

# Attitudinal Factors Associated with Prostate Cancer among Adult Males in South Eastern Nigeria

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## **Abstract**

*Prostate cancer is one of the most common and lethal cancers in the world. The incidence of prostate cancer has been increasing in recent years. Beliefs and awareness towards prostate cancer screening among men is very crucial for early detection and management of the condition. In Nigeria, it is the most common male cancer and maybe as high as that seen in African Americans in the united states. This paper examines the knowledge, belief and attitudes of men in Nigeria towards prostate cancer and prostate cancer screening for the peaceful existence in our society.*

## **Keywords**

*attitudinal factors, prostate cancer, adult males, South Eastern, Nigeria*

## **1. Introduction**

Prostate cancer is a malignancy occurring in any part of the prostate gland especially in the periphery. It is the most common form of cancer in old men after hepatocellular carcinoma in Africa (Parkin et al., 2003), but in the united states and northern western Europe, it is the most common cancer and the second common cause of cancer deaths in Africa. Global disease burden as reported by WHO in 2004, seem to demonstrate that prostate cancer is becoming an emerging epidemic in Nigeria and a number of other countries of the world. The report showed that the total death from all cancers/neoplasm in Nigeria was 78,700 and prostate cancer recorded 13,700 deaths (17.41%) while breast cancer recorded 10,600 (13.147%), putting Nigeria in the eleventh position globally. The implication of this observation is that prostate cancer appears to be more prevalent than breast cancer and should be given some prominence than it is receiving now for peaceful and harmonious existence of human well-being within Africa. The report showed that Nigeria ranked first out of the nine countries with the highest prevalence of prostate cancer. The results obtained from the study of Nnodimele, Motunrayo, Ademola and Omotoyosi (2010), showed that awareness and specific knowledge related to prostate cancer is low, a

similar observation was made by Ukoli et al. (2003), in their study.

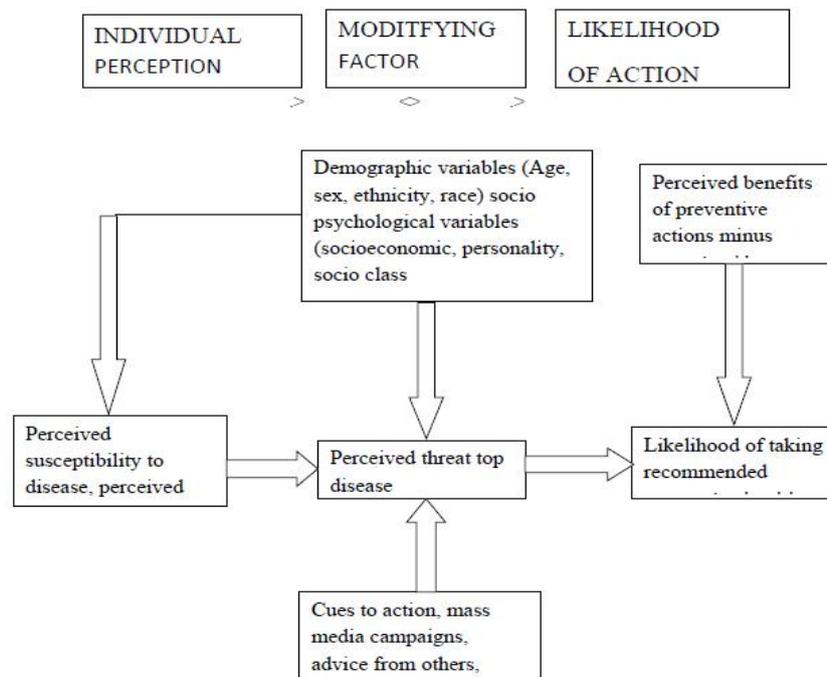
Nigerians have poor knowledge with regards to screening for prostate cancer. Some still hold onto the belief that it is a disease of western countries. Some cultural beliefs in Nigeria, do not allow men to go for screening. Some men still live in denial that prostate cancer exists. Lack of knowledge, negative attitude, past negative experience, lack of adequate health insurance, traditional beliefs about male gender roles, fear of prognosis that screening will identify more health problems. Cultural and religious beliefs influenced uptake of prostate cancer screening (Woods, Montgomery, Beliard, Johny, & Colwick, 2004).

