# Awareness and Prevention of Prostate Cancer among Male Aged in Twifo Hemang Lower Denkyira District in the Central Region of Ghana

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## Abstract

*The aim of this study was to investigate the awareness and prevention of prostate cancer among male aged in Twifo Hemang Lower Denkyira District in the Central Region of Ghana. Participants for the study were made up of male aged who are 60 years and above. 285 participants were purposively selected for the study. Participants were selected using the quota sampling technique. Questionnaire was used to collect data for the study. The data was analysed using frequencies and percentages. The study revealed that most male aged in Twifo Hemang Lower Denkyira District are not aware of the risk factors and symptoms associated with prostate cancer. The study revealed that a greater number of male aged in Twifo Hemang Lower Denkyira District have never gone for prostate cancer screening before. Though a greater number of the participants have never gone for screening before, the findings show that most male aged are of the view that when prostate cancer is detected early, it can improve the chances of survival. In all, the study found out that most male aged believe prostate cancer can be prevented and the best ways to prevent prostate cancer is through public health education, avoiding smoking, avoiding excessive intake of alcohol, having regular exercise, reducing intake of meat, dairy products and avoiding exposure to toxins. Based on the empirical findings, appropriate conclusion and recommendations for practice were offered.*

**Key words:** Cancer, Prostate Cancer, Male Aged, Screening, Diagnose, Awareness, Prevention

## 1. INTRODUCTION

Prostate Cancer is the commonest cancer in living men and has high incidence rate in the Africans, Caribbean's, and African-Americans (International Agency for Research on Cancer, 2018). Prostate cancer was the second most frequently diagnosed cancer among men as at 2011 (Etawo, Ekeke, & Mbiaba, 2012). According to the National Cancer Institute (2013), in 2012, worldwide, 1.1 million men were diagnosed with prostate cancer (accounting for 15% of all incident cancer cases in men), with almost 75% of the cases occurring in more developed countries. Cancer of the prostate is an important public health problem (Udeh, Amu, Nnagbugwu, & Ozoemena, 2015). Prostate cancer is the sixth leading cause of death among men in the world (Jemal, Lortet-tieulent, Ward, Ferlay, Brawley, & Bray, 2012). Prostate cancer is a frequently diagnosed cancer in men and an estimated 2,000 men are diagnosed each day worldwide, with one man expected to die from the disease every 2 minutes (Fitzpatrick, Kirby, Brough, & Saggerson, 2009). The mortality rates did not differ much worldwide and constitutes almost the same number of deaths in both developed and developing nations. The National Cancer Institute (2019) reported that there were 1.3 million new cases in 2018 worldwide. According to the World Cancer Research Fund (2018), it is also estimated that a total cost of $286 million to be annually associated with treating prostate cancer in this cohort in 2022. As cited by Quinn and Babb (2012), globally, three-quarters of cases occurred in men aged 65 years and above and very few people aged younger than 50 years are diagnosed with prostate cancer. The mean age of prostate cancer cases is 72-74 years and nearly 85% of cases are diagnosed after 65 years of age. These suggest that, the incidence rates of prostate cancer increases with advancing age. Prostate cancer burden is projected to grow to 1.7 million new cases and 499, 000 new deaths by 2030 simply due to the growth and aging of the world's population (Jemal et al., 2012).

A review conducted by Baade, Steginga, Pinnock & Aitken (2005) confirmed that prostate cancer was prevalent in developed nations such as the United States of America (USA) and the Scandinavian countries. As reported by the US Preventive Services Task Force (2018), in 2016, there were an estimated 3,110,403 men

living with prostate cancer in the United States. About 1 man in 9 will be diagnosed with prostate cancer during his lifetime. Prostate cancer is more likely to develop in older men and in African-American men. About 6 cases in 10 are diagnosed in men who are 65 or older. According to America Cancer Society (ACS, 2014) and World Health Organization (2012) cancer fact sheet, research has shown that prostate cancer is increasingly recognized as a critical public health problem in Africa. Currently, prostate cancer remains a significant burden among black men with research showing black men having a higher incidence and mortality rate for the disease. In Africa, prostate cancer is the leading cancer in both occurrence and the number of deaths among men (Rebbeck, Zeigler-Johnson, Heyns & Gueye, 2011). Rebbeck et al., (2011) further state that prostate cancer in Africa is expected to cause an estimated 57,048 deaths in 2030. Jemal et al., (2012) again posited that specifically Western Africa in the same year recorded estimated new cases of 13,300 deaths which is 18.3% of all death cases.

