both industrialized and developing nations (Wiafe *et al.*, 2021b). The etiology of prostate cancer has been the subject of numerous study and is still mostly unknown when compared to other prevalent cancers.

Prostate cancer is the most common type of cancer among older men. In fact, as life expectancy rises and PSA screening becomes more common, more senior men are receiving prostate cancer diagnoses. The risk of prostate cancer was shown to start increasing significantly in White guys after the age of 50, but it started increasing in Black males and those with a family history of prostate cancer after the age of 40 (Mucci, Wilson and Giovannucci, 2016).

2.2 Epidemiology of Prostate Cancer

In 2018, 358,989 African-American males died from prostate cancer, consequently, it is the second most typical kind of cancer in men globally (behind lung cancer), accounting for 1.276.606 new cases and 3.8% of all cancer-related deaths in men. For every 100,000 men, 158.3 new cases are diagnosed, which is a greater incidence rate than it is for White men, and their mortality is around twice as high. Different social, environmental, and genetic factors are thought to be the cause of this inequality. The mortality rate will increase by 1.05%, which will be a small change. despite the expected 2,293,818 new cases through 2040 (Mucci, Wilson and Giovannucci, 2016).

One of the most significant cancers in males is prostate cancer. It is the second most prevalent cancer in men globally, with a global incidence of 25.3 per 100,000, with significant regional variations. Important hints on risk factors are still missing. Environmental impacts, genetic influences, and aging have all been researched. The previous two decades have seen an increase in incidence, partly as a result of early diagnosis techniques. The death rate of 8.1 per 100,000 mostly affects men in their latter years; variations between nations and changes in this rate with time are noticeably smaller than for incidence (Mucci, Wilson and Giovannucci, 2016).

Prostate cancer is the fifth most common cause of cancer mortality in men and the second most common cancer in men worldwide (Chodak et al, 2014). Prostate cancer is the second most common disease among men, with an estimated 1,414,000 new cases and 375,304 deaths globally in 2020 (Wang *et al.*, 2022).

In South Africa, where the age-standardized prostate cancer (PC) incidence rate in 2018 was 68.0 per 100,000 people, it is the most common male neoplasm in Africa (Cassim *et al.*, 2020).

According to the 2018 database, it ranks as the sixth most common underlying factor for men's cancer-related fatalities globally. It also stated that men from Southern Africa and the Caribbean have the highest death rates worldwide. According to a recent study by Yeboah-Asiamah et al., PC is the second most prevalent malignancy in countries like Australia, the United States, and New Zealand. Even though developing nations account for less than 30% of all PC cases, these nations have historically been predicted to have the highest PC mortality rates due to late detection. The incidence of the disease is now low in sub-Saharan Africa (SSA), but if screening is promoted, it is anticipated to rise. As a result, both industrialized and developing nations continue to place a high priority on PC (Wiafe *et al.*, 2021b).

2.3 Risk Factors of Prostate Cancer

There is currently scanty evidence linking prostate cancer genesis and subsequent progression to any carcinogens or modifiable risk factors (Tindall *et al.*, 2013).

One of the most complicated diseases, prostate cancer (PC) is greatly influenced the behavior of the tumor would be affected by hormonal and genetic factors (Luis Alberto Henríquez-Hernández, Almudena Valenciano, Palmira Foro-Arnalot, María Jesús Álvarez-Cubero, José Manuel Cozar, José Francisco Suárez-Novo, Manel Castells-Esteve, Pablo Fernández-Gonzalo, Belén De-Paula-Carranza, Montse Ferrer, Ferrán Guedea, 2014).

2.4 Practices about Prostate Cancer Screening

A 2010 survey found that 95% of Ghanaian military officers and males had never undergone a prostate cancer screening test, whereas the remaining 5% said they had. When asked if they would consent to being screened if given the opportunity, all participants said they would. Despite the fact that 46% of respondents thought prostate cancer could be cured, if discovered in its early stages, 51% were unsure whether the disease was treatable in any situation, and 3% disputed that it was. The study was done among military men, therefore results cannot be applied to all males, it must be remembered. The results must also be understood in light of the convenience sampling method's use. a research project carried out in Uganda by (Nakandi *et al.,* 2013) found that only 12.3% of those surveyed had ever received advice to get screened from a doctor. Additionally, only 2.8% of men had ever undergone a prostate cancer screening; the majority (89.9%) had never had one, and 7.3% were unsure of whether they had ever undergone a screening or not. 32% of respondents who had never had a screening for prostate cancer were unaware of it, 25% did not believe they were at risk, and 17% were unaware of where the screening was conducted. The patient's age, overall health and the type and grade of their cancer and his or her preferred course of treatment are all factors in prostate cancer treatment. The patient's quality of life may be impacted by the adverse effects of each treatment option, and palliative and alternative therapies may occasionally be combined (Calabrese & Mueller, 2006).

2.5 Knowledge about Prostate Cancer

Knowledge is defined as having enough information about prostate cancer's warning signals, symptoms, causes, and available treatments of the disease. It is believed that awareness of prostate cancer is a reliable predictor of prostate screening uptake and proactive attitude toward health (Lloyd *et al.,* 2013). It is known that having a lot of information about prostate cancer can make people less likely to seek out health care (Oladimeji *et al.,* 2010). Prostate cancer knowledge is quite prevalent, according to a prior study (Adeloye *et al.,* 2016). In a study conducted by Oladimeji et al. (2010), the majority of public employees were found to be able to accurately name at least one prostate cancer symptom, with difficulty urinating being the most prevalent symptom. Zhang *et al.*,(2017) also observed that men at high risk, particularly those with a family history of prostate cancer, tend to have higher levels of knowledge. also discovered to possess greater knowledge than younger males. High degrees of schooling were also discovered to be connected to high levels of knowledge (Oladimeji *et al.,* 2010). Another earlier study revealed that certain wealthy countries had poor levels of understanding regarding prostate cancer (Zhang *et al.,* 2017). The majority of males in developed nations lack sufficient understanding of risk factors, screening procedures, and early diagnosis and screening (Bray, Jemal, Grey, Ferlay, & Forman, 2012). A cross-sectional investigation was carried out by (Oranusi, Mbieri, Oranusi, & Nwofor, 2012) to determine how well-informed and knowledgeable Anambra state government employees are of prostate cancer and prostate-specific antigen. The study evaluated knowledge in 7 categories related to prostate cancer screening. The respondents' median age was 45.1 years, while the modal age range was 40 to 49 years. The majority of respondents (45.3%) named having trouble passing pee as their most frequent symptom, while 23.9% said they had no symptoms at all. Despite the fact

that 90% of men were ready to undergo the screening test, only 6.4% had actually been tested. Yeboah-Asiamah, et al., 2017) investigated the understanding and attitudes of Sunyani's male teachers toward prostate cancer. The study was cross-sectional in design. The respondents' ages ranged from 45 to 60 years old, and the sample size was 160. The responders were 49.52 years old on average. Regarding prostate cancer causes, 58.8% of men were unaware that it could be sexually transmitted, and 40.6% were unaware that it could be brought on by cell phone radiation. 72% of those surveyed disagreed that the procedure was embarrassing, 95% of respondents were aware that screening was favorable. 90%, nevertheless, had never undergone screening. Despite the fact that 68.1% of respondents fell into the high-risk age group, only 34.4% of respondents were aware that they were in danger.

A qualitative study was carried out in the UK to look at men who are at high risk of developing prostate cancer and their attitudes about it, as well as how they feel about food and how much they value education (Horwood *et al.*, 2014). Participants were randomly assigned to receive either lycopene or a placebo and green tea in the trial that the study was nestled within. Participants ranged in age from 52 to 72, were married, and were all Caucasians. Knowledge of prostate cancer risk factors, opinions on lycopene and green tea for prostate cancer prevention, and preferences for diet-related information were the primary topics that emerged from the analysis.

2.6 Perceptions about Prostate Cancer

Prior research in the United States showed that patterns of change for all cancer screening modalities varied by age, gender, race, and ethnicity, but that the prevalence of use within recommended time intervals was consistently lower among groups with lower levels of education and, consequently, knowledge (Breen, Wagener, Brown, Davis, & Ballard-Barbash, 2001). In a comparable study conducted in the United States, knowledge about prostate cancer significantly predicted participation in screening (Nivens, Herman, Pweinrich, & Weinrich, 2001). Older Ghanaian men are more aware of prostate cancer than younger men, but they know less about its causes, how to avoid it, and how to cure it. They also perceive the disease's risk differently and are less likely to undergo screenings (Botwey *et al.,* 2010). However, the majority of these guys were eager to undergo screenings for the disease despite having little knowledge of the condition and little awareness of its risks (Botwey *et al.,* 2010). However, other studies (Ajape *et al.,* 2009) among native urban Ghanaians (with less education than the average) revealed that a sizable number of the men were ignorant of prostate cancer, including screening for the disease using the PSA method. Studies conducted recently on patients from India also revealed that the majority of men were ignorant of the available treatments and their results (Xu, Neale, Dailey, Eggly, & Schwartz, 2012). In light of this, increasing the availability of information on prostate cancer can change people's perspectives of the condition and encourage more people to get screened for the disease early.