In Nigeria, all men are at risk of prostate cancer. Prostate cancer is very rare in men younger than 40 years but chances of having prostate cancer rises rapidly after age 50 years (American cancer society, 2012). In Nigeria, prostate cancer is the most common male cancer and maybe as high as that seen in African Americans in the United State (Globocan, 2008), as cited in American cancer society (2011). Access to health care and prostate screening methods for early detection is limited (Odedina, 2009). High rate of mortality has been revealed to be due to late detection (Woods et al., 2004). Screening is the common method for early detection of all cancers in populations that are asymptomatic. The major problem with early detection in prostate cancer prevention is lack of knowledge about screening and poor detection guidelines among medical professional groups (Woods et al., 2004). Beliefs and awareness towards prostate cancer screening among men is very crucial for early detection and management of the condition. Among black men, lack of discussions about decision to screening and lack of cultural communication with health care providers has created fear and distrust. It has also increased the likelihood of men not participating in prostate cancer screening (Woods et al., 2004). According to Woods et al. (2004), past negative experience, lack of adequate health insurance, lack of knowledge, traditional attitudes about male gender roles, fear of prognosis, distrust in medical community, physicians attitude, cultural and religious belief and attitudes also contribute to non-participation in prostate cancer screening (Woods et al., 2004). It was discovered by researchers that sexual dysfunction is a sensitive issue for black men; therefore it discourages them from participation in prostate cancer screening and early detection strategies (Woods et al., 2004). The debate for and against screening for prostate cancer is still on. It is stated that if screening will be of great benefit in quality of life improvement, men should commence screening if at family risk of prostate cancer and also should be based on decision in men within the age range 55-64 years (American Urology Association, 2013). A goal of healthy people 2020 is to eliminate racial health disparities and reduce prostate cancer death rate among male adults. To achieve this goal, innovative measures must be applied to overcome the perceived barriers that hinder early screening practices for prostate cancers, create mechanisms to partake, support and reinforce men to make healthy choices. For screening to be effective in Africa, especially in Nigeria, it is necessary to have an idea of healthy knowledge, beliefs and positive attitudes towards screening of this disease among men of age 18-35 years (Ajape, Babata, & Abiola, 2010). The research problem is the increased rate of prostate cancer

due to poor knowledge and negative attitudes of men towards prostate screening in Nigeria. Based on the topic of this paper-knowledge, belief and attitude of men towards prostate cancer screening and the increasing rate of this disease, the paper aims at assessing the knowledge, belief and attitudes of men towards prostate cancer in Nigeria. The theory of the health belief model was applied.

According to Robert, Muriel and Vagasi (2003), the health model is a framework for understanding motivation, global attitudes and belief determining person's health-related behaviours. Various studies that have addressed psychosocial concerns such as attitudes, beliefs, social support, coping and psychological distress for African American prostate cancer patients have helped to overcome the weakness of the original Health Belief Model (HBM) (Meyer, Wolf, Mckee, MCGrory, Burgh, & Nelson, 1996). According to Potter and Perry (2001), the theory of the health belief model addresses the relationship between a person's belief and behaviours and they stated that person's willingness is to change his or her life health and behaviours depends on perception. The 5 dimensions of HBM will help examine what motivates men with prostate cancer to engage in health-related behaviours and examine the perceived barriers that influence the practice of prostate cancer screening. This model was developed by Irwin, Jones, Mudo in 1996. At first, this model was meant to envisage patient behaviour at response to the treatment given to him or her. However, in recent time, this model has been used to envisage none general health issues on a patient's behaviour.

## 2. Health Belief Model (HBM)



**Figure 1. Health Belief Model (HBM)**

*Note.* HBM Model adapted from stretcher, Rosenstock, Strecher and Becker (1998).