In Ghana, according to Global Cancer Project (GLOBOCAN, 2008), prostate cancer incidence rate is estimated to be increasing. Wiredu & Armah (2006) stated that prostate cancer death was the second leading cause of cancer-related deaths among males between the years 1991 and 2000 at the Korle-Bu Teaching hospital. In 2012, prostate cancer was one of the common cancers seen among males at the Korle-Bu teaching hospital representing 26.5% of cancer cases (Calys-Tagoe et al., 2014). Hsing et al., (2014) also confirmed that in recent time, 7% screen detected prostate cancer prevalence has been recorded in Accra. In Kumasi, the Kumasi Cancer Registry has reported prostate cancer incidence of 13.2% and as one of the common cancers among males (Laryea, Awuah, Amoako, Dogbe, Larsen-reindorf, Ansong, Martin, 2014). The cases of prostate cancer have risen by the year with incidence of greater than 200 per 100, 000 populations per year across the country (MOH/GHS, 2014). Early detection, knowledge and awareness of prostate cancer is suggested to have better treatment outcomes and thus regarded as the best way of reducing deaths related to prostate cancer (Chiu, Anderson, & Corbin, 2005). However certain barriers to prostate cancer screening are lack of knowledge and awareness of the disease, negative attitudes toward prostate cancer screening and high costs of screening, embarrassment

of being aware of the disease, lack of awareness of available healthcare services for prostate cancer (Chiu et al., 2005). The lack of knowledge and awareness in the general population on many issues about prostate cancer which could have informed early screening suggests several prostate cancer cases may be reported late.

Generally, screening and management of cancers often is influenced by local perceptions, beliefs and cultural norms particularly in the developing countries (Kolahdooz, Jang, Corriveau, Gotay, Johnston & Sharma, 2014) According to Vedel, Puts, Monette, Monette, & Bergman (2011), knowledge and awareness about prostate cancer and attitudes are said to influence screening behaviours and help in early detection of the disease. As posited by Kolahdooz et al (2014), it is well documented that men of African descent in USA, Caribbean, and Sub-Saharan Africa have low levels of awareness compared to American Hispanic men, hence the high incidence and mortality rates within those populations (Rebbeck et al., 2013). In other studies, conducted in Nigeria and Ghana, it was found that awareness of prostate cancer is quite low.  60.8 percent and 55.9 percent of participants were not aware of prostate cancer respectively (Atulomah, Motunrayo, Olanrewaju, Ademola M. Amosu, & Omotoyosi Adedeji, 2010), (Binka, Nyarko, Doku & Antwi, 2014). In Ghana, about 75% of prostate cancer cases are reported at the hospital in the advanced stages (Yamoah et al., 2013; Chu, Ritchey, Devesa, Quraishi, Zhang & Hsing, 2011; MOH/GHS, 2014). With 75% of cases reported late, it suggests that only 25% of Ghanaian men will live 5 years after been diagnosed of prostate cancer (MOH/GHS, 2014) and this situation is indifferent among male aged in Twifo Hemang Lower Denkyira District. Binka, Nyarko and Doku (2015) also stated that in previous studies in Ghana, the findings revealed lack of awareness and knowledge on the key risk factors and symptoms of prostate cancer.  According to Nakandi, Kirabo, Semugabo and Kittengo (2013), lack of awareness of prostate cancer is due to insufficient information on prostate cancer risk. It is well documented that having adequate knowledge and awareness of prostate cancer is also a significant determinant of screening behaviour (Pendleton, Hopkins, Anai, Nakamura, Chang, Grissett, & Rosser, 2008).

Despite prostate cancer related studies in other parts of the world, particularly in developed countries, not much information is

known on the awareness and prevention of prostate cancer in Ghana. As such no study on awareness and prevention of prostate cancer among male aged has been conducted within Twifo Hemang Lower Denkyira District. An effective awareness and prevention strategy for prostate cancer would provide many benefits to men with a substantial positive impact on public health, including the potential to reduce the high lifetime risks of prostate cancer development and morbidities. Better understanding of prostate cancer etiology represents the key to open new opportunities for prostate cancer awareness and prevention. The high global incidence of prostate cancer makes a call to strengthen empirical research to identify trends and prevention strategies to reduce the public health impact of this disease in the future. Therefore, it is important to investigate the awareness and prevention of prostate cancer among male aged in Twifo Hemang Lower Denkyira District. This study aims to bring out empirical findings through proper and well accepted methodological approach.