2.7 Conclusion

One of the most often diagnosed cancers in males and the fifth greatest cause of cancer-related death is prostate cancer. Men are more likely to get prostate cancer due to a number of risk factors, the most prevalent of which include age, lifestyle variables like alcohol consumption, and family history of the illness. There are conflicting empirical findings regarding prostate cancer behaviors, with some studies suggesting a beneficial association and others a negative association. Similar findings on knowledge and attitudes around prostate cancer have been observed. There have been a few studies done in Ghana, however the majority of these investigations have been reported in high-income nations. The study's methodology was detailed in the next chapter.

CHAPTER THREE

3.0 METHODOLOGY

3.1 Research Methods and Design

This study was a quantitative research study design. It employed the use of data collection to estimate the extent of attitudes and perceptions of men aged 40 years and above in the Ada East District. A cross-sectional study is a sort of observational research that examines information on variables gathered at one particular moment across a sample group. It is usually very suitable for community surveys such as this research undertaken.

This chapter describes the methodology used to carry out the study and accomplish the predetermined goals. It addressed the study's design, setting, demographic, sample size, sampling technique, research tools, and validity assessment techniques. The 2010/2021 population of the Ada East District was obtained from Ghana Statistical Service as part of the items used for univariate and multivariate analysis.

3.2 Data Collection Techniques and Tools

The study's data gathering method was a structured questionnaire with closed-ended questions. The researcher together with the trained field assistants administered the questionnaires, after outlining the objectives to the respondents and seeking their voluntary consent. The questionnaire was created to represent the particular goals and was "extracted" from the literature research. The questionnaire focused on socio-demographic factors, practices about prostate cancer, prostate cancer awareness and use of prostate cancer screening of the respondents.

3.3 Study Population

Adult males in the Ada East District who are at least 40 years old and meet the inclusion criteria made up the study's population. This population was chosen since it has been shown that men over 40 are most at risk for developing prostate cancer. Additionally, the Ghana Health Service (GHS) advises starting early PC screening for men around age 40. This implies that men who are 45 years old and older should have undergone at least two PC screenings (Asare and Ackumey, 2021). The age at risk for Prostate Cancer in Ada East District is unknown. Regardless of whether they had previously been diagnosed with prostate cancer or taken a prostate cancer screening test, these men were chosen at random from households.

3.4 Study Variables

3.4.1 Dependent variables;

Attitudes toward Prostate cancer: The behavior of respondents concerning but not limited to screening of those suffering prostate cancer.

Perception of Prostate cancer: The beliefs of respondents concerning the causes, seriousness and susceptibility of risk of suffering prostate cancer.

Knowledge of Prostate cancer: The understanding and/or awareness of the risk factors of prostate cancer.

3.4.2 Independent variable;

Socio-demographic: Age, marital status, educational level, ethnicity, occupation and religion.

3.5 Sampling

A multistage sampling approach was employed in the sample selection. The Ada East District has twenty-seven electoral areas. The researcher simple random sampling to pick 14 out of 27 electoral areas in the community. Proportional allocation was then used to determine the sub-sample that should be taken from each area. A systematic sampling technique was then used to recruit the consented respondents in the 14 electoral areas for the survey.

A sample size of about 349 men was estimated using the Cochran formula (1977) at 95% confidence interval and a 5% margin of error, considering a 65.2% prevalence rate for prostate cancer from literature(Nartey Laweh and Manortey, 2021).

$$n = \frac{(Z)^2 p(1-p)}{e^2}$$

Where:

n = desired sample size

Z = reliability coefficient for a 95% confidence interval usually set at 1.96.

p = the prevalence of prostate cancer was 65.2%.

e = degree of accuracy desired set at 0.05 probability level.

Hence,

$$n = \frac{(1.96)^2 \times 0.652(1 - 0.652)}{(0.05)^2} = 349$$

Adding a 5% non-response rate to the generated sample size, the operational size was brought to about 366 respondents. A multistage sampling method was employed over two months to select three hundred and sixty-six (366) respondents. A systematic selecting procedure with a chosen skip pattern was then used to pick study participants for enrolment after signing the consent form.

3.6 Pre-testing

Pre-testing of the study's questionnaires took place in a neighborhood outside the chosen study location which has the same climatic and socioeconomic characteristics as the selected research communities. The community of choice was Asigbekope which is in the Ada West District in the Greater Accra Region. The pre-test made it possible to test the participants' level of understanding and help to further adjust the questions on both forms. A few questions were clarified and changed based on the feedback given in order to guarantee the accuracy of the answers. It helped to test participants' level of understanding of the questionnaire. Results from the pretesting was not be included in the main study.

3.7 Data Handling

All data was confirmed for consistency, coded, and keyed into Microsoft excel spreadsheet 2019. The principal investigator was in charge of data handling. Data collected with questionnaires was assessed for completeness and errors. All data sets and work done was sent to the investigator by email and external drive which were under data protection.

3.8 Data Analysis

Data retrieved was analyzed using a statistical software tool, STATA (*StataCorp.2007. Stata*

Statistical Software. Release 17. StataCorp LP, College Station, TX, USA). The demographic features of the study participants were summarized in tables and graphs using descriptive statistical analysis. Results obtained was expressed as means, frequencies, percentages, and then graphs. univariate, bivariate and to identify the factors of attitudes, knowledge, and perception of men aged 40 and older regarding prostate cancer, multivariate logistic regression analysis was used. These will help to compute the association between prostate cancer and predictors in terms of odds ratio (OR). Odds ratios (ORs) and their respective 95% confidence intervals (CIs) were provided, and the threshold for statistical significance was set at $p<0.05$ for all tests.

3.9 Ethical Considerations

Ethical clearance was obtained from the Ethical Review Committee of Ensign Global College. Also, administrative permission was sought from the Ada East District Assembly. Before beginning the exercise, an oral informed consent was obtained from each subject after briefly explaining the study's goal. Additionally, a signed consent form was obtained from participants. Objectives of the research were discussed with them and assured of anonymity and confidentiality of all information gathered. Participants were assured of the right to pull out of the research at any time without any consequences to them, their image and self-esteem.

3.10 Limitations of Study

The study depended on respondents' self-reports, and the information they provided could not be confirmed; it was envisaged that there might be information bias.

The study considered males 40 years of age and older were only allowed to participate; males younger than 40 could not, despite the possibility that their involvement might have further supported the findings. No generalization of the results to all men in the Ada East District will be made.

3.11 Assumption

The study is predicated on the notion that men are underinformed and under-screened for prostate cancer in Ada East District could be a result of lower educational attainment and poor practices on self-vulnerability to prostate cancer. It was also assumed that the study participants were truthful in all the answers they were asked to provide.

CHAPTER FOUR

4.0 RESULTS

4.1 Introduction

The key findings from the data are presented in this chapter based on the study objectives. These comprise inferential statistics using predictive models to evaluate the impact of chosen independent factors on the chosen dependent variables as well as descriptive statistics on the socio-demographic features of the research respondents. Ten (10) questions were included in the part on the assessment of respondents' knowledge of prostate cancer, covering knowledge of risk factors, symptoms and indicators of prostate cancer, knowledge of prostate cancer, and knowledge of prevention and therapy. The results of the respondents' judgments of the value of screening in lowering the prevalence of prostate disease as well as their self-reported practices of getting checked for the condition are also included in this chapter.

4.2 Socio-demographic Characteristics

A total of 366 men aged 40 years of age or older who consented to participate were recruited for the study. The bulk of respondents (42.90%) are Adas who belonged to the Ga-Dangme ethnic group. The respondents' average age was 48.71 $\pm$ 6.92 years. A little over half of the respondents (59.84%) were between the ages of 40 and 49 years. Out of the total study respondents, 253 representing 69.13% were married at the time of enrolment, and the vast majority (85.25%) identified as Christians. The majority of the 141 respondents (38.52%) to the survey had no formal education at the time of participation. The majority of respondents (62.57%) came from the unofficial sector, and roughly 27.60% of them were unemployed. It was discovered that 61.20% of the study population has one

to three children, while 20.77% do not. The majority of respondents (81.15%) said their NHIS card had expired, and 73.5% said they had no family history of prostate cancer. The details of the characteristics of men in the Ada East District are presented in Table 4.1.

Table 4.1: Socio-Demographic Characteristics of Men in the Ada East District (n=366)

Variables	Categories	Frequency	Percentage
Ages	40-49	219	59.84
	50-59	94	25.68
	60-70	53	14.48
Marital status	Single	79	21.58
	Married	253	69.13
	Divorced	34	9.29
Educational status	None	141	38.52
	JHS/Middle school	101	27.60
	SHS/Voc/Tech	103	28.14
	Tertiary	21	5.74
Religion	Christianity	312	85.25
	Islam	48	13.11
	Traditional	6	1.64
Ethnicity	Ada	157	42.90
	Krobo	78	21.31
	Ewe	66	18.03
	Akan	65	17.76
Occupation	Formal	18	4.92
	Informal	229	62.57
	Unemployed	101	27.60
	Retired	18	4.92
Parity	None	76	20.77
	1-3	224	61.20
	4+	66	18.03
Working years	None	64	17.49
	1-5	92	25.14
	6-10	81	22.13
	11-20	73	19.95
	20+	56	15.30
Family history of PC	Yes	69	18.85
	No	297	81.15
NHIS	Yes	252	68.85
	No	114	31.15
Age(mean ± SD) 48.71 ± 6.92			

Source: *Field data,2022.*
NHIS: National Health Insurance Scheme

4.3 Practices of Prostate Cancer Screening

The majority of those surveyed (61.20%) said they had heard of prostate cancer. However, very few (21.86%) had undergone a prostate cancer screening. Prostate cancer screening was not deemed to be painful (87.70%) or embarrassing (58.74%) by the majority of respondents (52.46%), who also disputed that it was important. While 59.02% of respondents said that getting screened for prostate cancer would make them healthier, 88.52% of respondents believed that it would worsen the condition. Additionally, 54.37% of the respondents disagreed that screening for prostate cancer was advantageous in order to determine their status and allay their concerns. Nearly 69.13% of those surveyed believed that routine prostate cancer screenings were pricey. Details of the practices of prostate cancer screening are shown in Table 4.2.