### **3. Perceived Susceptibility/Personal Risk**

This is one of the most powerful perceptions in promoting people to adopt healthier behaviour. The greater the Perceived risk, the greater the likelihood of people engaging in positive behaviour (Potter & Perry, 2001). Perceived susceptibility is a person's view on the likelihood of experiencing a potential harmful health condition such as prostate cancer. With regards to prostate cancer, theories have shown that men with family history perceived themselves to be more at risk and would be more likely to have a recent screening (Bloom, Stewart, Banks, & Change, 2006). With regards to psychosocial concerns in African American prostate cancer patients, background and lifestyle factors such as age, race, ethnicity, family history and diet are known risk factors. Being an African man with family history of prostate cancer, early detection and prompt treatment are necessary to control prostate cancer and it suggests that increasing knowledge and awareness about prostate cancer detection is essential to reduce prostate cancer risk in African American Men (Robert et al., 2003), and by extension Nigerian and African men.

### **4. Perceived Seriousness and Severity of Illness**

This perception is influenced by demographic and socio-psychological variables, perceived threats to illness and cues to action such as mass media campaign, advice from family and health care professionals (Potter & Perry, 2001). The probability that a person might change their behaviour to avoid consequences depends on how severe the person considers the consequences to be (Potter & Perry, 2001). Threat of an illness and accompanied by fear of illness outcome is the major key that pushes an individual to seek and accept health interventions.

### **5. Perceived Benefits**

Perceived benefits are the person's belief that performing a specific behaviour will reduce the threat of that condition. Obtaining a prostate cancer screening will increase the chances of identifying prostate cancer at a very early stage, thus reducing the mortality rate. The likelihood that a person will take preventive measures result from the person's perception of the benefits and barriers of taking action such as change of lifestyle, increase search for medical care, therapies and medical advice. It is difficult to convince people to change their behaviour if there is no proof for it. According to Robert et al. (2003), perceived efficacy of early detection, examination and support from the physical significantly predicted African American men's intention to undergo early screening as a panacea to early management of prostate cancer is welcome idea.

### **6. Perceived Barrier**

Perceived barriers are factors that hinders one from engaging in health seeking behaviours and barriers within the individual are seen through the perceptions they hold about illness and disease, barriers are a major concept in Healthy Belief Model (HBM) which suggests that prostate cancer screening is determined by each individuals Perceived benefits. In order for a new behaviour to be adopted a person

needs to believe that the benefits of the new behaviour outweigh the consequences of continuing the old behaviour. People hold on the negative perception about pain, embarrassment associated with screening, wearing of diapers as well as possible incontinence and impotency resulting from prostate cancer screening and treatment. These factors will make an African American man not likely to participate in prostate screening (Robert et al., 2003).

### **7. Prompts to Action**

It is the internal and external factors that stringers to stimulate an individual to change his or her behaviour for more positive outcomes (Robert et al., 2003). An assumption of the HBM in emphasising readiness to take action is that a person must be prompted to act. Internal acts such as symptoms and external prompts such as knowledge and information about illness and disease may motivate a person to seek care (Robert et al., 2003). These variables of health are modified (HBM) listed above socio-demographic factors, personality variables, culture, past experience, skills and motivation. HMB is necessary because it fixes on patient compliances and preventive measures on health care practices. The health belief model will help to understand the factors influencing people's perception, belief, behaviour, knowledge and attitude towards prostate cancer. Kenerson (2012), noted that the health belief model has been known to be useful in understanding and predicting health Care practices especially in the area of prostate cancer and screening. There are lots of critics about the HBM because it fails to address psycho-social aspects about attitudes and beliefs towards illness, economic, cultural factors and the social network role on illness and diseases (Kenerson, 2012). However, this model becomes relevant in the sense that the level of awareness campaigns, knowledge and behaviour of men on prostate cancer can motivate people health consciousness towards avoiding negative health behaviour that lead to prostate cancer.

