

We are IntechOpen, the world's leading publisher of Open Access books Built by scientists, for scientists

5,800

Open access books available

142,000

International authors and editors

180M

Downloads

Our authors are among the

154

Countries delivered to

TOP 1%

most cited scientists

12.2%

Contributors from top 500 universities



WEB OF SCIENCE™

Selection of our books indexed in the Book Citation Index
in Web of Science™ Core Collection (BKCI)

Interested in publishing with us?
Contact book.department@intechopen.com

Numbers displayed above are based on latest data collected.
For more information visit www.intechopen.com



Health-seeking Behaviours and Effect of Prostate Cancer on Male Soldiers in Ghana: A Qualitative Study

*Emmanuel Anongeba Anaba, Juliana Gyasi Necku
and Moses Abile*

Abstract

Prostate cancer is a global public health problem and contributes to the global morbidity and mortality burden. This study aimed to explore health-seeking behaviours and the effect of prostate cancer on Ghanaian soldiers. 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 analysed using qualitative thematic analysis. 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. 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

1. Introduction

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 to prostate cancer [4]. Also, military deployment is associated with immunization and depletion of uranium which increases soldiers' 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. The 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].

Soldiers provide essential services (i.e., protect life and property), hence promoting their health and wellbeing is crucial. Prostate cancer has the potential 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 are 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.

2. Methods

This study was conducted in the 37 Military Hospital, the largest military health-care 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

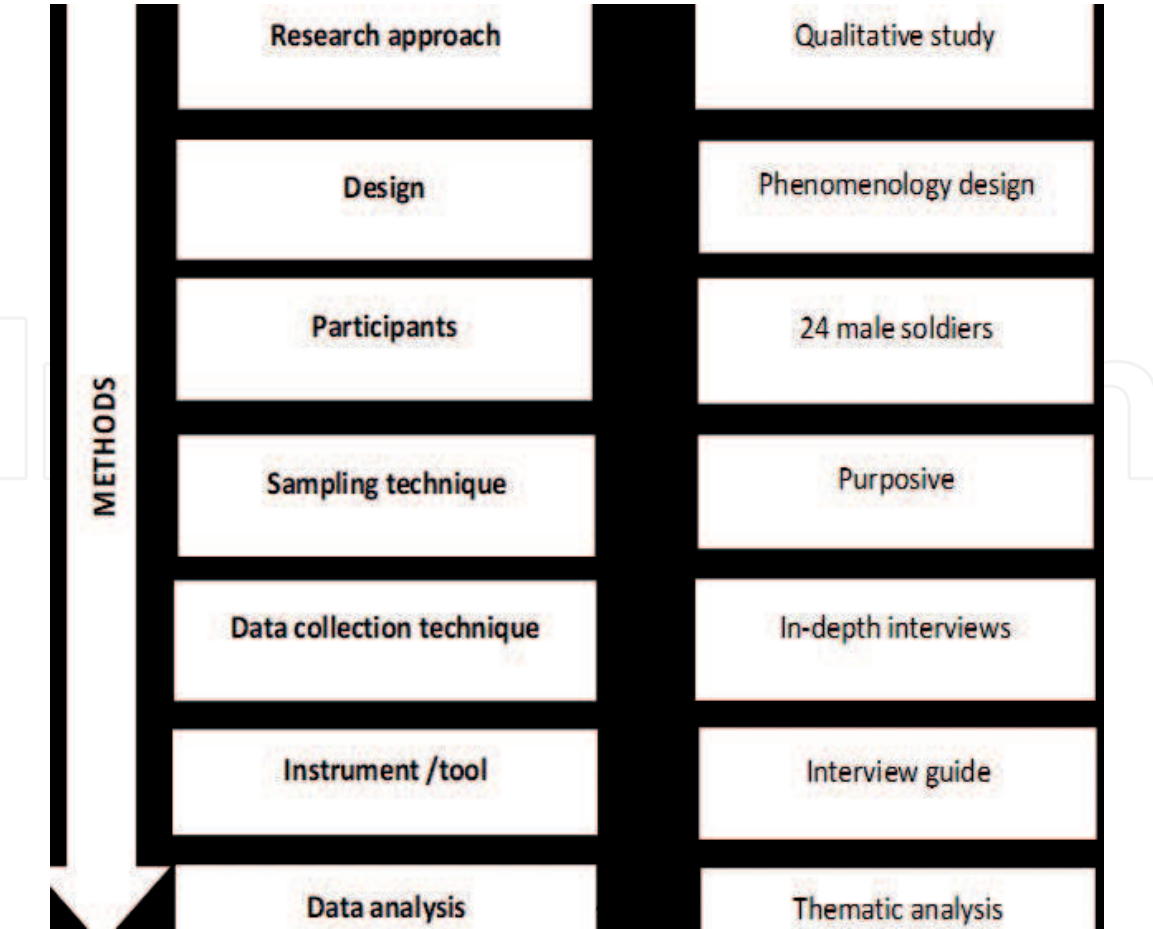


Figure 1.
Schematic diagram of methods.