Table 4.2.: Prostate Cancer Screening among Men in Ada East District(n=366)

Variables	Categories	Frequency	Percentage
Heard about Prostate Cancer	Yes	224	61.20
	No	142	38.80
Screened for Prostate Cancer before	Yes	80	21.86
	No	286	78.14
Prostate Cancer screening is important	Agree	174	47.54
	Don't agree	192	52.46
Prostate Cancer screening is painful	Agree	45	12.30
	Don't agree	321	87.70
Screening aggravates the disease	Agree	42	11.48
	Don't agree	324	88.52
Prostate cancer screening is embarrassing	Agree	151	41.26
	Don't agree	215	58.74
Prostate Cancer screening will keep me healthy	Agree	216	59.02
	Don't agree	150	40.98
Prostate Cancer screening will settle any ambiguities on whether I have the disease or not.	Agree	167	45.63
	Don't agree	199	54.37
Prostate Cancer screening is expensive	Agree	253	69.13
	Don't agree	113	30.87

Source: *Field data, 2022*

4.3.1. Sources of Prostate Cancer Information

Details on the sources of prostate cancer information are presented in Figure 4.1. The majority of respondents learned about prostate cancer from literature, the internet, and the mass media, whereas 8.85% did so from health professionals. In addition, 8.85% said they learned about prostate cancer from family and friends.

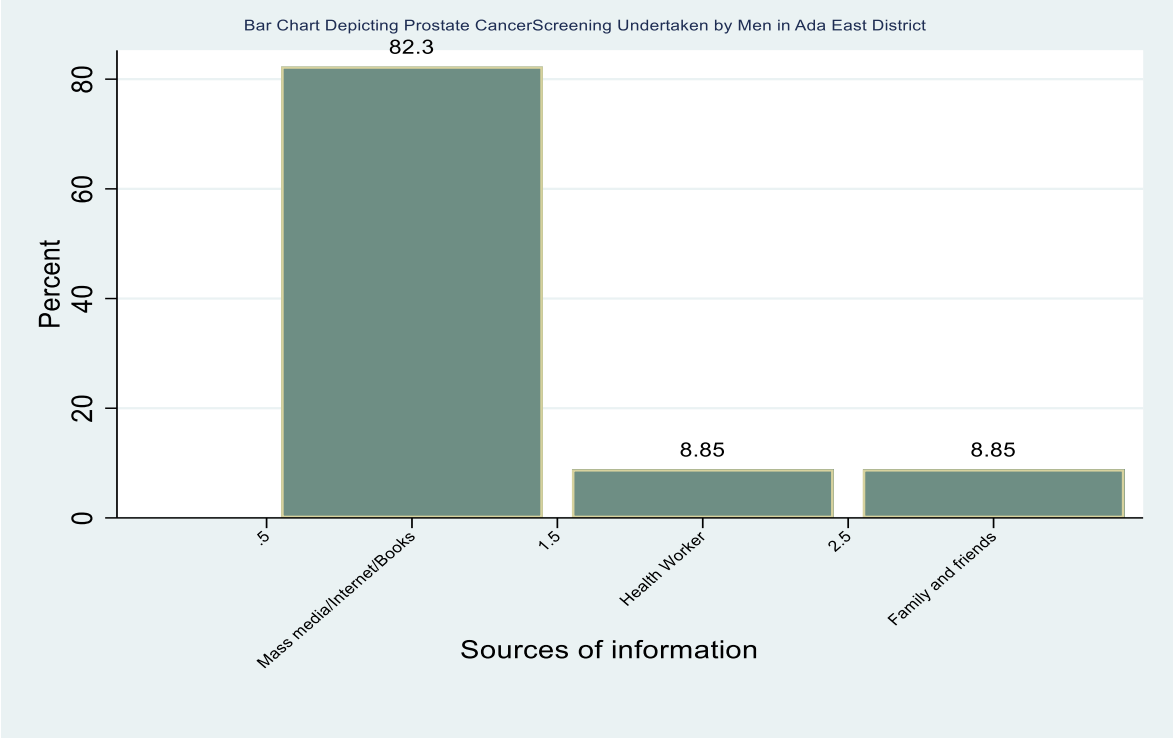


Figure 4.1. Chart showing sources of Prostate Cancer (PC) information

4.3.2. Types of Prostate Cancer Screening

The commonest form of prostate cancer screening done by most of the respondents is Digital Rectal Examination (DRE) (81.25%); followed by Prostate Specific Antigen(PSA) (11.25%) and Biopsy (7.5%) was the least accessed by respondents. Details of the screening methods for prostate cancer are presented in Figure 4.2.

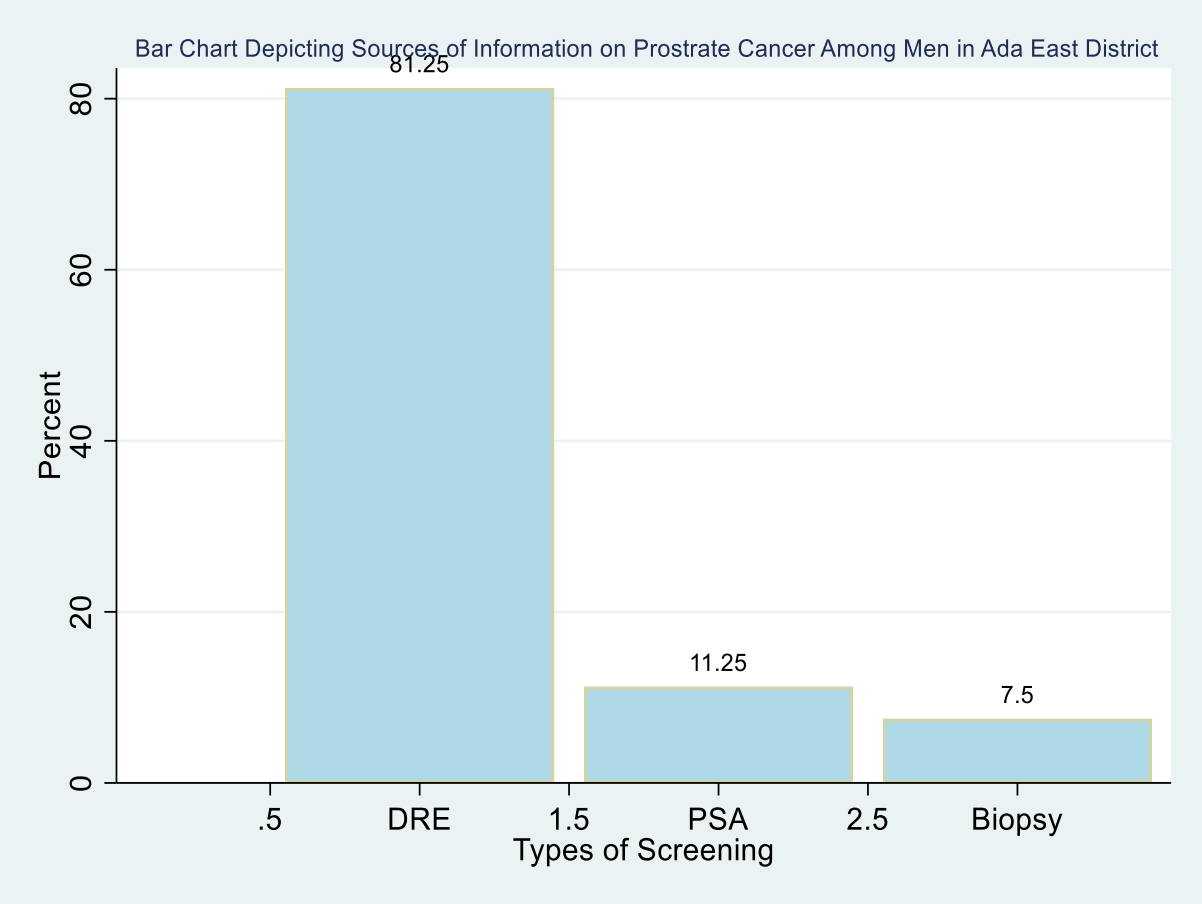
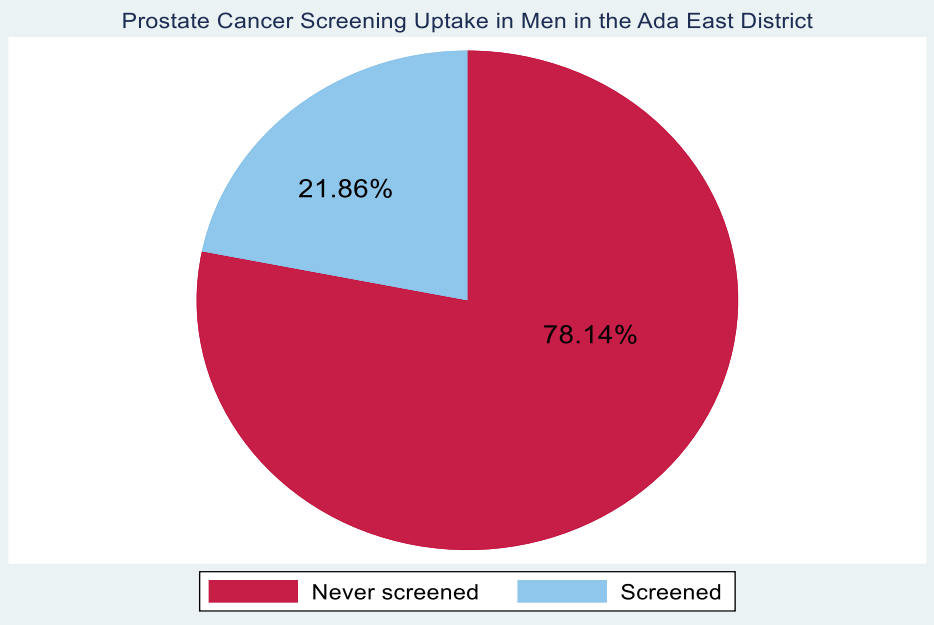