### **8. Incidences of Cancer in Nigeria**

World Health Organization (2007) reports revealed that there are presently more deaths from cancer than from HIV/AIDS, tuberculosis, and malaria. High incidences of lung cancer among women had called attention to the culpability of chemical pollutants derived from wood-burning and the use of charcoal in cooking (Ogunbiyi, 2003). These environmental risks are also considered important in cases of lung cancer among young people regardless of their gender (Ogunbiyi, 2003). Prostate cancer progress more rapidly in Nigerian environment in the recent past (Ogunbiyi, 2003). According to WHO (2013), cancer accounts for 13% of all deaths registered globally and 70% of that figure occurred in middle and low income countries such as Nigeria. In Nigeria, estimated numbers of 10,000 cancer deaths are recorded annually while 250,000 new cases are recorded yearly (WHO, 2013). Most cancer treatment centres in Nigeria today lack modern diagnostic equipment for diagnosing the condition and there is also lack of awareness about cancer especially the causative factors, preventative measures, treatment options and available facilities for prompt cancer treatments (Andreas, 2013).

## 9. Knowledge about Cancer in Nigeria

Nigerians still believe that cancer is a disease of the wealthy people, elderly and white—man disease, while victims of the disease in Nigeria still regards it as their fate (Andreas, 2013). There is a remarkable lack of knowledge about cancer screening among the most Nigerian population (Ajape, Babata, & Abiola, 2010). In addition to the treatment complexity and cost, death rate from prostate cancer are increasing daily due to negative attitude, beliefs, poor knowledge toward prostate cancer screening and poor management skills (National cancer Society, 2012). Education and knowledge about prostate cancer and screening is low in Nigeria (Akinremi, Ogo, & Olutunde, 2011). According to Ejike and Ezeanyinwa (2009), lifestyle changes among Nigerian men such as eating of westernize diets chronicled diseases like cancer.

According to Nnodimele et al. (2010), awareness and knowledge about prostate cancer is low in Nigeria and only 1.5% of their research participants were able to identify specific symptoms. Nnodimele et al. (2010), also reported that some of the participants were not aware of prostate cancer and they believed that prostate cancer has no cure.

## 10. Attitude towards Cancer in Nigeria

The incidence of cancer rate in Nigeria today is such a fact that many lives are at risk and that has been attributed to high adoption of western life style and diet (Fregene & Newman, 2005). According to Azubuike and Okwuokoli (2013) many Nigerians do not seek screening because they believe they cannot have cancer. Another major reason from non-participation in any of the cancer preventive measures was the “feeling that once one gets cancer it will have no remedy” which is followed by lack of awareness, forgetfulness and avoidance of fear and anxiety, tendering for prostate attitude towards preventive measures in Nigeria and this attitude could be seen to be high, but there is still high level of superstitious beliefs and ignorance that could hinder Nigerian men and woman to seek for cancer screening (Azubuike & Okwuokoli, 2013).

## 11. Beliefs about Cancer in Nigeria

Religious belief is what majority used to cope with chronic disease as it tends to address patients hopelessness, fear of losing ego/self control (Guz, Gursel, & Ozbek, 2010). Many patients with chronic disease and stressful life most times turn to religious and spiritual practices to get coping mechanism (Guz et al., 2010). Many patients with chronic disease and stressful life most times turn to religious and spiritual practices to get coping mechanism (Guz et al., 2010). Religiousness of Nigerians usually influences their belief and cultural values, and these in turn influence health behaviour of Nigerians to screening awareness campaign (Akigbe, A. & Akigbe, K., 2012). Many Nigerians belief that death is inevitable once diagnosed of cancer and as such do not participate in cancer screening, detection and treatment (Akigbe, A. & Akigbe, K., 2012). Religious beliefs tend to dominate Nigerians as majority has passion and confidence in God as such believe in fatalism, witchcraft, magical powers and demons

as causes of their illnesses (Akigbe, A. & Akigbe, K., 2012).