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 voluntarily 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 the 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 (**Figure 1**).

3. Results

Out of the 24 respondents, 54% were between the ages of 51 and 60 years, 92% were married and 58% had attained tertiary education. Moreover, 54% of the

Characteristic n = 24	n (%)
Age (years)	
41–50	11 (46)
51–60	13 (54)
Marital status	
Married	22 (92)
Divorced	2 (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 1.
Characteristics of participants.

respondents were officers, 50% professed Christianity and 37% had between 21 and 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**).

3.1 Diagnosis

3.1.1 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.

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

Table 2.
Main themes and subthemes from thematic analysis.

“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).

3.1.2 Symptoms of prostate cancer

The respondents stated that they experienced painful urination, frequent urination, especially at 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).

3.2 Treatment for prostate cancer

3.2.1 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).

3.2.2 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).

3.2.3 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).

3.3 Effects of prostate cancer

3.3.1 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).

3.3.2 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).

3.3.3 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).

3.3.4 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).

3.3.5 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 absent 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).

4. 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 to 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 affects 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 programmes 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 is 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 a large sample size. Notwithstanding, this is the maiden study to explore the lived experiences of Ghanaian soldiers living with prostate cancer.

5. 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.

Acknowledgements

The author would like to thank the management of the Ghana Armed Forces for permitting them to collect data from their organization. Also, we thank all the respondents who sacrificed their time and energy to participate in the interviews.

Conflict of interest

The authors declare no conflict of interest.

Appendix

Consent form

Section A: Background information

Title of Study	Assessing the impact of prostate cancer on the health security of soldiers. A case study of the Ghana Armed Forces.
Principal Investigator:	Juliana Gyasi Necku

Section B: Consent to participate in research

General Information about research

Prostate cancer is the most common non-skin cancer among men and the sixth leading cause of cancer-related death among men globally. Estimations indicate that by 2030, 1.7 million new cases of prostate cancer will be recorded coupled with 499,000 new deaths. Prostate cancer can pose a serious threat to health security, which is an essential part of human security. Prostate cancer is the second leading cause of cancer deaths among men in Ghana. Out of every three men of 40 years and above in Ghana, one is at risk of prostate cancer. This is a cross-sectional survey that seeks to assess men understanding, attitudes, health-seeking behaviours and impact of prostate cancer. This study will last for three months and it is expected that you will be available during the study period for interviews.

Benefits/Risks of the study

Benefits: There is no direct benefit for you. However, findings from this study will help promote the reproductive health and wellbeing of men through policies and programmes. It will also help improve stakeholders’ understanding of prostate cancer and access to professional healthcare services for men living with prostate cancer.

Risks: You will be required to answer questions about yourself and your experiences about prostate cancer, hence there will be minimal risk and discomfort. You can contact the Principal Investigator (Juliana Gyasi Necku) on +233 244284669

to channel your concerns. Also, there is a counselor on standby to counsel you with support if you experience any emotional challenges.

Confidentiality

We will protect information about you to the best of our ability. Information provided by you will be saved on a computer with a password so no one else can see it. Your real name and other identifiable information will not be shared with anyone else and you will be given a study identity number with which we will identify you. The interview will be audio recorded for it to be transcribed into word format. This recording will not have any record of your name or any easily identifiable information. It will only be available to the research team. The findings will be reported in a thesis report and submitted to the Ghana Armed Forces Command and Staff College as well as disseminated in scientific journals and conferences. This study is strictly for academic purposes and your name or any identifiable information will not appear in any publication or presentation.

Compensation

There will be no monetary compensation for you if you agree to participate in this study.

Withdrawal from study

Your participation in this study is voluntary and you can drop out at any time of the study period if you wish to end your participation. You or your legal representative will be informed promptly if information becomes available that may be relevant to your willingness to continue participation or withdraw. You may do so without any consequences.

Contact for additional information

Please for further information about this project or related injuries, contact the:

Student Investigator

Juliana Gyasi Necku
Ghana Armed Forces Staff Command College, Accra
Tel: +233 244284669
Email: adjoanecku@gmail.com

Section C: Participant agreement

“I have read or have had someone read all of the above, asked questions, received answers regarding my participation in this study, and am willing to give consent for me to participate in this study. I will not have waived any of my rights by signing this consent form. Upon signing this consent form, I will receive a copy for personal records.”

