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Health-Seeking Behaviours and Effect of Prostate Cancer on Male Soldiers in Ghana, a Qualitative Study

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Abstract

Background: Prostate cancer is a global public health problem and contributes to the global morbidity and mortality burden.

Objective: This study aimed to explore health-seeking behaviours and the effect of prostate cancer on Ghanaian soldiers.

Methods: This study employed a phenomenology qualitative research design. In-depth interviews were conducted among 24 male soldiers living with prostate cancer. Data were collected with the aid of an interview guide and analyzed using qualitative thematic analysis.

Results: Three major themes and ten subthemes emerged from the thematic analysis. The three major themes were diagnosis, treatment and effects of prostate cancer. The subthemes under diagnosis were medical tests and symptoms of prostate cancer. The subthemes under treatment were orthodox treatment, herbal treatment and behaviour change. The subthemes under effect were poor physical, sexual, mental, social and financial wellbeing.

Conclusion: Ghanaian soldiers living with prostate cancer adopt multiple health-seeking behaviours. Prostate cancer adversely affects the physical, sexual, mental and social wellbeing as well as the financial stability of soldiers. This study provides relevant information for public health policy and programming.

Keywords

Ghana, Prostate cancer, Soldier, Qualitative study, Health-seeking, effects

Background

Prostate cancer (PC) is a global public health problem. PC is the second most common cause of cancer deaths among Whites, African Americans, American Indians and Hispanic men [1]. Estimates suggest that by 2030, 1.7 million new cases of PC and 499,000 related deaths will occur if the trend is not interrupted [2]. Several studies have shown that occupational exposures are risk factors of prostate cancer [3], besides race, family history and age. Soldiers are more likely to be diagnosed with prostate cancer compared with the general population [4]. Partly because, they are more exposed to cancer-causing agents, such as pesticides, metals, chemicals, radiation, warfare chemical, fuels and solvent, compared with the general population [5]. Moreover, soldiers are more exposed to cadmium, which is a risk factor for prostate cancer. Cadmium is used in military installations, including surface treatment in aerospace and weapons systems to prevent corrosion. Further, soldiers are frequently exposed to sunlight and physical fitness coupled with unhealthy behaviours, such as smoking, alcohol consumption and unhealthy diets, which predispose them prostate cancer [4]. Also, military deployment is associated with immunization and depletion of uranium which increases soldier's risk of prostate cancer [6]. Besides, soldiers are more likely to have access to free health care, frequent contact with doctors, hence are more likely to get screened for prostate cancer. Frequent medical examination is common among the military, which contributes to the detection of more prostate cancer cases among soldiers. However, evidence shows that soldiers have negative attitudes towards seeking health care services [7].

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Soldiers provide essential services (i.e., protect life and property), hence promoting their health and wellbeing are crucial. Prostate cancer has the potentials to negatively affect the health, wellbeing and productivity of soldiers. Studies have shown that prostate cancer is associated with physical and cognitive disabilities, which negatively affect job performance [8,9]. Prostate cancer is also associated with sexual dysfunction [10]. Therefore, the impact of prostate cancer on soldiers cannot be underestimated.

In Ghana, prostate cancer is the second leading cause of cancer deaths. One in three Ghanaian men of age 40 and above is at risk of prostate cancer [11]. The rising prevalence of prostate cancer in the country is a public health threat. However, there is a paucity of empirical evidence on the subject matter. For instance, Ghana has no published cancer register and no well-established policy guidelines for prostate cancer management, making it difficult to accurately estimate the burden of the disease.

A majority of the military personnel in Ghana are males, hence are at risk of prostate cancer. The 37 Military Hospital (the largest military hospital in Ghana) records new cases of prostate cancer among soldiers every year. Yet, there is rare evidence of Ghanaian soldiers living with prostate cancer. Also, existing studies on prostate cancer are largely quantitative studies, hence little is known about the experiences of prostate cancer survivors. Generating empirical evidence on the phenomenon is crucial for public health policy and programming. The objective of this study was to explore health-seeking behaviours and the effect of prostate cancer among male soldiers in Ghana.

Methods

This study was conducted in the 37 Military Hospital, the largest military healthcare facility in Ghana. It is also the 37th military hospital to be built in the British colony of West Africa. The hospital is located in Accra, Ghana's capital city. The hospital has a total bed capacity of 400 and serves as one of the referral hospitals in the coastal part of Ghana.