Fatalism is the beliefs that all situations such as illness or traumatic event occur as a result of higher power such as God or they are meant to happen or cannot be prevented or avoided. Cancer fatalism is a situation occurrence of fatalism in which the individual affected may feel powerless in the case of cancer and accept its diagnosis as a struggle that can never be solved or cured (Akigbe, A. & Akigbe, K., 2012).

## **12. Prostate Cancer: What It's All about**

The prostate is a sex gland found in men. It is small in size, about the size of a walnut and surrounds the neck of the bladder and urethra. The urethra is a tube like organ that carries urine from the bladder and out through the penis. It is muscular, with ducts opening into the prostatic portion of the urethra. It is made up of three lobes:

A center lobe within one lobe on each side. The prostate gland secretes a slightly alkaline fluid that forms part of the seminal fluid, a fluid that carries sperm (Walsh & Worthington, 1995). Approximately 5 to 10 percent of all prostate cancers are known to be attributed to an inherited DNA change, such as the cancer susceptibility gene. Recent researchers have pointed out that there is a set of common DNA variations that lead to a higher risk of inherited prostate cancer in African American men. The panic of having prostate cancer can be overwhelming to most men. Prostate cancer is the most common cancer among men. But the good news is that it can be treated when detected early enough. Prostate cancer is a type of cancer which only affects men. It occurs when tumor begins to grow in the prostate gland of male reproductive system (American Cancer Society, 2012).

## **13. Causes and Risk Factor of Prostate Cancer**

The exact causes of prostate cancer are unknown, though it appears to result from endogenous hormones and environmental factors (American cancer society, 2012). There are various risk factors that predispose men to prostate cancer such as race, age, hormones, diet, environment etc.

**Race:** prostate cancer is nearly 60% more common among African American men than it is among Caucasian American men. The differential incidence and mortality rate among African-American males have been suggested to be related to hormonal factors, as high rates of bioavailable testosterone have been noted among African-American male along with higher rates of mutation in the susceptibility gene (cancer research UK, 2012).

**Diets:** According to Cancer Research UK (2012), a high fatty-diet and meat have been proven to be a risk of developing prostate cancer as they influence circulating levels of testosterone and estradiol, which in turn may decrease the progression of prostate cancer. Diet high in Selenium, vitamin D, E and lycopene especially such as watermelon, grape fruits, guava etc. have been suggested to be chemo-protection (American Institute for cancer Research, 2013). According to National cancer Society (2013), lack of foliate, expensive to nickel-cadmium batteries has been proven to be a risk

factor (Kristal & Lip man, 2009).

Causes of prostate cancer have been attributed to family history (Carten et al., 1991). In a recent research carried out by some scientist at Johns Hopkins University, shows the undeniable link between a family history of prostate cancer and man's probability of developing the disease. The study showed that if your father or brother has prostate cancer, your risk is two times greater than the average American man's which is about 13%. It increases depending on the number of affected relative you have and the age at which they developed prostate cancer. Genetics have succeeded in dividing families into three groups based on the number of men with prostate cancer and their ages were put into consideration, these include the following:

**Hereditary:** prostate cancer is grouped under this if more than three relatives are affected within a nuclear family. Researchers have shown that 5% to 10% of prostate cancer cases are considered hereditary.

**Sporadic:** the word sporadic means to occur by chance. A family with prostate cancer present in one man, at a typical age of onset is grouped under this class.

**Familial:** this has to do with having more than one person in a family with prostate cancer, but with no definitive pattern of inheritance. Men in a family with prostate cancer have 50% chance of having it. Men are advice to carry out a test yearly to check for prostate cancer (Hillary, 2009). Ethnicity, obesity, age, heavy alcohol consumption and smoking have also been identified to be risk factors of developing prostate cancer (Moynihan & Rochester, 2012).

**Environmental Exposures:** Few studies have shown that there are high chances for men who are into welding or electroplating and farming to have prostate cancer, also environmental pollution relating to urbanization and industrialization has been linked to causes of prostate cancer in Nigeria.