Figure 4.2 Chart showing types of Prostate Cancer Screening Undertaken by Men in Ada East District.



4.4 Bivariate Association between Prostate Cancer Screening Uptake and Socio-Demographic Characteristics

All sociodemographic traits of respondents were shown to be substantially associated with prostate cancer screening uptake among men in the Ada East District (p-value < 0.05), except for religion, occupation, and family history of prostate cancer. Prostate cancer screening uptake was found to be more closely related to educational achievement. Similar findings showed that a larger percentage of prostate cancer screening uptake was related to age. Additionally, it was discovered that respondents' marital status was linked to a higher percentage of prostate cancer screening uptake. Respondents without any history of prostate cancer were more likely to take up prostate cancer screening than respondents with a family history of prostate cancer (84.0% vs 16.0%, p=0.01). Also, respondents with valid NHIS cards were more likely to take up prostate cancer screening compared with respondents with invalid NHIS cards (71.8% vs 28.2%, p=0.05). The details of the assessed

association between socio-demographic characteristics and prostate cancer screening uptake among men in the Ada East District are shown in Table 4.3.

Table 4.3: Test of Association between Socio-Demographic Characteristics and prostate cancer screening Uptake Among Men in Ada East District(n=366)

Variables	Prostate Cancer screening uptake		P-Value
	No n=286 (%)	Yes n = 80 (%)	
Ages			0.009
40-49	183(83.56)	36(16.44)	
50-59	66(70.21)	28(29.79)	
60-70	37(69.81)	16(30.90)	
Marital status			<0.001
Single	74(93.67)	5(0.33)	
Married	184(72.73)	69(27.27)	
Divorced	28(82.35)	6(17.65)	
Educational status			<0.001
None	128(90.78)	13(9.22)	
JHS/Middle school	84(83.17)	17(16.83)	
SHS/Voc/Tech	56(54.37)	47(45.63)	
Tertiary	18(85.71)	3(14.29)	
Religion			0.195
Christianity	246(78.85)	66(21.15)	
Islam	34(70.83)	14(29.17)	
Traditional	6(100.00)	0(0.00)	
Ethnicity			<0.001
Ada	125(79.62)	32(20.38)	
Krobo	75(90.15)	3(3.85)	
Ewe	44(66.67)	22(33.33)	
Akan	42(64.62)	23(35.38)	
Occupation			0.881
Formal	15(83.33)	3(16.67)	
Informal	177(77.29)	52(22.71)	
Unemployed	79(78.22)	22(21.78)	
Retired	15(83.3)	3(16.67)	
Parity			<0.001
None	38(50.00)	38(50.00)	
1-3	186(83.04)	38(16.96)	
4+	62(93.94)	4(6.06)	
Working years			**0.055**

None	50(78.13)	14(21.88)	
1-5	76(82.61)	16(17.39)	
6-10	62(76.54)	19(23.46)	
11-20	49(87.50)	24(32.88)	
20+	49(87.50)	7(12.50)	
Family history of PC			**0.345**
Yes	51(73.91)	18(26.09)	
No	235(79.12)	62(20.88)	
NHIS			<0.001
Yes	217(86.11)	35(13.89)	
No	69(60.53)	45(39.47)	

N(%) column total NHIS: National Health Insurance Scheme

4.5 Knowledge of Prostate Cancer

Prostate cancer is treatable, according to 54.64% of respondents, while 56.01% of those polled disagree that it has a known cause. Furthermore, 51.91% of respondents disagreed that difficulty passing urine is one of the warning signals of prostate cancer, and more than half of respondents (53.55%) thought that prostate cancer can not show with early signs and symptoms. 92.60% of respondents disputed, nonetheless, that weakness and numbness in the leg are indicators of prostate cancer development. While 53.28% of respondents disagreed that males under the age of 40 are at increased risk for prostate cancer, 90.16% of respondents disagreed that back and waist discomfort is a symptom of prostate cancer. In addition, when asked if males who have a family history of the disease are more prone to get it, 75.41% of the respondents disagreed. Although 85.79% of the respondents were unable to name any screening techniques, 14.21% were able to. In addition to the screening techniques, nearly all responders (98.36%) disagreed that surgery could be used to treat prostate cancer. Details of the knowledge on prostate cancer are presented in Table 4.4.

Table 4.4 Knowledge of prostate cancer among men in Ada East District (n=366)

Variables	Frequency	Percentage
Is prostate cancer curable		
Yes	200	54.64
No	166	45.36
Prostate cancer has no known cause		
Yes	161	43.99
No	205	56.01
Early stages of prostate cancer may not exhibit any signs or symptoms		
Agree	170	46.45
Don't agree	196	53.55
Urination difficulties may be an indication of prostate cancer		
Agree	176	48.09
Don't agree	190	51.91
The symptoms of prostate cancer may include weakness and numbness in the legs and feet		
Agree	27	7.40
Don't agree	338	92.60
Urinating blood may indicate prostate cancer		
Agree	220	60.11
Don't agree	146	39.89
Pain in the back and waist may be a sign of prostate cancer		
Agree	36	9.84
Don't agree	330	90.16
Prostate cancer is not more likely to affect males under 40 than it is older men		
Agree	171	46.72
Don't agree	195	53.28
High-risk men are those who have a family history of prostate cancer		
Agree	90	24.59
Don't agree	276	75.41
Digital rectal examination (DRE) and prostate-specific antigen (PSA) testing are two approaches for detecting prostate cancer		
Agree	52	14.21

Don't agree	314	85.79
Surgery is a treatment option for prostate		
Agree	6	1.64
Don't agree	360	98.36

Source: *Field data, 2022*

4.6 Bivariate Association between Knowledge on Prostate Cancer and Socio-Demographic Characteristics

Apart from occupation and family history of prostate cancer, the Chi-square test showed that religious affiliation, the number of biological children, age group, marital status, educational level, ethnicity, and possession of a valid NHIS card were significantly associated with prostate cancer knowledge (p 0.05). Details of the association between respondents' characteristics and knowledge on prostate cancer are presented in Table 4.5.

Table 4.5 Association between Socio-Demographic Characteristics and Knowledge on PC(n=366)

Variables	Prostate Cancer knowledge		P-Value
	Poor n = 195(%)	Good n= 171 (%)	
Ages			0.001
40-49	120(54.79)	99(45.21)	
50-59	59(62.77)	35(37,23)	
60-70	16(30.19)	171(46.72	
Marital status			0.001
Single	35(44.30)	44(55.70)	
Married	150(59.29)	103(40.71)	
Divorced	10(29.41)	24(70.59)	
Educational status			< 0.001
None	88(62.41)	53(37.59)	
JHS/Middle school	36(35.36)	65(64.36)	
SHS/Voc/Tech	56(54.37)	47(45.63)	
Tertiary	15(71.43)	6(28.57)	
Religion			< 0.001
Christianity	151(48.40)	161(51.60)	
Islam	39(81.25)	9(18.75)	

Traditional	5(83.33)	1(16.67)	
Ethnicity			< 0.001
Ada	58(36.94)	99(63.06)	
Krobo	49(62.82)	29(37.18)	
Ewe	56(84.85)	10(15.15)	
Akan	32(49.23)	33(50.77)	
Occupation			0.136
Formal	9(50.00)	9(50.00)	
Informal	127(55.46)	102(44.54)	
Unemployed	46(45.54)	55(54.46)	
Retired	13(72.22)	5(27.78)	
Parity			0.008
None	47(61.84)	29(38.16)	
1-3	105(46.88)	119(53.13)	
4+	43(53.28)	23(46.72)	
Working years			< 0.001
None	24(37.50)	40(62.50)	
1-5	55(59.78)	37(40.22)	
6-10	27(33.33)	54(66.67)	
11-20	45(61.64)	28(38.36)	
20+	44(78.57)	12(21.43)	
Family history of PC			0.202
Yes	32(46.38)	37(53.62)	
No	163(54.88)	134(45.12)	
NHIS			< 0.001
Yes	117(46.43)	135(53.57)	
No	78(68.42)	36(31.58)	

Source: *Field data, 2022*

4.7 Perception on Prostate Cancer

Table 4.6 details the respondents' perceptions in more detail. 81.97% of respondents, or more than half, disagreed that prostate cancer is a sexually transmitted disease. However, 72.13% of the respondents disagreed that leading a normal life is assured, and 69.13% disagreed that prostate cancer might kill and cannot be treated. Similar to how most respondents (68.03%) thought they were not at risk of developing prostate cancer, 80.33% said receiving a prostate cancer diagnosis was a "death sentence." Although most of the respondents(73.22%) disagreed that prostate cancer is a taboo or a curse; 63.66% believed that prostate cancer is curable when detected early. Ageing is a risk factor for developing

prostate cancer, according to the majority of respondents (57.10%). Prostate cancer is painful and deters people from seeking early treatment, yet the majority of responders (66.67%) disagreed with this statement. Additionally, 64.21% did not believe that routine prostate cancer screenings were a sign that someone had the disease.