This study seeks to investigate the awareness and prevention of prostate cancer among male aged in Twifo Hemang Lower Denkyira District in the Central Region of Ghana. This study provides in-depth explanation to the awareness and prevention of prostate cancer among male aged in Twifo Hemang Lower Denkyira District in the Central Region of Ghana. This study has both theoretical and practical contributions. Firstly, the study adds to the literature by giving empirical evidence from the perspectives of male aged thereby widening the scope of the awareness and prevention of prostate cancer literature. It may also serve as useful literature for students and future researchers in this field. In terms of practical contributions, the findings of this study will inform policy decisions regarding the awareness and prevention of prostate cancer in Ghana. Furthermore, findings from this research will provide appropriate information needed to organize a more effective educational campaign against prostate cancer in Ghana.

Findings from this study may guide policy makers, government, non-governmental agencies and public health educational programs and also assist in the development of public health interventions on prostate cancer to complement the awareness and prevention on this important public health issue. Lastly, findings

from this study will be useful to the Ministry of Health, Ghana Health Service, local and international health partners in the design of interventions aimed at preventing prostate cancer through increased awareness and improved screening.

The rest of the study was organised as follows: section two focused on materials and methods. Section three focused on results and discussions. Finally, section four dealt with conclusions and recommendations.

## 2.0 MATERIALS AND METHODS

### 2.1 Research Design
The descriptive survey design was adopted for the study. According to Cresswell (2009), descriptive survey research employs applications of scientific method by critically analyzing and examining the source of materials, by analyzing and interpreting data, and by arriving at generalization and prediction. Again, Descriptive survey is useful for investigating a variety of problems including assessment of opinions and attributes.

### 2.2 Participants
The participants for the study were made up of male aged of 60years and above in five largest communities within Twifo Hemang Lower Denkyira District. They are Hemang, Jukwa, Wawase, Krobo and Mfuom community. According to the Ghana Statistical Service (2010), the total population of male aged who are 60 years and above in Twifo Hemang Lower Denkyira District is 1,181. A sample size of 285 was selected for the study. The sample size was calculated using Krejcie and Morgan (1970) recommendation on selection of population sample. Male aged were purposively selected for the study because the study sought to find out the awareness and prevention of prostate cancer among male aged in Twifo Hemang Lower Denkyira District. Quota sampling technique was used to select the participants from the five largest communities in Twifo Hemang Lower Denkyira District. 36% of the participants were within the ages of 60-64 years, 32% were between the ages of 65-69 years, 19% were between the ages of 70-74 years while 13% were 75 years and above. In addition, 74% were farmers, 26% were retired employees from the public and

private sector. Again, 55% had education up to JHS level, 18% had education up to SHS level, 15% had education up to tertiary level while 12% had no formal education.

## 2.3 Instruments

The main instrument used for the study was Questionnaire. The questionnaires were designed and validated by the researcher. According to Abawi (2013), questionnaires allow for collecting objective data in a large sample of the study population in order to obtain results that are statistically significant especially when resources are limited. Questionnaire allows for collection of a lot of information from respondents within a short time.

## 2.4 Data Gathering Procedure

The researcher sort for permission from Assembly members and community elders before the data was collected. one week later, the researcher and four trained research assistants collected the data from the participants. Data collection took two weeks. All ethical considerations involving the research and the participants were ensured. This allowed the researcher to clarify the misunderstandings that arose during the data collection.

## 3.0 RESULTS AND DISCUSSIONS

Table 1 Shows the awareness of prostate cancer among participants.

**Table 1: Awareness of prostate cancer by participants**

| Response | Frequency | Percentages (%) |
|----------|-----------|-----------------|
| Yes | 86 | 30.2 |
| No | 199 | 69.8 |
| Total | 285 | 100 |

Table 1 shows that 69.8 % of the participants indicated that they are unaware of prostate cancer with 30.2% being aware of prostate cancer. This indicates that a greater number of the participants are unaware of prostate cancer disease. The result of this study is similar to a study conducted by Wiredu and Armah (2006) which revealed that there is low level of awareness of prostate cancer among men in Ghana.

Table 2 Shows participant's awareness of the risk factors associated with prostate cancer.