The Ghana Armed Forces comprise the Navy, Army and Air Force. More than half of the military personnel are males. This study focused on male soldiers who have been diagnosed with prostate cancer and were receiving treatment in the 37 Military Hospital. With the assistance of health professionals in the hospital, respondents were selected using the purposive sampling technique during hospital visits. We adopted a phenomenology qualitative research design.

Respondents who consented were interviewed in a private room by the first author with the aid of an interview guide. All the interviews were conducted in the English Language because all the respondents were literate. The average duration for the interviews was about forty (40) minutes. The first author visited the hospital bi-weekly, except at weekends to interview respondents. A discussion approach was employed to conduct the interviews coupled with several inductive probes to broaden the narratives as much as possible. With the consent of participants, interviews were audiotaped coupled with taking notes. Data saturation was attained after interviewing 24 respondents. Before data collection, approval was sought from the management of the hospital. Also, the purpose of the study was made known to the respondents as well as their right to voluntary participate or redraw from the study at any stage. We obtained written consent from all the respondents as well as assured them of privacy and confidentiality.

Thematic analysis was employed to identify themes within the data. The analysis was guided by Braun and Clarke's thematic analysis framework [12]. Audio recordings were listened to severally and transcribed by the first author, while the second author verified the transcripts by comparing it with the recordings. To gain familiarization with the data as well as document initial impression, both the transcripts and the notes were read severally by all the authors. Afterwards, parts of the transcripts were coded manually to identify main themes. Coding was done separately by the authors and subsequently compared, discussed and revised where necessary. Codes that fitted were grouped into themes after serious scrutiny and revised to safeguard consistency between themes and related data. Lastly, the themes were well-defined into main and sub-themes. Findings were presented according to main and sub-themes and verbatim quotes were selected at random.

Results

Out of the 24 respondents, 54% were between the ages of 51-60 years, 92% were married and 58% had attained tertiary education. Moreover, 54% of the respondents were officers, 50% professed Christianity and 37% had between 21-30 years of work experience (Table 1).

From the thematic analysis, three main themes emerged, including diagnosis, treatment and effects of prostate cancer. Two subthemes emerged under diagnosis, including medical tests and symptoms of prostate cancer. Three subthemes emerged under treatment, including orthodox treatment, herbal treatment and behaviour change. Five subthemes emerged under the effects of prostate cancer, including poor physical, sexual, mental, social and financial wellbeing (Table 2).

Diagnosis

Medical test for diagnosing prostate cancer: All the respondents stated that they were diagnosed by health professionals using various medical tests/examinations. Probing further, some respondents revealed that they underwent Prostate-Specific Antigen (PSA), Digital Rectal Examination (DRE) and Biopsy tests to confirm the presence of cancer in the prostate gland. The soldiers indicated that the medical tests were prescribed by health practitioners when they visited the hospital with signs and symptoms of prostate cancer. This is what a respondent had to say about how he got to know his PC status.

"I reported to my doctor about pains in my scrotum. He then requested for PSA test, DRE and biopsy test. Through the following tests, it was confirmed by the doctor that I have prostate cancer" (Participant 5, Non-officer).

Symptoms of prostate cancer: The respondents stated that they experienced painful urination, frequent urination,

Table 1: Characteristics of participants.

Characteristic n = 24	n (%)
Age (years)	
41-50	11(46)
51-60	13(54)
Marital status	
Married	22(92)
Divorced	29(8)
Education	
Secondary school	10(42)
Tertiary	14(58)
Rank	
Officer	13(54)
Non-officer	11(46)
Religion	
Christianity	12(50)
Islam	8 (33)
No religion	4 (17)
Work experience (years)	
1-10	3(13)
11-20	7(29)
21-30	9(37)
31-35	5(21)

Table 2: Main themes and subthemes from thematic analysis.

Main theme	Subtheme
Diagnosis of prostate cancer	Medical tests- Prostate Specific Antigen Test (PSA), Digital Rectal Examination (DRE) and Biopsy test
	Symptoms of prostate cancer - painful micturition, frequent micturition, blood in urine, weak urinary stream, pain during ejaculation, difficulty in postponing urine, abdominal pains.
Treatment of prostate cancer	Orthodox treatment - hormonal therapy, Radical prostatectomy,
	Herbal/traditional -herbal medication
	Behaviour change- changes in diet and alcohol consumption
Effects of prostate cancer	Physical wellbeing- weight loss
	Sexual wellbeing- poor sexual performance
	Mental wellbeing -depression, insomnia
	Social wellbeing - dependency, isolation
	Economic wellbeing -catastrophic healthcare expenditure, poor job performance

especially in the night, urinary retention, blood in urine, weak urinary stream, painful ejaculation, difficulty in postponing urine, abdominal pains and burning sensations after urination. This was what a respondent had to say:

"I had a weak urinary stream, a lot of pain during urination and sometimes I saw blood in my urine" (Participant 15, Non- officer).