Table 4.6: Perception on Prostate Cancer among Men in Ada East District(n=366)

Variables	Frequency	Percentage
Prostate cancer cannot be sexually transmitted		
Agree	66	18.03
Don't agree	300	81.97
Prostate cancer can lead to death		
Agree	113	30.87
Don't agree	253	69.13
After undergoing therapy for prostate cancer, one can lead a normal life		
Agree	102	27.87
Don't agree	264	72.13
I think my risk of developing cancer is really high		
Agree	117	31.97
Don't agree	249	68.03
If prostate cancer is detected, you are sentenced to death		
Agree	294	80.33
Don't agree	72	19.67
It is believed that prostate cancer is a curse and is therefore prohibited		
Agree	98	26.78
Don't agree	268	73.22
Even if found early, prostate cancer has no known cure		
Agree	133	36.34
Don't agree	233	63.66
After the age of 50, one is more prone to develop prostate cancer		
Agree	157	42.90

Don’t agree	209	57.10
Painful prostate cancer treatments discourage those who are affected from receiving timely care		
Agree	122	33.33
Don’t agree	244	66.67
Regular prostate cancer screenings reveal prostate cancer		
Agree	235	64.21
Don’t agree	131	35.79
Early detection of prostate cancer allows for treatment		
Agree	186	50.82
Don’t agree	180	49.18

Source: *Field data, 2022*

4.8: Bivariate Association between Perception on Prostate Cancer and Socio-Demographic Characteristics

Age group, marital status, ethnicity, occupation, number of biological children, holders of valid NHIS cards, and the remaining variables were found to be statistically significant with perception of prostate cancer based on the Chi-square tests. Table 4.7 provides more information about the relationship between respondents' characteristics and perceptions of prostate cancer. The two factors that were shown to be substantially associated with perception of prostate cancer (p 0.05) were religious affiliation and family history of the disease. When compared to those who completed formal tertiary education, JHS/Middle School graduates had significantly higher perceptions of prostate cancer (51.49% vs. 28.57%, p< 0.001). In comparison to Islam, traditionalists were shown to have a substantially better perception of prostate cancer (50.00% vs 6.25%, p< 0.001). It was found that respondents with a family history of prostate cancer had considerably better perceptions than respondents without a history of the disease (44.93% vs. 27.61%, p=0.012).

Table 4.7 Association between Socio-Demographic Characteristics and Perception of Prostate Cancer among Men in the Ada East District(n=366)

Variables	Prostate Cancer risk perception		P-Value
	No n= 253 (%)	Yes n= 113(%)	
Ages			< 0.001
40-49	155(70.78)	64(29.22)	
50-59	74(78.72)	20(21.28)	
60-70	24(45.28)	29(54.72)	
Marital status			0.006
Single	45(56.96)	34(43.04)	
Married	188(74.31)	65(25.69)	
Divorced	20(58.82)	14(41.18)	
Educational status			< 0.001
None	116(82.27)	25(17.73)	
JHS/Middle school	49(48.51)	52(51.49)	
SHS/Voc/Tech	73(70.87)	30(29.13	
Tertiary	15(71.43)	6(28.57)	
Religion			< 0.001
Christianity	205(65.71)	107(34.29)	
Islam	45(93.75)	3(6.25)	
Traditional	3(50.00)	3(50.00)	
Ethnicity			< 0.001
Ada	90(57.32)	67(42.68)	
Krobo	68(87.18)	10(12.8)	
Ewe	54(81.82)	12(18.18)	
Akan	41(63.08))	24(36.92)	
Occupation			< 0.001
Formal	7(38.89)	11(61.11)	
Informal	174(75.98)	55(24.02)	
Unemployed	57(56.11)	44(43.56)	
Retired	15(83.33)	3(16.67)	
Parity			< 0.001
None	73(96.05)	3(3.95)	

1-3	131(58.48)	93(41.52)	
4+	49(74.24)	17(25.76)	
Working years			< 0.001
None	31(48.44)	33(51.56)	
1-5	75(81.52)	17(18.48)	
6-10	44(54.32)	37(45.68)	
11-20	56(76.71)	17(23.29)	
20+	47(83.93)	9(16.07)	
Family history of PC			0.005
Yes	38(55.07)	31(44.93)	
No	215(72.39)	82(27.61)	
NHIS			< 0.001
Yes	158(62.70)	94(34.30)	
No	95(83.33)	19(16.67)	

N(%) column total

4.9 Multivariate Association between Dependent and Independent Variables

Table 4.8 provides details of the multivariate connection between the independent factors (respondent sociodemographic characteristics) and the dependent under the various thematic areas of research (practices, knowledge, and perception of prostate cancer).

The respondents' age range was found to be strongly correlated with prostate cancer practices. When compared to respondents in the younger age groups, those 60 to 70 years old were roughly 5.40 times more likely to follow good prostate cancer prevention strategies (COR: 5.40, 95% [CI]: 1.03, 28.32). Age group and knowledge and perception of prostate cancer did not significantly correlate.

The prevalence of prostate cancer was shown to be substantially correlated with marital status. When compared to respondents who were divorced, married respondents were 7.12 times more likely to follow excellent prostate cancer practices (AOR: 7.12, 95% CI:1.14-44.47) holding all other variables constatnt. The perception of prostate cancer and marital status did not show any association that was statistically significant. Prostate cancer

behaviors were found to be substantially correlated with knowledge. Education level has been found to be strongly related to attitudes and behaviors about prostate cancer. This suggests respondents with SHS/Voc/Tech education were 8.23 times more likely to engage excellent prostate practices compared to those with no educational levels (COR: 8.23, (4.15, 16.47). (4.15, 16.47).

In addition, individuals with JHS/Middle School education are 5.01 and 7.09 times more likely

To have knowledge and demonstrate practices toward PC respectively, after holding all other covariates constant.

When compared to Muslims, traditional worshipers had a 1.91 times greater likelihood of having a favorable opinion of prostate cancer (COR: 1.91, 95% CI: 0.38, 9.65). In contrast, there was a 1.53 times greater likelihood among Muslims to use good prostate cancer prevention methods compared to non-Muslims (COR: 1.53, 95% CI: 0.78, 3.03). The knowledge of prostate cancer and Islamic and Traditional worshippers' activities were not shown to be significantly correlated.

The retired group and practices, knowledge, and perception of prostate cancer were not found to be significantly correlated. In contrast, groups who were unemployed were 1.39 times less likely than other groups to use good practices for preventing prostate cancer (COR: 1.39, 95% CI: 0.37, 5.25). Again, informal employees were 1.47 times more likely than other employees to use beneficial practices for preventing prostate cancer (COR: 1.47, 95% CI: 0.41, 5.27).

Additionally, respondents with one to three children were 17.27 times more likely than the general population to have a favorable opinion of prostate cancer (COR: 17.27, 95% CI: 5.28, 56.49). Contrarily, respondents with four children or more were 8.44 times less likely than the general population to have a favorable opinion of prostate cancer (COR: 8.44, 95% CI: 2.35, 30.35).

When compared to individuals without a family history of prostate cancer, those with a favorable perception of prostate cancer were 16.34 times more probable to screen for the disease (AOR: 16.34, 95% CI: 2.71, 98.72) after adjusting for all other variables in the regression model. Once more, respondents with a family history of prostate cancer were 1.93 times more likely than other respondents to use excellent behaviors about prostate cancer (AOR: 1.93, 95% CI: 0.36, 1030) holding all other covariates in the model constant. In comparison to other respondents, those who had active NHIS cards were 0.25 times less likely to follow excellent prostate cancer practices (COR: 0.25, 95% CI: 0.15, 0.42). Similarly, respondents with valid NHIS cards were 2.5 times more likely than those without valid NHIS cards to have strong knowledge of prostate cancer (COR: 2.5, 95% CI: 1.57, 3.98).

Table 4.8: Multivariate Logistic Regression of Practices, Knowledge and Perception on PC with Socio-Demographic Characteristics.