Name of Participant

Signature or mark of Participant

Date

If a participant cannot read and or understand the form themselves, a witness must sign here:

I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered and the volunteer has agreed to take part in the research.

Name of witness

Signature of witness / Mark

Date

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

Name of Person who Obtained Consent

Signature of Person Who Obtained Consent

Date

Author details

Emmanuel Anongeba Anaba^{1*}, Juliana Gyasi Necku² and Moses Abile³

1 Department of Population, Family and Reproductive Health, University of Ghana, Accra, Ghana

2 37 Military Hospital, Accra, Ghana

3 Department of Nursing, Nursing and Midwifery Training College, Gushegu, Ghana

*Address all correspondence to: emmaanaba24@gmail.com

IntechOpen

© 2022 The Author(s). Licensee IntechOpen. This chapter is distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/3.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.



References

- [1] Pernar CH et al. The epidemiology of prostate cancer. Cold Spring Harbor Perspectives in Medicine. 2018;8(12):a030361
- [2] Center MM et al. International variation in prostate cancer incidence and mortality rates. European Urology. 2012;61(6):1079-1092
- [3] Sauvé J-F, Lavoué J, Parent M-É. Occupation, industry, and the risk of prostate cancer: A case-control study in Montréal, Canada. Environmental Health. 2016;15(1):1-19
- [4] Leavy J, Ambrosini G, Fritschi L. Vietnam military service history and prostate cancer. BMC Public Health. 2006;6(1):1-6
- [5] Gan Y et al. Association between shift work and risk of prostate cancer: A systematic review and meta-analysis of observational studies. Carcinogenesis. 2018;39(2):87-97
- [6] Zhu K et al. Cancer incidence in the US military population: Comparison with rates from the SEER program. Cancer Epidemiology and Prevention Biomarkers. 2009;18(6):1740-1745
- [7] Joseph HJ. Determinants of prostate cancer screening in a sample of African American military servicemen. Military Medicine. 2006;171(5):430-435
- [8] Oberst K et al. Work task disability in employed breast and prostate cancer patients. Journal of Cancer Survivorship. 2010;4(4):322-330
- [9] Bradley CJ et al. Employment outcomes of men treated for prostate cancer. Journal of the National Cancer Institute. 2005;97(13):958-965
- [10] Albaugh JA et al. Life after prostate cancer treatment: A mixed methods study of the experiences of men with sexual dysfunction and their partners. BMC Urology. 2017;17(1):1-9
- [11] Arthur F et al. Prostate cancer screening in Ghana-a clinical benefit? Journal of Science and Technology (Ghana). 2006;26(1):1-7
- [12] Clarke V, Braun V, Hayfield N. Thematic Analysis, Qualitative Psychology: A Practical Guide to Research Methods. London: SAGE Publications; 2015. pp. 222-248
- [13] Appleton L et al. The impact of prostate cancer on men's everyday life. European Journal of Cancer Care. 2015;24(1):71-84
- [14] Atinga RA, Yarney L, Gavu NM. Factors influencing long-term medication non-adherence among diabetes and hypertensive patients in Ghana: A qualitative investigation. PloS One. 2018;13(3):e0193995
- [15] Houédé N et al. Impact on quality of life 3 years after diagnosis of prostate cancer patients below 75 at diagnosis: An observational case-control study. BMC Cancer. 2020;20(1):1-12
- [16] Nabisubi P, Nanyingi M, Okeny PK. Lived experiences of prostate cancer patients below 55 years of age: A phenomenological study of outpatients receiving treatment at the Uganda cancer institute. East and Central African Journal of Surgery. 2020; 25(3):1-13
- [17] Watts S et al. Depression and anxiety in prostate cancer: A systematic review and meta-analysis of prevalence rates. BMJ Open. 2014;4(3):1-9
- [18] Montazeri A. Health-related quality of life in breast cancer patients: A bibliographic review of the literature from 1974 to 2007. Journal of Experimental & Clinical Cancer Research. 2008;27(1):32

[19] Lee TK et al. Impact of prostate cancer treatment on the sexual quality of life for men-who-have-sex-with-men. *The Journal of Sexual Medicine*. 2015;**12**(12):2378-2386

[20] Roehrborn CG, Black LK. The economic burden of prostate cancer. *BJU International*. 2011;**108**(6):806-813

[21] Knaul FM et al. Self-identity, lived experiences, and challenges of breast, cervical, and prostate cancer survivorship in Mexico: A qualitative study. *BMC Cancer*. 2020;**20**(1):1-11