**Table 2: Awareness of risk factors of prostate cancer**

| Response | Frequency | Percentages (%) |
|----------|-----------|-----------------|
| Yes | 74 | 26 |
| No | 211 | 74 |
| Total | 285 | 100 |

The researcher asked the participants to identify the risk factors associated with prostate cancer. Results in Table 2 indicate that 74 % of the participants indicated they do not know the risk factors associated with prostate cancer while 26% were aware of the risk factors. This finding suggests that most of the participants are unaware of the risk factors associated with prostate cancer disease. The finding of this research is consistent with a study conducted in Australia by Sanderson, Wijesinha, & Jones (2013) which revealed that many previous studies have also reported low level of knowledge about prostate cancer, the causes and symptoms among male aged.

Table 3 Shows participant's response on the risk factors of prostate cancer.

**Table 3: Risk factors associated with prostate cancer**

| Risk factors of prostate cancer | Frequency | Percentages (%) |
|---------------------------------|-----------|-----------------|
| Alcoholism | 15 | 5.3 |
| Age | 13 | 4.6 |
| Smoking | 10 | 3.5 |
| Gender | 16 | 5.6 |
| Family history | 11 | 3.8 |
| Pesticide Exposure | 4 | 1.4 |
| Obesity and fatty acid | 5 | 1.8 |
| No idea | 211 | 74 |
| Total | 285 | 100 |

The researcher asked the participants to identify the risk factors associated with prostate cancer. Results from table 3 shows that 74% of the participants could not identify any risk factor associated with prostate cancer. 5.6% identified Gender as the risk factor, 5.3% identified Alcoholism as the risk factor, 4.6% identified Age as the risk

factor, 3.8% identified Family history, 3.5% identified Smoking as the risk factor while 1.8% and 1.4% identified Obesity and fatty acid and Pesticide exposure respectively. The results of this research confirm with a study conducted in Nigeria by Jo, Eo, Co, & Eo (2013) which revealed there is total lack of knowledge about the risk factors, screening and treatment of prostate cancer among men in Nigeria. Again, the results of this study is consistent with a study by Binka, Nyarko and Doku (2015) which revealed that Ghanaian men in general lack.

Table 4 Shows participant's response on the symptoms of prostate cancer.

**Table 4: Symptoms associated with prostate cancer**

| Symptoms of prostate cancer | Frequency | Percentages (%) |
|---|---|---|
| Frequent urination | 25 | 8.8 |
| Slow/weak Urinary System | 14 | 4.9 |
| Erection Dysfunction | 16 | 5.6 |
| Blood in the urine | 10 | 3.5 |
| Lack of sensation in the legs | 5 | 1.8 |
| Occasional loss of bladder | 4 | 1.4 |
| No idea | 211 | 74 |
| Total | 285 | 100 |

The researcher asked participants to identify the symptoms associated with prostate cancer. The result from table 4 shows that (74%) of the participants stated they have no idea on the symptoms of prostate cancer. (8.8%) indicated Frequent Urination as the symptoms of prostate cancer, (5.6%) indicated Erection Dysfunction, (4.9%) indicated Slow/Weak Urinary System, (3.5%) indicated Blood in the urine whiles (1.8%) and (1.4%) indicated Lack of sensation in the legs and Occasional loss of bladder as the symptoms of prostate cancer respectively. This shows that a greater number of the participants are unaware of the symptoms associated with prostate cancer disease. The findings of this research is similar to a study conducted by Nakandi, Kirabo, Semugabo and Kittengo (2013) which revealed there are low knowledge and awareness of the symptoms of Ugandan men regarding prostate cancer. Again, the findings this research is related to the work of Binka, Nyarko, Doku, and Antwi (2014) which revealed

that generally, many Ghanaian men lack awareness and knowledge on the key risk factors of prostate cancer.

Table 5 Shows participant's response on early detection of prostate cancer.

**Table 5: Early detection of prostate cancer**

| Response | Frequency | Percentages (%) |
|---|---|---|
| Yes | 230 | 80.7 |
| No | 55 | 19.3 |
| Total | 285 | 100 |

The researcher asked participants to indicate whether prostate cancer can be detected early. (80.7%) of the participants responded (Yes) showing that prostate cancer can be detected early among male aged. (19.3%) of the participants stated (No) showing that prostate cancer cannot be detected early. Again, the participants were asked to indicate whether early detection of cervical cancer can improve the chances of survival. (80.7%) of the participants indicated that early detection of cervical cancer can improve the chances of survival while (19.3%) also stated that early detection cannot improve the chances of survival. This finding is also consistent with a study by Arafat, Farhat & Rabah (2015) which revealed that a greater number of the respondents in Riyadh, Saudi Arabia indicated that prostate cancer can be detected early and early detection can help improve the chances of survival.