Variables	Categories	Knowledge on Prostate Cancer		Practices of Prostate Cancer		Perception of Prostate Cancer	
		AOR (95%)	COR (95%)	AOR (95%)	COR (95%)	AOR (95%)	COR (95%)
Ages	*40-49*	*Ref*	*Ref*	*Ref*	*Ref*	*Ref*	*Ref*
	50-59	0.49(0.20-1.20)	0.72(0.44-1.18)	1.06(0.27-4.08)	2.16(1.22-3.81)	0.47(0.15-1.54)	0.65(0.37-1.160
	60-70	3.42(0.94-1.41)	2.80(1.47-5.34)	5.40(1.03-28.32)	2.20(1.11-4.37)	151.53(11.37-2018.92)	2.93(1.58-5.41)
Marital status	Single	Ref	Ref	Ref	Ref	Ref	Ref
	Married	0.56(0.21-1.47)	0.55(0.33-0.91)	7.12(1.14-44.47)	5.55(2.15-14.31)	0.04(0.01-0.18)	0.56(0.27-0.78)
	Divorced	6.60(1.34-32.55)	1.91(0.81-4.52)	2.23(0.24-20.61)	3.17(0.90-11.23)	0.30(0.04-2.12)	0.93(0.41-2.09)
Educational status	*None*	*Ref*	*Ref*	*Ref*	*Ref*	*Ref*	*Ref*
	JHS/Middle School	5.01(2.02-12.43)	3.0(1.76-5.10)	7.09(1.48-34.05)	1.99(0.92-4.32)	1010.03(72.32-14105.51)	4.92(2.75-8.81)
	SHS/Voc/Tech	7.71(2.85-20.88)	1.40(0.83-2.34)	40.85(6.75- 247.18)	8.23(4.15-16.47)	258.25(21.32-3128.32)	1.91(1.04-3.50)
	Tertiary	0.45(0.12-1.69)	1.40(0.83-2.34)	10.99(1.66-72.66)	1.64(0.43-6.32)	441.13(20.93-9295.44)	1.86(0.66-5.25)
Religion	*Christianity*	*Ref*	*Ref*	*Ref*	*Ref*	*Ref*	*Ref*
	Islam	0.23(0.05-1.06)	0.22(0.10- 0.46)	0.29(0.04-1.94)	1.53(0.78-3.03)	0.00(0.00-0.006)	0.13(0.04-0.42)
	Traditional	0.28(0.01-5.60)	0.19(0.02-1.62)	1	1	7.53(0.22-263.50)	1.91(0.38-9.65)
Ethnicity	*Ada*	*Ref*	*Ref*	*Ref*	*Ref*	*Ref*	*Ref*
	Krobo	0.61(0.25-1.51)	0.35(0.20- 0.61)	0.11(0.02-0.60)	0.16(0.05-0.53)	1.16(0.34-3.98)	0.20(0.09-0.41)
	Ewe	0.05(0.02-0.17)	0.10(0.05-0.22)	0.37(0.06-2.34)	1.95(1.03-3.71)	0.88(0.23-3.37)	0.30(0.15-0.60)
	Akan	0.35(0.132-0.94)	0.60(0.34-1.08)	1.5490.31-7.65)	2.14(1.13-4.06)	1.32(0.37-4.71)	0.79(0.43-1.43)
Occupation	*Formal*	*Ref*	*Ref*	*Ref*	*Ref*	*Ref*	*Ref*
	Informal	2.66(0.59-12.03)	0.80(0.31-2.10)	0.22(0.04-1.26)	1.47(0.41-5.27)	0.31(0.05-1.75)	0.20(0.07-0.54)
	Unemployed	2.56(0.52-12.63)	1.20(0.44-3.26)	0.18(0.02-1.28)	1.39(0.37-5.25)	0.51(0.08-3.03)	0.49(0.18-1.37)
	Retired	0.68(0.90-5.11)	0.38(0.10-1.54)	0.04(0.00-0.93)	1(0.17-5.77)	0.09(0.01-0.13)	0.13(0.27-0.61)
Parity	*None*	*Ref*	*Ref*	*Ref*	*Ref*	*Ref*	*Ref*
	1-3	1.94(0.82-4.56)	1.84(1.08-3.13)	0.00(0.00-0.02)	0.20(0.12-0.36)	1162.14(55.07-24524.74)	17.27(5.28-56.49)
	4+	1.81(0.66-4.98)	0.87(0.44-1.72)	0.00(0.00-0.01)	0.06(0.02-0.20)	1582.10(55.05-45568.28)	8.44(2.35-30.35)
Working years	*None*	*Ref*	*Ref*	*Ref*	*Ref*	*Ref*	*Ref*
	1-5	0.42(0.10-1.83)	0.40(0.21-0.78)	0.34(0.04-3.10)	0.75(0.34-1.68)	1.00(0.10-10.26)	0.21(0.10-0.44)
	6-10	1.88(0.39-8.98)	1.2(0.60-2.38)	0.03(0.00-0.39)	1.09(0.50-2.40)	0.34(0.04-3.20)	0.79(0.41-1.52)
	11-20	0.26(0.06-1.10)	0.37(0.19-0.75)	1.17(0.16-8.82)	1.75(0.81-3.77)	0.23(0.02-2.21)	0.29(0.14-0.59)
	20+	0.17(0.08-0.75)	0.16(0.07-0.37)	0.36(0.04-3.17)	0.51(0.19-1.37)	0.19(0.02-1.98)	0.18(0.08-0.43)
Family history of PC	*No*	*Ref*	*Ref*	*Ref*	*Ref*	*Ref*	*Ref*
	Yes	0.81(0.35-1.88)	1.41(0.83-2.38)	1.93(0.36-1030)	1.34(0.73-2.45)	16.34(2.71-98.72)	2.14(1.25-3.66)
NHIS	No	Ref	Ref	Ref	Ref	Ref	Ref
	Yes	2.43(1.23-4.82)	2.5(1.57-3.98)	0.04(0.01-0.14)	0.25(0.15-0.42)	8.70(2.35-32.14)	2.97(1.71-5.18)

CHAPTER FIVE

5.0 DISCUSSION

5.1 Introduction

In order to fulfil the study's specific aims, this chapter addresses the study's findings in relation to self-reported screening behaviors of the study participants for prostate cancer, knowledge of prostate cancer, and perceptions of prostate cancer. The chapter contrasts the results of this investigation with those of other studies. Also highlighted are the factors that contributed to the study's conclusions.

5.2 Characteristics of Respondents

This study compared the sociodemographic features of males in the Ada East District who are 40 years of age and older to prior studies that concentrated on hospital-based settings in order to examine their knowledge, perceptions, and practices about prostate cancer screening uptake. The focus was on males over 40 because they have a larger chance of developing prostate cancer than do those under 40. Prostate cancer in men under the age of 40 is uncommon, though the cause(s) is/are unknown. Age is considered a contributing risk factor(American Cancer Society, 2016). Men in the Ada East District who are 40 years and older and who are especially aware of their prostate cancer status are therefore ideal candidates to serve as ambassadors, educators, advocates, and role models in their communities to encourage prostate cancer screening uptake and prevention in order to lower the associated morbidity and mortality.

Ethnicity, according to studies, African American males are more likely than white men to acquire prostate cancer. Additionally, cases of black men with the condition are more aggressive and nearly twice as many deaths have been observed (American Cancer Society, 2016). There are values and

beliefs such as seeking medical care among others that prevent early prostate cancer screening uptake. Such values and believes are worrying such that they can influence the understanding of men aged above 40 years to take up screening to know their statuses and early treatment thereof should they test positive. Every culture has its own beliefs about how to treat illnesses, provide healthcare, and deal with the disease itself, which means that various cultural groups have different perceptions of cancer risks, methods for screening and diagnosing the disease, and their trust in the organizations and individuals who provide cancer treatments.(Jin, 2017)**.**

Similar to the influence of ethnicity, religion can influence the early uptake of prostate cancer screening negatively as explained by Pedersen *et al.,* (2012) that the perception of fears and taboos among people of a particular ethnic decent, affect the willingness of its men to talk to their doctors about prostate cancer. The belief of some men in the healing power of the Supreme Being, God, supersedes the potency of the health system, thus rely more on spirituality to be "free" from developing prostate cancer than screening to know their statuses(Allen, Jennifer D.;Akinyemi, Ifedayo C., Reich, 2017).

Education, particularly JHS/Middle school, was attained by most of the respondents (46. 0%).This is an indication of formal education and by extension the ability to read and make informed decisions. Taking up early prostate cancer screening or seeking early treatment can be influenced by formal education. Also, occupation can be a predisposing factor for developing prostate cancer based on the nature of work. Engaging in sedentary work can be psychologically draining as exercises are non-existent in their daily lives. This can lead to depression and anxiety, thus increasing the risk of developing prostate cancer.

For instance, research indicates that prostate cancer is more common in Vietnam and Korean War Veterans who were exposed to defoliants like Agent Orange. In actuality, men who have served in the military are nearly twice as likely to be diagnosed with prostate cancer than men who have not. Additionally, those who frequently work with metal cadmium, such as welders, battery manufacturers, and rubber workers, are especially susceptible to prostate cancer, as do farmers and other men who handle huge amounts of pesticides. Some evidence suggests that firefighters are also more vulnerable('Am I at Risk? | ZERO - The End of Prostate Cancer', 2017).