Treatment for prostate cancer

Orthodox treatment: Most of the respondents specified that they were undergoing hormonal therapy, while other respondents indicated that they were undergoing Radical prostatectomy. According to one respondent:

"After I was diagnosed with prostate cancer some years ago, I have been on hormonal therapy all this while" (Participant 21, Officer).

Traditional/ herbal treatment: The soldiers combined both orthodox and herbal medicines to treat prostate cancer. This suggests that there is the practice of medical pluralism in managing prostate cancer. This was what a soldier said:

"I was diagnosed with prostate cancer about a year ago and I have been on hormonal therapy and herbal treatment. I think the two would be more effective than just depending on only one method" (Participant 8, Non-officer).

Behaviour change: Besides, orthodox and herbal treatments, the respondents expressed divergent views regarding changes in behaviour. Some respondents underscored that they have adopted positive health behaviours, such as quitting smoking, reducing the intake of alcohol and unhealthy diets. One respondent said:

"For me to recover fast, I decided to stop bad eating habits, alcohol intake and smoking. I have reduced my dietary intake to help me recover well" (Participant 13, Non-officer).

Effects of prostate cancer

Poor physical wellbeing: The soldiers indicated that the disease has affected their physical health. Some respondents expressed concerns about weight loss due to prostate cancer. A respondent lamented that:

"I have lost some weight due to my condition couple with urinal incontinence" (Participant 3, Officer).

Poor sexual wellbeing: The soldiers lamented about poor sexual functioning. The respondents stated that they could not get an erection or keep an erection during sexual intercourse, experienced pain and discomfort during and after ejaculation, as well as did not enjoy sex anymore. For example, a respondent stated that:

"My condition has affected my sexual performance very badly. I find it difficult to erect and after managing to erect, I don't stay long at all. Moreover, there is this pain and discomfort I usually experience during ejaculation and it is disturbing me so much" (Participant 1, Officer).

Poor social wellbeing: The respondents also lamented that the disease has affected their social wellbeing. A reduction in respondents' engagement in social events, such as festivals, weddings, funerals, was common. Respondents who participated in social gatherings before the onset of prostate cancer stated that they could no longer participate in social events. Some respondents bemoaned that they could not attend social gatherings due to frequent urination and urine incontinence, while other respondents expressed concerns about how they could no longer socialize with friends. According to one respondent;

"Because I cannot postpone urination, I do not want to socialize anymore. This is because, I might end up embarrassing myself in public, at first, I use to engage in sporting activities but of late I cannot do that anymore due to the disease am having" (Participant 19, Officer).

Poor mental wellbeing: Prostate cancer was associated with poor mental wellbeing. The respondents indicated

that they experienced stress, insomnia, anxiety and severe depression. A soldier expressed the following concern.

"I usually have insomnia; thus, I cannot sleep well in the night and have to wake up several times before is morning" (Participant 22, Officer).

Poor financial wellbeing: The respondents stated that they pay their medical bills, which poses a huge financial burden on them and their families. Some respondents depend on relatives and friends for money to pay their medical bills. A respondent stated that:

"I spend a lot on medical bills and cannot even afford the prescribed treatment. For instance, I cannot afford the hormonal treatment due to financial constraints" (Participant 6, Non-officer).

Also, respondents indicated that the cost of treatment for prostate cancer was very expensive, making it very difficult for them to access. Soldiers who had enrolled in the National Health Insurance Scheme (NHIS) said they still pay out-of-pocket for medication because treatment for prostate cancer is not included in the benefits package. Hence, the respondents who had enrolled in the NHIS did not have any protection against catastrophic healthcare expenditure. A respondent said:

"The cost of treatment is very expensive. I cannot afford and sometimes have to depend on friends and families to support me. In fact, it has not been easy for me". (Participant 20, Non-officer).

The soldiers stated that prostate cancer affected their performance on the job. For example, some soldiers could not engage in regular physical activity, while other respondents absented from work.

"My condition has affected my performance negatively. I cannot work like before; I easily get tired and sometimes lose my concentration on the job due to worrying about my condition" (Participant 4, Non-officer).