#### **14. Sign and Symptoms of Prostate Cancer**

There are no specific signs and symptoms of prostate cancer but the cancer usually grows slowly and some of the symptoms related to growth of the prostate are typical of non cancerous enlargement and these symptoms' majority brings changes in urination pattern such as urgency, frequency, weak stream, painful urination or dribbling of urine (Calabrese & Mueller, 2006). In more advanced prostate cancer, there may be weight loss and fatigue and it spreads to the bones. There may be pain in that area as a result of pressure on the nerve endings (Calabrese & Mueller, 2006). According to Canadian cancer society (2014), the signs at early stage are problem with urination such as frequency at night, difficulty of passing urine flow, urgency (intense need to urinate); sense of incomplete emptying of the bladder; weak or decreased urine stream, pain or burning sensation during urination; difficulty in achieving or maintaining erection; and painful ejaculation. At advanced stage, there are bone pains especially in legs, anemia (low red blood cell count); fatigue; weight loss; loss of bladder control; loss of bowel control such as fecal incontinence and blood in urine (Canadian cancer society, 2014).

## 15. Screening and Detection of Prostate Cancer

Prostate cancer screening remains a controversial issue (American Urological Association, 2012). It is the only method recognized to control the disease through early detection. Some evidence have shown that Prostate Cancer Specific Antigen (PSA) screening can detect early stage of prostate cancer (American Urological Association, 2012). Screening based on the serum marker PSA is the most cost-effective method for the detection of early disease (American cancer society, 2004). American Cancer society (2004), recommended that men at high risk, based on race and family history, should commence early screening with PSA blood test and Digital Rectal Examination (DRE) at age 45 years. Also, American Urology Association (2013), states that screening will be of greater benefits in quality of life improvement and PSA screening should not be done for men between 40-54 years and men over 70 years and those with less than 10-15 years life expectancy is also not recommended. But for men between 55-64 years, the decision should be individualized and based on weighing the benefits and potential harm of not undertaking the prostate cancer screening. These guidelines were approved based on the findings that screening pose lots of complications such as painful biopsies, bleeding from the site of biopsy, infection, hematuria and hematosperimal (blood in sperm) which occur in 10%-70% of patients (Journal of Urology, 2011). It was also discovered to be the cause of hospitalization in 6% of patients (American Urology Association, 2013). Screening has been identified to be the reduction of mortality rate from prostate cancer, which will result in early detection and prompt treatment (Jemal et al., 2005; Kenerson, 2010). Prostate cancer result may reveal results that may lead to recommendations for biopsy and other tests that can help if biopsy is considered (American cancer society, 2004). The man aim of screening is to reduce the possibilities of developing the disease at asymptomatic stage, as a method of early detection because of their various negative attitudes, poor knowledge and beliefs (Kenerson, 2010).

The major problem with early detection of prostate cancer prevention is lack of knowledge about screening and poor detection guideline among medical professional group (Woods et al., 2004). It was also discovered by researchers that sexual dysfunction is a sensitive issue for black men, therefore discourages them from participation in prostate cancer screening and early detection strategies. Direct Rectal Examination (DRE) was identified as a major problem as it threatens men's sexuality (Woods et al., 2004). Majority of their participant indicated fear of weak erection, impotence and insufficient strength for vaginal penetration as a major concern why men do not go for prostate cancer screening (Woods et al., 2004).

A goal of healthy people in 2020 is to eliminate racial health disparities and reduce prostate cancer death rate to 21.2 per 100,000 males. To achieve this, goals innovative measure must be applied to overcome the perceived barriers that hinders early screening practices for prostate cancer, create mechanisms to partake support and reinforce men to healthy choice (healthy people, 2010). Screening is a very big issue especially in black men as compare to women (Woods et al., 2004). Many research work done has revealed economic limitation, low level of education, poor access to health care

facilities, lack of knowledge about studies, past negative experience, physician attitude, cultural and religious beliefs/attitude and various erection negative factors preventing an individual participation in prostate cancer examination (Steele et al., 2000); and only 46.5% of their study participants indicated that they have heard about prostate cancer screening and 68.8% indicated interest for screening.