There is an unconventional knowledge that presupposes that prostate cancer is more likely to rear its head among men who are not sexually active. This unconventional knowledge agrees with Etawo et al. (2012) that there is an unconventional knowledge that presupposes that prostate cancer is more likely to rear its head among men who are not sexually active(Nartey Laweh and Manortey, 2021). Another school of thought has it that , having several sexual partners can lead to developing prostate cancer (Nakandi *et al.,* 2013).More than half of the prostate cancer cases are related to genetic alterations(Loeb, 2017). One common way of developing prostate cancer is through the family line, thus genetic factors. Due to the 'transfer' of chromosomes from parents to children, being born into families with history of prostate cancer makes it more likely for one to develop the condition (Leitzmann & Rohmann, 2012).

Considering the high cost of seeking medical care in Ghana, the NHIS was introduced to alleviate the burden of the 'poor': however, the failure to renew NHIS cards hampers regular check- ups, a situation that contributes to late screening for prostate and possibly, its treatment.

5.3 Practices of Prostate Cancer

While self-reported methods for preventing prostate cancer were generally positive, only 21.86% of respondents self-reported having ever undergone a prostate cancer screening. This is in line with a men's attitudes toward prostate cancer are unfavorable, according to an Australian study, screening due to factors like the discomfort of the Digital Rectal Examination (DRE) and the blood obtained for Prostate Specific Antigen (PSA) (Sanderson *et al.,* 2013). The slow rate of patient treatment and the prevention of other comorbidities associated with prostate cancer can both be exacerbated by the low screening rate. Early therapy for the prevention of fatalities from breast, lung, colon, and cervical cancers as well as screening in the asymptomatic phases make this clear (Kolahdooz *et al.,* 2014). Despite their good self-reported practices, men 40 years and older in the Ada East District have a low uptake of prostate cancer screening, which can be partially attributed to their lack of understanding of screening recommendations and the lack of a well-designed program that specifically targets them at no cost. It could also be attributed to the challenge of access to health facilities, especially for individuals who reside far away from existing hospitals or health centres. This has the potential to undermine attempts to increase screening uptake among older men who are more likely to get the disease than younger men.

Additionally, it was found that the study population's practices of prostate cancer screening uptake were substantially correlated with religious affiliation, educational attainment, occupation, family history of the disease, and holders of valid NHIS cards.

In Sub-Saharan Africa, a lack of participation in prostate cancer screening is most frequently attributed to religious beliefs (Rebbeck, *et al.,* 2011). Religion affects attitudes, which in turn affect health behaviors like early screening, in Nigeria as well (Akgibe & Akigbe, 2012).

A higher percentage of prostate cancer screening uptake was shown to be substantially linked with educational attainment. The complete lack of knowledge regarding risk factors, symptoms, and indicators is the cause of the low adoption of prostate cancer screening described by Jo *et al.*,(2013). It was revealed in the analysis, that men with tertiary level education have an increased odds of practicing screening for the disease. This finding corroborates similar results from Nartey-Lawer *et al.,* (2021) in the Lower Manya Krobo Municipality that reported respondents with tertiary education were 5.29 times more likely to engage in good prostate cancer practices compared to those with their counterparts with no formal educational exposure (Nartey-Lawer & Manortey, 2021). This shows that choosing to get screened for prostate cancer is made simple when you have formal education. As a result, it is simple to understand information about the disease's dangers, making it possible for people to undergo screening to determine their status. As a result, an intervention designed to ensure frequent screening uptake can target these "educated" guys and spread them through their friends. This is true because a high degree of formal education is linked to a high level of awareness of the value of prostate cancer screening.

A study conducted in Nigeria by Oranusi *et al.*(2012) found that the majority of public servants correctly reported one or more symptoms of prostate cancer, with difficulty urinating being the most prevalent symptom. Additionally, the occupation of respondents was identified as being associated with a higher proportion of prostate cancer screening uptake.

The adoption of institutional or occupational programs to promote early and sustained screening would likely help in increasing awareness of the early uptake of prostate cancer screening and, hopefully, translate into improving their capacity to educate other men in the community. To become a public servant or a government employee, it is expected that one possesses some level of formal education.

Prostate cancer screening was taken up by individuals who reported having a family history of the disease roughly four times more frequently than those who did not. There is evidence that those who have a family history of prostate cancer are more likely to get the illness (ACS, 2014). As they get older and want to know their status and seek treatment early, men with a family history of the disease are more likely to start getting screened for prostate cancer. However, because they are unaware of the risks the disease poses to their health, men without a family history of the condition are less motivated to get early prostate cancer screening.

When compared to respondents who had invalid National Health Insurance Scheme (NHIS) cards, all respondents with valid NHIS cards were more likely to have prostate cancer screening. This is consistent with the findings of the International Network for Cancer Treatment and Research [INCTR], which determined that government funding for healthcare expenses and cancer management programs are essential for improving healthcare delivery(Pallipedia, 22AD). Men with active NHIS cards are more likely to undergo routine screening, especially when they are not responsible for covering the cost of the consultation, as the NHIS was established to reduce the high expense of seeking medical treatment. The issue still exists that the PSA test has not been included in the National Health Insurance Scheme, making it impossible for most men to get screened. There are sufficient medical professionals with knowledge of treating prostate cancer, and the majority of hospitals have successful prostate cancer screening programs. The National Health Insurance Scheme should "catch" the expense of screening in order to raise awareness of prostate cancer. This will boost screening participation and enrolment among men aged 40 and older.

Similar to other studies where most of the respondents learned about prostate cancer from health professionals, the media, and friends or family (Liu *et al.,* 2017), Elamurugan *et al.,* 2019, and Sothy *et al.,* 2018), the majority of the men in this study learned about prostate cancer from mass media, internet and books (82.3%), while 8.85% learned about prostate cancer from health workers and8.85% from family and friends. A form of prostate cancer screening test called a biopsy was only used by 7.5% of the men in this study. This clarifies the low rate of prostate cancer screening among men in the Ada East District even more.

5.4 Knowledge on Prostate Cancer

Prostate cancer knowledge among males in the Ada East District was generally high; as a result, 54.64% of respondents knew that the disease is treatable. This is comparable to earlier research that showed a high level of awareness of prostate cancer. however, this study differs from earlier ones that found low levels of knowledge about prostate cancer in Australia, the United States, Uganda, and Nigeria (Sanderson, Wijesinha, & Jones, 2013; Chan *et al.,* 2011; Pedersen *et al.,* 2012) (Jo *et al.,* 2013). Contrary to earlier research results that the general population knew little about prostate cancer, knowledge of prostate cancer among men in this study was sufficient (Nakandi *et al.,* 2013; Pedersen *et al.,* 2012). In several other research works (Chan *et al.,* 2011; Allen *et al.,* 2007; Watson *et al.,* 2006), which is one of the cases why prostate cancer are reported in advanced stages, there has been a lack of knowledge or understanding of the availability of screening or testing for the disease. However, through educational programs and/or therapies, prostate cancer may become more well known (Chan *et al.,* 2011).

Although men were generally knowledgeable about prostate cancer, they were less so about the screening recommendations, which has an impact on the early uptake of prostate cancer screening.

This is concerning because it could have a negative effect on their ability to "spread" or educate other men about the importance of getting screened, as previous studies have shown that knowledge is a potent and effective "weapon" in the reduction, prevention, and early detection of prostate cancer among men (Cancer Association of South Africa [CANSA], 2013; INTCTR, 2013).

The "adequacy" of knowledge among men in this study is due to persistent and continuous information sharing on traditional media and information hubs by local drug producers and marketers who target men in the unorganized sector with the idea that they lack sufficient knowledge. Similar to this, the majority of educational initiatives on prostate cancer are community-based or geared toward the general public. This could also help to explain how well-informed the men in Ada East District are about prostate cancer.

Most importantly, it was found that knowledge of prostate cancer screening uptake among men in the Ada East District was not significantly correlated with religious affiliation, the number of biological children, age group, marital status, educational attainment, ethnicity, occupation, and holders of valid NHIS cards. This shows that men's traits in this study are a key factor in determining how much knowledge they acquire about prostate cancer. Or, to put it another way, demographics or personal traits do not characterize someone who is highly conscious of the importance of starting an early prostate cancer screening program. Although it has been suggested that both extremely low and extremely high rates of information about prostate cancer may also discourage men from trying to get screened for the disease, it is reported that increased knowledge or awareness of the disease is a reliable indicator of men getting prostate cancer screenings. Including Watson (2009). It is reassuring to see that males in this study had higher levels of

awareness since they are better prepared to promote good health, especially through participating in early prostate cancer screening in the Ada East District.

Although there was no discernible correlation between respondents' educational levels and their awareness of prostate cancer, individuals with higher education levels showed greater knowledge than those with lower education levels. The preparedness and confidence of other men with lesser levels of education to undergo an early screening to lessen morbidity and death can be positively impacted by adequate awareness of the condition. Because they know their status and can seek early treatment, males in his study with higher education levels are more likely to participate in early screening.

5.5 Perception on Prostate Cancer

Men in the Ada East District had a generally good opinion of the importance of prostate cancer screening in reducing the condition, with 81.97% of them believing that it is not a sexually transmitted infection and 73.22% believing that it is not a taboo subject. This is consistent with the outcomes of earlier investigations (Nakandi *et al.*, 2013; Fitzpatrick *et al.*, 2009). Since this study has demonstrated that favorable perception can transfer into major acceptable practices, especially when knowledge levels are adequate as demonstrated by other studies, it creates the ideal framework for improving screening procedures while educating other males in the District (CANSA, 2013; INTCTR, 2013).