Discussion

Three main themes emerged from the thematic analysis, including diagnosis, treatment and effects of prostate cancer. Regarding diagnosis, three main medical tests were employed by health professionals to diagnose soldiers who visited the hospital with symptoms such as painful micturition, frequent micturition, blood in urine, weak urinary stream and painful ejaculation. These medical tests include the Prostate-Specific Antigen test, Digital Rectal Examination and Biopsy test. These findings corroborate with findings of prior studies [10,13]. The above tests are widely known for diagnosing prostate cancer [13]. This is commendable, however not surprising, because the 37 Military Hospital is a referral hospital. Therefore, it is expected that the hospital should have ultra-modern medical technology coupled with cancer specialists. This implies that soldiers in Ghana have access to standard prostate cancer diagnosis which conforms with international best practices.

In addition, multiple therapies were adopted to cure prostate cancer, including orthodox and herbal medicines coupled with changes in behaviour. Hormonal treatment and Radical prostatectomy were the common medical treatment options for soldiers with prostate cancer. Besides, soldiers preferred both orthodox and herbal treatments (medical pluralism), which is a common practice among the general Ghanaian population [14]. This finding requires urgent attention since medical pluralism can negatively affect treatment outcomes. It was insightful to find that soldiers had adopted positive health behaviours to aid in their recovery, including healthy dietary practices, physical activity and cessation of smoking. In this regard, we recommend that a multi-disciplinary approach to prostate cancer treatment, such as incorporating dietitians, physical activity specialists and counsellors in the continuum of care, should be adopted.

Furthermore, prostate cancer affected soldiers' physical, sexual, mental, social and financial wellbeing. These findings are parallel with existing studies [15,16]. Evidence shows that depression is common among persons living with prostate cancer [17]. Again, there is evidence to show that prostate cancer is associated with weight loss [18]. Persons living with prostate cancer experience erectile dysfunction [13], which affect their masculinity and emotional wellbeing. For instance, a similar study found that men living with prostate cancer experienced difficulties with ejaculation, erection, urination and orgasm [19]. Also, prostate cancer had financial implications, including poor job performance and the high cost of treatment [20]. The cost of treatment for prostate cancer was perceived to be expensive, predisposing soldiers to catastrophic healthcare expenditure. Research shows that prostate cancer is associated with financial hardships [21]. These findings imply that soldiers living with prostate cancer need medical, emotional, social and financial support. It is therefore crucial for stakeholders to design strategies and programmers to help minimize the adverse effects of prostate cancer on soldiers.

We recommend that stakeholders should adopt a multi-disciplinary approach to help minimize the adverse effects of prostate cancer. For instance, the cost of treatment for prostate cancer should be included in the benefits package of Ghana's National Health Insurance Scheme. Although the cost of treatment for cervical and breast cancer are covered by the National Health Insurance Scheme, the cost of treatment for prostate cancer is currently not covered. This can help provide financial risk protection to persons living with prostate cancer. Alternatively, the management of the Ghana Armed Forces should consider providing financial support to soldiers living with prostate cancer, such as paying their medical bills. In addition, healthcare providers should educate prostate cancer patients about risks associated with medical pluralism as well as provide counselling services for soldiers with emotional problems. Also, it is crucial to involve psychologists and sex therapists in the continuum of care to provide support services to prostate cancer patients experiencing sexual dysfunction. There is therefore a need for multi-stakeholder collaboration, such as the Ghana Armed Forces, the Ghana Health Services, the National Health Insurance Authority and the Ghana Psychological Association.

Although the findings of this study provide valuable information for health policies and programming, it is not

devoid of limitations. Firstly, the findings of the study must be interpreted with caution, since the study was conducted among few soldiers. Also, the findings of the study cannot be generalized due to the qualitative nature and small sample size. Therefore, future studies should adopt longitudinal designs and large sample size. Notwithstanding, this is the maiden study to explore the lived experiences of Ghanaian soldiers living with prostate cancer.

Conclusion

This study demonstrated that Ghanaian soldiers living with prostate cancer adopt multiple health-seeking behaviours. Prostate cancer adversely affects the physical, sexual, mental and social wellbeing as well as the financial stability of soldiers. These findings are consistent with the findings of previous studies. The findings of this study provide relevant information for public health policy and programming. Going forward, a multidisciplinary approach should be adopted to help promote the health and wellbeing of soldiers living with prostate cancer.

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