Odedina, Yu, Akinremi, Reams, freedman and Kumar (2009) revealed that emigration of Nigerian men from Nigeria to the United States has significant impacts on prostate cancer knowledge and beliefs. In addition to lack of understanding, knowledge, accesses and financial constrain as the most common reason why screening is not done; fear; religious and cultural beliefs were the most common reason for non-participation in prostate cancer screening in west Africa (Rebbeck, Zeigler, Johnson, Heyns, & Gueye, 2011). According to Olasoji, Babgana, Tligali and Yahaya (2008), cancer is believed to be as a result of curses from wicked people, ancestors punishment meted to family members for wrong doing. Most Nigerian men belief that prostate cancer has no cure and does not kill, therefore, screening is not necessary. Many patient beliefs that cancer diagnosis is a death sentence; therefore, they see no reason in screening for it (Guz, Gursel, & Ozbek, 2010). According to Mayo clinic (2012), Trans-Rectal Ultrasound (TRUS) is a test done by using sound wave echoes to create an image of the prostate gland to usually inspect for abnormal conditions such as gland enlargement, nodules, penetration of tumor through capsule of the gland and or invasion of seminal vesicles.

According to Mayo foundation for Medical Education and Research (2012), a Computed Tomography scan (CT scan) is a diagnostic imaging procedure that uses a combination of X-rays and computer technology to produce cross-sectional images of the body in order to evaluate nodes tissues and prostrate organs. It is done to estimate prostrate size by showing the detailed image of any part. Magnetic Resonance Imaging (MRI) is a diagnostic imaging procedure that uses a combination of large magnet, radio frequencies and a computer to produce detailed images of organs and structures within the body in order to evaluate extra capsular penetrations beyond the gland itself (American cancer society, 2004).

## **16. Treatment of Prostate Cancer**

Prostate cancer treatment depends on the stage and grade of the cancer, the age and general health of the patient and the treatment preference of the patient. Each treatment option has great effect on the patient quality of life and sometimes treatment options are used in combination (Calabrese & Mueller, 2006).

Surgery is the most common choice used in treating and trying to cure prostate cancer. This is done if it has not spread outside the prostate gland. The main type of surgery for prostate cancer is known as a radical prostatectomy (American cancer society, 2014). Radiation therapy is also a treatment with high energy rays (Such as x-rays) to kill cancer cells or shrink tumors. This may be used to treat cancer in and around the prostate. It is also used to treat areas of cancer spread. Radiation therapy can be external beam radiation or internal (Brach therapy). The radioactive isotope is placed directly on the cancer to

kill it (American Cancer Society, 2014). External Beam Radiation Therapy (EBRT) is a treatment where beams of radiation are focused on the prostate gland from a machine outside the body. This type of radiation can be used in trying to cure cancers at an early stage, or to help relieve symptoms such as bone pain if the cancer has spread to a specific area of the bones (American Cancer Society, 2004).

Cryosurgery is sometimes used to treat early stage of prostate cancer by freezing the cells with cold metal probes also known as hollow needles. It is used only for poor prostate cancer that is still confined to a position but may not be a good option for men with large prostate gland or large tumors (American cancer society, 2004).

According to Calabrese and Mueller (2006) hormone therapy prevents the production of testosterone thus shrinking the prostate cancer and slowing down each growth. This option is intended as a treatment but does not give a cure for prostate cancer. Hormone therapy is also known as androgen deprivation, is given to lower the levels of the male hormones (androgens), such as testosterone or to stop the spread of the hormone from reaching prostate cancer cells (American cancer society, 2013). Hormones therapy is usually given to male patients who cannot undergo surgery, have radiotherapy and also to patients whose cancer cannot be cured because of its metastasis. It is also used for reoccurrence cancer situation and as first treatment to prostate cancer risk patient.