Table 6 Shows how often participants do Prostate Cancer screening.

**Table 6: How often participants do Prostate cancer screening**

| Response | Frequency | Percentages (%) |
|---|---|---|
| Monthly | 2 | 0.7 |
| Quarterly | 3 | 1.0 |
| Yearly | 15 | 5.3 |
| Never done screening before | 265 | 93 |
| Total | 285 | 100 |

The researcher asked the participants to indicate how often the go for screening. The result from table 6 shows that (93%) had never gone for screening before, (5.3%) stated they go for screening on yearly bases, (1.0%) stated they go for screening on quarterly bases while

(0.7%) stated they go for screening on monthly bases. This finding also add on to support Ministry of Health and Ghana Health Service report, which stated that many men in Ghana have not heard and do not have access to prostate cancer screening services as a result they do not do screening. Again this finding is similar to a research by Oranusi, Mbieri, Oranusi Nwofor (2012) which revealed that a huge number of males in Anambra State, Nigeria do not go for prostate cancer screening. The researcher further asked participants to indicate how prostate cancer screening is important to them. (80%) of the participants indicated that they do not see the importance of prostate cancer screening, (15%) indicated prostate cancer screening is very important while (5%) indicated is important to them.

Table 7 Shows participant's response on prevention of Prostate Cancer.

**Table 7: Prevention of prostate cancer**

| How to prevent prostate cancer | Frequency | Percentages (%) |
|---|---|---|
| Public Health Education | 80 | 28 |
| Avoiding Smoking | 68 | 23.9 |
| Avoiding excessive intake of alcohol | 45 | 15.8 |
| Regular exercise | 30 | 10.5 |
| Reducing intake of meat and dairy products | 22 | 7.7 |
| Avoiding exposure to toxins | 15 | 5.3 |
| No idea | 25 | 8.8 |
| Total | 285 | 100 |

The researcher asked the participants to indicate whether prostate cancer can be prevented. (91.2%) stated prostate cancer can be prevented while (8.8%) believe that it cannot be prevented. Again, they were asked to indicate how prostate cancer can be prevented. Out the (91.2%) who indicated prostate cancer can be prevented, (28%) stated it can be prevented through Public Health Education, (23.9%) stated Avoiding Smoking, (15.8%) indicated Avoiding excessive intake of alcohol, (10.5%) stated having Regular exercise while (7.7%) and (25.3%) stated Reducing the intake of meat and dairy products and Avoiding exposure to toxins respectively. This

result shows that a greater number of the participants are of the view that prostate cancer can be prevented.

## 4.0 CONCLUSION AND RECOMMENDATIONS FOR PRACTICE

The following conclusions are drawn based on the findings. The study concludes that male aged in Twifo Hemang Lower Denkyira District in the Central Region have low level of awareness on the risk factors and symptoms associated with prostate cancer. The study concludes that a greater number of the male aged in Twifo Hemang Lower Denkyira District in the Central Region have never gone for prostate cancer screening before. Though a greater number of the male aged have never gone for screening before, the findings show that most male aged believe prostate cancer can be detected early and early detection can help improve the chances of survival. Most of the participants are of the view that prostate cancer can be prevented and the best ways to prevent prostate cancer is through public health education, avoiding smoking, avoiding excessive intake of alcohol, having regular exercise, reducing intake of meat, dairy products and avoiding exposure to toxins.

The following recommendations are made based on the findings. Firstly, Health care providers seeing clients should give prostate cancer screening education at health facilities. Government should consider in cooperating prostate cancer screening programme into the National Health Insurance Scheme (NHIS). This will not only help create awareness about the disease but also aid early detection of prostate cancer. Ministry of Health, Ghana Health Service and NGOs should consider instituting prostate cancer awareness and screening on yearly bases. During this period in the year the Ministry of Health and other campaign groups will be expected to educate and screen males throughout the country. The Public health division of Ministry of Health and Ghana Health Service must increase educational campaign on prostate cancer. Government in partnership with NGOs should establish prostate cancer screening centres in each district across the country. Lastly, Public health workers should give more health talks on prostate cancer throughout the country in order to reach more males.

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