Additionally, it was found that perceptions of prostate cancer were highly influenced by educational attainment, religious affiliation, and family history of the disease. When compared to those with no formal education, JHS/Middle School graduates had a much greater perception of prostate cancer. This gives the notion that men without formal education are not exposed enough

to prostate cancer to have a positive perspective of it. Education level and personal experience have an impact on how people perceive their risk of having the prostate disease (Matthew *et al.,* 2011). Additionally, men who believe their risk of developing prostate cancer is higher struggle with sadness and worry that interfere with their daily life (Matthew *et al.,* 2011).

When compared to Muslims, Christians were shown to have a considerably more favorable perception of prostate cancer. This goes against the finding made by Pedersen *et al.*,(2012) that men's propensity to talk to a deity is affected by their perceptions of taboos and concerns because they are afraid of the consequences of seeking "foreign" care, which keeps them from getting an illness early on. As a result, it was believed that wearing amulets could both prevent and treat illnesses. Additionally, the most prevalent excuses for not participating in prostate cancer screenings were cultural and religious views (Rebbeck, Zeigler-Johnson, Heyns & Gueye, 2011). The results of this study, however, are consistent with a study by Holt, Wynn, and Darrington (2009), which focused on the influence of religious convictions and church support on screening and preventative behaviors for prostate cancer. Similar results showed that people with religious affiliations were more likely to participate in screening than those without religious affiliations in a study that looked at the function of religious involvement with reference to prostate cancer screening (Holt *et al.,* 2009).

CHAPTER SIX

6.0 CONCLUSIONS AND RECOMMENDATIONS

This chapter includes recommendations to improve practices, knowledge and views perceptions on prostate cancer and its screening and prevention, directly addressing the specific objectives of the study in light of the findings.

6.2 Conclusions

In the Ada East District, screening procedures for prostate cancer among men aged 40 and older were good practices. Only 17.0% of respondents, however, self-reported having ever undergone a prostate cancer screening. In the Ada East District, prostate cancer screening rates were higher among respondents who identified as members of a particular faith, had a formal education, worked for the government, had a family history of the disease, and had a valid NHIS card.

Prostate cancer knowledge among males in the Ada East District was generally high, and a sizable portion of them were aware that the condition is treatable. Despite this, there was little detailed awareness of the screening guidelines. The Ada East District men's knowledge of prostate cancer screening uptake was found not to be substantially correlated with their personal characteristics.

Men aged in the Ada East District had a generally good assessment of the importance of prostate cancer screening in reducing the disease, with 55.1% of men positively perceiving prostate cancer as not being a sexually transmitted infection and 90.9% not thinking the condition to be taboo.

6.3 Recommendations

The following recommendations were made in light of the findings and conclusions;

1. It is advised that the National Commission on Civic Education (NCCE) assist in providing men in the Ada East District with the "right" education on prostate cancer screening and prevention in order to improve early uptake and to only seek advice from qualified staff in hospitals and clinics in order to allay any doubts.

2. The Ada East District Health Directorate is advised to develop a workable and long-lasting program through its Public Health Promotion Departments to target and inform men aged 40 and over on the significance of early prostate cancer screening.

3. Health facilities in the District should add screening for prostrate cancer as a routine service for all men aged 40 years and above that are seeking care in the units.

4. Given the topic's importance in enhancing men's quality of life, a future study should look into using a qualitative approach to help identify the variables behind the poor uptake of prostate cancer screening in broader populations.

5. To increase access and uptake for males, it is advised that the Ministry of Health work with the National Health Insurance Scheme to implement a free prostate cancer screening and prevention program in the District Hospital and other medical facilities in the Ada East District. They ought to incorporate PSA testing into the plan as well.

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APPENDIX A:

INFORMED CONSENT FORM

I am a graduate at Ensign Global College of Public Health, Kpong. I am conducting a research on KNOWLEDGE, PRACTICES AND PERCEPTIONS OF PROSTATE CANCER SCREENING as an academic work which could be used for a database in policy formulation. I would be grateful if you could spare me some time to be part of this study. You are hereby assured of anonymity and that any information provided will be treated with the utmost confidentiality. Participation in this study is voluntary and if at any point you feel reluctant to participate you have the right to withdraw without any offence or hindrance.

Respondent's Agreement

I have been given the opportunity to ask questions about the research and answers given adequately to my satisfaction. I do hereby consent to be a participant in the study.

Yes [ ] No [ ]

Questionnaire Number…… Date:…….

Name of interviewer……. Signature of interviewer……..

APPENDIX B:

SAMPLE QUESTIONNAIRE

ATTITUDES, KNOWLEDGE AND PERCEPTION ABOUT PROSTATE CANCER SCREENING AMONG MEN IN THE ADA EAST DISTRICT OF THE GREATER ACCRA REGION, GHANA.

Respondent's ID #:…… Date:……../……../…….

Name of interviewer……

Dear Sir/Madam,

My name is……. I am a graduate at Ensign Global College, Kpong**.** I am conducting a research on the attitudes, knowledge and perceptions of prostate cancer risks amongst men aged 40 years and above among residents in Ada East District. This is an academic work which could be used to formulate a policy. I would very much appreciate it if you could spare some time to answer this questionnaire. You are hereby assured of anonymity and that any information provided will be treated with the utmost confidentiality. Participation in this study is voluntary and if at any point you feel reluctant to participate you have the right to withdraw without any offence or hindrance.

Thank you.

SECTION A: Socio-Demographic Characteristics of Respondents

Qns	Question	Response	Code
1	How old are you, please?		
2	What is your marital status?	Single [ ] Married [ ] Divorced [ ]	1 2 3
3	What is your highest level of education?	None [ ] JHS/Middle School [ ] SHS/Voc./Tech. [ ] Tertiary [ ]	1 2 3 4
4	What is your religious affiliation?	Christian [ ] Muslim [ ] Traditionalist [ ]	1 2 3
5	What is your ethnicity?	Ga/ADamgbe [ ] Krobo [ ] Ewe [ ] Akan [ ] Others ……	1 2 3 4
6	What is your occupation?		
7	How many biological children do you have?	None [ ] 1-3 [ ] 4-6 [ ]	1 2 3

		7+ [ ]	4
8	How long have you been in this job?		
9	Do you have a family history of PC?	Yes [ ] No [ ]	1 0
10	Have you been enrolled in the NHIS?	Yes [ ] No [ ]	1 0

SECTION B: Practices of Prostate Cancer Screening Uptake

Qns	Question	Response	Code
1	Heard about Prostate Cancer?	Yes [ ] No [ ]	1 0
2	If yes, what was your source of information?	TV/Radio [ ] Health worker [ ] Family/Friends [ ]	1 2 3
3	Screened for Prostate Cancer before?	Yes No	1 0
4	If yes, which of them? If no, move to Question 5	Prostate -Specific Antigen(PSA) [ ] Digital Rectal Examination(DRE) [ ] Biopsy [ ]	1 2 3
5	Screened for Prostate Cancer before?	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0

6	Prostate Cancer screening is important.	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0
7	Prostate Cancer screening is painful.	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0
8	Screening aggravates the disease.	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0
9	Prostate cancer screening is embarrassing.	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0
10	Prostate Cancer screening will keep me healthy.	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0
11	Prostate Cancer screening will settle any ambiguities on whether I have the disease or not.	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0
12	Prostate Cancer screening is expensive.	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0

SECTION C: Knowledge of Prostate Cancer

Qns	Question	Response	Code
1	Is prostate cancer curable?	Yes [ ] No [ ]	1 0
2	Prostate cancer has no known cause.	Yes [ ] No [ ]	1 0
3	Early stages of prostate cancer may not exhibit any signs or symptoms.	Yes [ ] No [ ]	1 0
4	Urination difficulties may be an indication of prostate cancer	Yes [ ] No [ ]	1 0
5	The symptoms of prostate cancer may include weakness and numbness in the legs and feet.	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0
6	Urinating blood may indicate prostate cancer.	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0
7	Pain in the back and waist may be a sign of prostate cancer.	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0
8	Prostate cancer is not more likely to affect males under 40 than it is older men.	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0

9	High-risk men are those who have a family history of prostate cancer.	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0
10	Prostate cancer may present with pain in the waist and back.	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0
11	Men aged 40 and below are not at risk of developing prostate cancer than older men.	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0
12	High-risk men are those who have a family history of prostate cancer.	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0
13	Digital rectal examination (DRE) and prostate-specific antigen (PSA) testing are two approaches for detecting prostate cancer.	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0
14	Surgery is a treatment option for prostate.	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0

SECTION D: Perceptions of Prostate Cancer

Qns	Question	Response	Code
1	Prostate cancer cannot be sexually transmitted.	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0
2	Prostate cancer can lead to death.	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0
3	After undergoing therapy for prostate cancer, one can lead a normal life.	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0
4	I think my risk of developing cancer is really high.	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0
5	If prostate cancer is detected, you are sentenced to death.	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0
6	It is believed that prostate cancer is a curse and is therefore prohibited.	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0
7	Even if found early, prostate cancer has no known cure.	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0

8	After the age of 50, one is more prone to develop prostate cancer.	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0
9	Painful prostate cancer treatments discourage those who are affected from receiving timely care.	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0
10	Regular prostate cancer screenings reveal\ prostate cancer.	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0
11	Early detection of prostate cancer allows for treatment.	Agree [ ] Don't know [ ] Don't agree [ ]	1 0 0

Thank you!