Sipuleucel-T is also known as provenge which is a cancer vaccine use to treat advance prostate cancer (cancer research UK, 2014). Most vaccines are designed to prevent disease, but this vaccine is aimed at treating prostate cancer, not preventing it. This vaccine is just commonly produced. It is manufactured specially for each patient from his own blood cells (cancer research UK, 2014).

Palliative Treatment: This is used for advances stage prostate cancer with aim of extending life and relieving symptoms such as pain management (life nurses, 2014). Abiraterone is an example of drugs used at this stage which brings about massive reduction in the level of Prostate Specific Antigen (PSA) (Life nurses, 2014). Chemotherapy such as docetaxel may also be administered at this stage in combination with prednisolone in other to prolong the life of the patients (Tannock et al., 2004).

### **17. Complementary and Alternative Medicine (CAM) For Prostate Cancer**

Complementary therapy is the use of other treatment along side with regular medical care and majority of them not offered to cure cancer but to make the patients feel better. For example the use of acupuncture to relief pain, peppermint tea to relieve nausea (American cancer society, 2013). Examples of complementary management are massage reflexology and chiropractic care in order to relief discomfort, reduce stress and alleviate certain side effects of standard medical care, including nausea and vomiting (national health statistics report, 2008).

In Nigeria, surgeons are trained but instrumentation and suppliers are limited and in most cases not available. Post-operative follow up care is limited or poor because of lack of infrastructures such as CT-Scan machines, bone scanners laboratories services for the detection of recurrence cancers (Enumah, 2013). Chemotherapy is also limited due to high cost with only 5% availability of cytotoxic

drugs in Nigeria. With lack of electricity and refrigerator for storing of chemotherapy drugs, the potency of even the available ones are in doubt (Enumah, 2013). More than four million Nigerians need radiotherapy treatment, but most shocking, only six radiotherapy machines are available in the entire country and only about 15% of the population has access to this treatment at their own cost (Enumah, 2013). Majority of these patients cannot afford the cost of this therapy. There is limited palliative care in Nigeria because there is no physical infrastructure for use (Enumah, 2013). Majority of Nigeria who can afford cancer treatment cost go to abroad especially to India (India cancer blog, 2013). According to African Nigerians, there are only eight recognized palliative centers in Nigeria which are;

1. Ahmadu Bello university teaching hospital palliative centre.
2. Centre for palliative Nigeria, Ibadan Oyo State.
3. Federal medical centre hospice palliative care services Ogun state.
4. Hearts of Gold Children, Lagos.
5. Hospices and applicative care, federal medical centre Ogun State Abeokuta.
6. Pain and palliative unit, Enugu.

They provide in and out patients services to paediatrics and adult, provision of in-patients pain and palliative care, twice weekly visitation. To provide home base care and bereavement support research, advocacy and community sensitization (Africa, Nigeria, 2013). Complementary and alternative used are common among cancer patients in Nigeria. Some of the users do not derived expected benefit and averse effect are however well known and very common (Ezeome & Anarado, 2007). In Nigeria, the use of traditional herbs and remedy are however well known and are very common (Liu et al., 1997), as cited in Ezeoma and Anarado (2007). The high cost of western medical treatment and inadequate access to orthodox medicine has led many Nigerians into using alternative and complementary medicine in Nigeria (Ezeome & Anarado, 2007). Due to all these medical treatment issues, cancer is considered death sentence in Nigeria.

## **18. Way Forward**

The researchers recommend the following:

- 1) Introduction of cancer teachings in schools, churches and traditional gathering is very necessary.
- 2) Demonstrations with the use of mass media such as the use of posters in public places about cancer menace and screening.
- 3) Policy that every male student from age 30 should be involved in health education and promotion programme.
- 4) Oncology specialist should encourage health promotion and education in every association, gatherings, denominations of faith they find themselves.
- 5) Dietary recommendations are also required.
- 6) Healthy lifestyle is recommended as the best form of prevention. Frequent consumption of fruit and vegetables and physical activities can make a difference.

7) Campaign planner should lower the age for screening so that early detection and prevention at the hospital is enhanced.

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